STATE AUTO FINANCIAL CORPORATION
2019 ANNUAL REPORT

LETTER TO SHAREHOLDERS

"...we've never lost sight of where we were going, and that focus and persistence has transformed State Auto and positioned us for long-term success."

Dear Shareholders,

2019 was a challenging but ultimately successful year. Our journey to create a modernized and healthy carrier took a major step forward. We entered 2020 a much stronger company than in many years.

Like any journey, ours has not been perfectly smooth. Rather, it's been a long and winding road. However, through all the challenges of the journey, we've never lost sight of where we were going, and that focus and persistence has transformed State Auto and positioned us for long-term success.

Of course, we must take accountability for the 2019 results. We failed to make an underwriting profit, and that is unacceptable. Our personal lines business was the primary cause of our miss. After a strong 2018, our progress in 2019 was slowed by a few key product and technology gaps that had to be closed, mainly impacting our auto line. In addition, we experienced an elevated level of weather losses that significantly impacted our property lines of business.

Personal Lines

As I noted, early in the year we uncovered a handful of technology issues, as well as some weaknesses in our personal auto product we thought we'd addressed. The work to correct these issues put us behind and caused us to fail to achieve our goal of profitable growth for our largest line of business.

In personal auto, we had no growth for the year and our statutory combined ratio was 103.0%. We identified the weaknesses in our pricing model and began a series of adjustments to correct. Those fixes continued throughout the year and will be completed when we launch an updated model in the first and second quarters of 2020.

We also experienced execution issues while upgrading our platform architecture. We worked through the transition and are now in a much more robust position. We were clearly challenged in the auto line with both product and technology issues, but I'm proud our team rallied together, fixed the areas of concern, and by the end of the year, our technology and personal auto products were ready for 2020.

In our business, weather is a reality and we do our best to prepare for it through underwriting, risk management and pricing. Unfortunately, there are some years in which Mother Nature is especially unkind and preparation isn't enough. 2019 was one of those years, and the result was a homeowners statutory combined ratio of 106.8%. Regardless of the severe weather, we own the poor result and are committed to returning our homeowners business to an underwriting profit in 2020.

The good news in personal lines was our homeowners business growth of nearly 20%. This is a terrific result demonstrating the combination of our digital technology and new product design has been embraced by our agency force. We have good momentum in this line and I believe our growth trajectory will continue.

As we enter 2020, we're clear on the adjustments needed in personal lines in order to return to growth and profitability.

Commercial Lines

Our goal is to grow and be profitable in each of our lines of business, and commercial lines delivered on that goal with an extremely strong year.

Overall, commercial achieved a profit, coming in at a statutory combined ratio of 97.0% for the year. This is a result of our teams across underwriting, claims, sales, and pricing working together. The profitability was achieved along with strong growth of 12.0%. As I stated, we want each individual line to win, so it's important to note the consistency across commercial lines. Of our six commercial product lines, four were profitable and all but workers' compensation grew.

We spent the last two years rebuilding our commercial teams and products, and our 2019 results are a clear indicator that those efforts were successful. More importantly, we believed a few years ago when this journey began that commercial lines had great potential for State Auto. 2019 was a major step forward toward realizing that potential.

As we enter 2020, commercial lines are well positioned to continue delivering outstanding results.

Technology

While we uncovered some fundamental technology pieces that needed to be fixed, we continued to move the company forward. Our system stability and security are both strong. We'll be able to add volume to this platform with great efficiency.

In early 2020, we'll launch farm and ranch and middle market commercial on our digital-only platform, State Auto Connect. The only product left to add to our digital

“Our State Auto associates have demonstrated the creativity, passion and persistence needed to win.”

platform will be workers’ compensation. In just four years, we’ve delivered six products, a blistering pace, and are now near the end of the modernization of State Auto. This is extremely significant. It gives us continuity, efficiency, and effectiveness.

I’m very proud of our technology team. We talked in 2015 about the fact that we have to spend and upgrade technology to truly win going forward, especially in an industry that will be greatly affected by change and innovation. The journey to date has been hard, but we’re on the cusp of gaining the full benefit of that investment and effort.

As we enter 2020, our technology platform has never been stronger.

Agent Partners

We also finished 2019 with a clearer view and understanding of our agent partners: their needs, their commitment to us, and how we can win together. We’ve taken our agent partners on this turnaround journey for the last four years and it hasn’t been perfect. However, we’ve emerged as a stronger company with an obvious spot on their “shelf” of companies. We provide them an innovative partner with competitive products and work with them to anticipate and prepare for the change that is coming. Likewise, we’ve been clear about what we need and expect from a true partner: quality business, high integrity and open communication in both directions.

As we enter 2020 our agency partnerships have never been more mutually beneficial.


"As we enter 2020, our talent and
culture are strong."

Our People

We've emphasized from day one that the key to our success is culture. It is our number one priority. As we get the culture right, as our associates embrace it, as we all live it, we will win.

In 2019, we continued to make progress toward a deep and meaningful culture based on trust and respect. One that encourages candor, radical transparency, innovation and fun. Our culture empowers associates and allows them to develop personally and professionally. As a result, our talent has gotten better and we've become an employer sought out by elite candidates. At the end of the day, these factors will drive our success.

As we enter 2020, our talent and culture are strong.

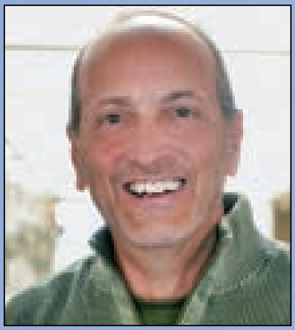
We are responsible for a year where our results did not meet our expectations. The journey we've taken isn't smooth, and our industry is complex and presents challenges along the way. Success is based on how one reacts to adversity along the way. Our State Auto associates have embraced our journey and reacted to challenges with the creativity, passion and persistence needed to win. That's why I'm confident we enter 2020 with all the key pieces in place to deliver on our goal of profitable growth.

Best,

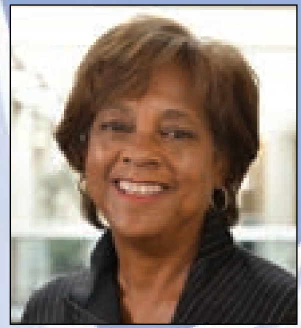
Mike

Mike LaRocco
President, Chairman of the Board
& Chief Executive Officer

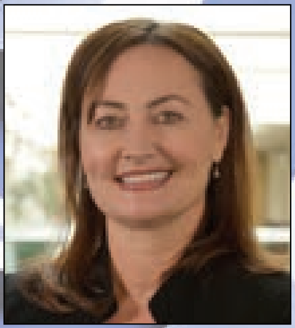
BOARD OF DIRECTORS



Michael E. LaRocco
President and
Chief Executive Officer
Chairman of the Board,
Investment and Finance Committee

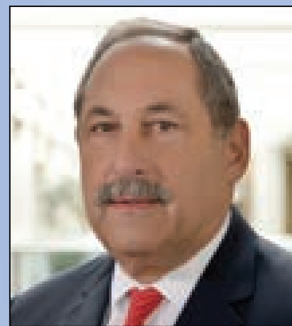


Kym M. Hubbard
Retired Global Head of
Investments, Chief Investment
Officer and Treasurer,
Ernst & Young, LLC
Audit Committee, Compensation
Committee, Independent Committee,
Investment and Finance Committee
(Chair)



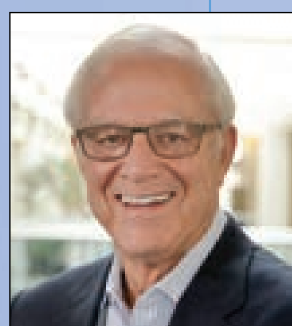
Setareh Pouraghabagher
Member of the faculty and
Executive Partner, California
Polytechnic State University
Audit Committee (Chair), Indepedent
Committee (Chair), Nominating and
Governance Committee, Risk Committee

ROBERT BAKER
Executive Vice President of
DHR International Inc.
Compensation Committee (Chair), Nominating and Governance Committee, Risk Committee

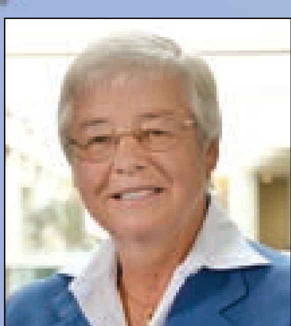


MICHAEL J. FIORILE
Retired President and
Chief Executive Officer of
The Dispatch Printing Company
Nominating and Governance Committee (Chair), Risk Committee

EILEEN A. MALLESCH
Retired Senior Vice President
and CFO, Nationwide Property and
Casualty Inurance Company
Audit Committee, Compensation Committee , Independent Committee



DAVID R. MEUSE
Senior Advisor, Stonehenge Partners
Lead Director, Audit Committee, Independent Committee, Investment and Finance Committee



S. ELAINE ROBERTS
Retired President and Chief
Executive Officer, Columbus
Regional Airport Authority
Compensation Committee, Independent Committee, Nominating and Governance Committee Investment , Risk Committee (Chair)

SENIOR OFFICERS

Mike LaRocco
President, Chairman of the Board
and Chief Executive Officer

Steve English
Senior Vice President,
Chief Financial Officer

Melissa Centers
Senior Vice President,
Secretary and General Counsel

Jason Berkey
Senior Vice President,
Data & Analytics

Kim Garland
Senior Vice President,
Personal & Commercial Lines, State Auto Labs

Élise Spriggs
Senior Vice President,
Associate and External Relations

Paul Stachura
Senior Vice President,
Chief Claims and Risk Engineering Officer

Greg Tacchetti
Senior Vice President,
Chief Information and Strategy Officer

Environmental, Social & Governance Report

"State Auto believes that to build a sustainable future, we must deliver profitable, long-term growth in an ethical and responsible manner..."

We believe in delivering profitable, long-term growth in an ethical and responsible manner by protecting and enhancing the safety and well-being of our associates, communities and the environment. Our 2019 Environmental, Social and Governance (ESG) Report highlights the steps we're taking to do just that, and is tangible evidence of our commitment to transparency.

Workforce as of June 30, 2019

54.8% female

Fully subsidized rideshare program and public transit passes for associates.

24/7 no-cost on-site fitness center

“We can’t become the very best without new ideas, fresh perspectives and various backgrounds among our ranks.”

403,325 lbs.

paper recycled

The 13 members of STFC’s board of directors include **6 women and 3 African Americans.**

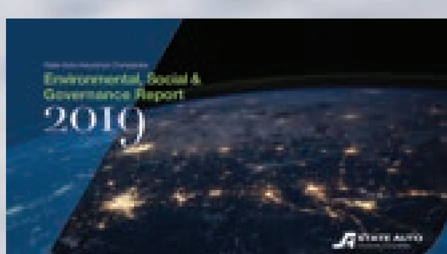
4 of 6

STFC board committees chaired by women

"State Auto Women in Technology" group formed

CO_2 Emissions Reduced by

168,000 lbs.



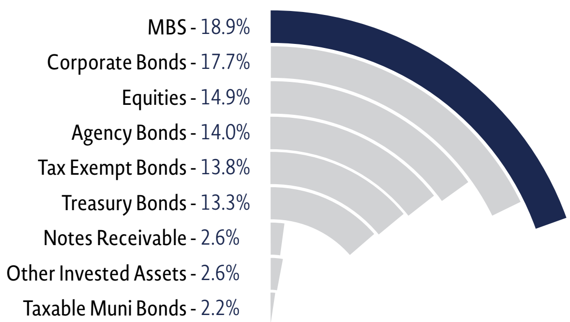
To view the entire report go to
www.stateauto.com/esg

Financial Highlights

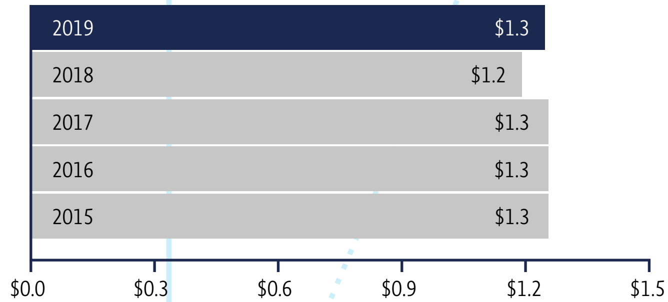
($ in millions, except per share amounts)

STFC®		2019	2018	2017	2016	2015
Earned premiums	$	1,253.0	1,238.0	1,276.1	1,291.1	1,275.9
Net investment income	$	80.4	84.9	78.8	74.7	71.7
Net investment gain (loss)	$	74.2	(49.7)	65.1	36.5	24.3
Other income	$	2.4	2.6	2.3	2.3	2.1
Total revenue	$	1,410.0	1,275.8	1,422.3	1,404.6	1,374.0
Net income (loss)	$	87.4	12.8	(17.8)	19.2	52.3
Basic earnings (loss) per share	$	2.01	0.30	(0.42)	0.46	1.27
Diluted earnings (loss) per share	$	1.96	0.29	(0.42)	0.46	1.26
Dividends paid per share	$	0.40	0.40	0.40	0.40	0.40
Book value per share	$	22.01	18.91	19.68	20.34	20.40
Total assets	$	2,985.4	2,895.9	3,019.1	2,973.4	2,841.1
Stockholders' equity	$	959.9	818.5	835.0	850.5	843.2
Return on equity		9.8%	1.5%	(2.1)%	2.3%	6.3%
GAAP Combined ratio		102.7	100.6	107.7	106.3	101.5

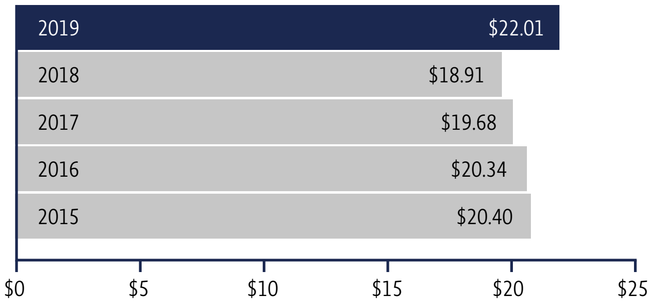
Investment Portfolio



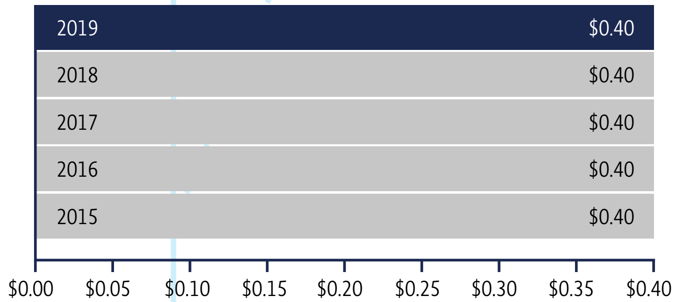
Net Premium Written (In Billions)



Book Value (Per Share)



Dividend Paid (Per Share)



UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2019 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	**Columbus Ohio**	**43215-3976**
(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:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common shares, without par value	STFC	The Nasdaq Global Select Market

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

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

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

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

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). Yes ☒ No ☐

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

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

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

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

As of June 30, 2019, 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 $617,915,534.

On February 21, 2020, the Registrant had 43,654,704 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 8, 2020 (the "2020 Proxy Statement"), which will be filed within 120 days of December 31, 2019, 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, 2019

IMPORTANT INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

All statements, other than statements of historical facts, included in this Annual Report on Form 10-K of State Auto Financial Corporation ("State Auto Financial" or "STFC") for the fiscal year ended December 31, 2019 (this "Form 10-K"), 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 59.5% 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 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.

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 commercial 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 59.5% 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 previously reported, we have exited our specialty business and we stopped writing this business on a net basis in 2018; as a result, the specialty insurance segment is no longer a reportable segment and is disclosed as "specialty run-off."

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 and commercial insurance (collectively the "insurance segments"). These insurance segments are business units managed separately from each other due to the differences in the types of customers they serve, products they provide or services they offer. 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 16 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

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 3,200 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.

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 run-off 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, 2019:

State	% of Total
Texas	13.2 %
Ohio	7.7
Kentucky	6.2
Michigan	5.4
South Carolina	4.2
Arkansas	4.0
Minnesota	4.0
Tennessee	4.0
Mississippi	3.8
Maryland	3.7
Illinois	3.6
Indiana	3.6
Missouri	3.5
North Carolina	3.4
Pennsylvania	3.3
All others (1)	26.4
Total	100.0 %

(1) No other single state accounted for 3.0% or more of the total direct written premiums written in 2019.

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 unreported claims. Loss reserves are management's best estimate at a given point in time of what we expect to pay to settle all claims 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 claims are initially established on either a case-by-case or formula basis depending on the type and circumstances of the claim. The case-by-case reserve amounts are determined based on our case 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, 2019, 2018 and 2017:

($ millions)	Year Ended December 31		
	2019	2018	2017
Beginning of Year:			
Loss and loss expenses payable	**$ 1,146.8**	$ 1,255.6	$ 1,181.6
Less: Reinsurance recoverable on losses and loss expenses payable	**5.5**	3.1	3.6
Net losses and loss expenses payable(1)	**1,141.3**	1,252.5	1,178.0
Provision for losses and loss expenses occurring:			
Current year	**913.5**	876.6	964.9
Prior years(2)	**(68.7)**	(80.2)	(46.6)
Total	**844.8**	796.4	918.3
Loss and loss expense payments for claims occurring during:			
Current year	**530.4**	456.5	445.2
Prior years	**402.8**	451.1	398.6
Total	**933.2**	907.6	843.8
End of Year:			
Net losses and loss expenses payable	**1,052.9**	1,141.3	1,252.5
Add: Reinsurance recoverable on losses and loss expenses payable	**13.6**	5.5	3.1
Losses and loss expenses payable(3)	**$ 1,066.5**	$ 1,146.8	$ 1,255.6

(1) Includes net amounts assumed from affiliates of $593.6 million, $711.4 million, and $630.9 million at beginning of year 2019, 2018, and 2017, 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 $500.8 million, $593.6 million, and $711.4 million at end of year 2019, 2018, and 2017, respectively.

COMPETITION

The property and casualty insurance industry is highly competitive. We compete with numerous insurance companies, with varying sizes and financial resources, in the personal and commercial 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. 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 2019, 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, $91.3 million is available in 2020 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, $10.0 million and $15.0 million in 2019, 2018 and 2017, respectively, from its insurance subsidiaries. Additional information regarding dividend restrictions can be found in this Item 7 and in Note 12 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 2019 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.

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, 2019, 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 was extended in 2005, 2007 and again in 2019. The 2019 reauthorization of the Terrorism Risk Insurance Act provides an extension through 2027. Under these Terrorism Acts, commercial property and casualty insurers like State Auto Group, in exchange for making terrorism coverage 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 Act, 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. 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 only cover 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 From 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 February 21, 2020, we had 1,978 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.

Information about our Executive Officers

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	63	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	59	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, Data and Analytics	45	Senior Vice President of Data and Analytics of STFC and State Auto Mutual, 1/20 to present; Vice President of Personal Lines of STFC and State Auto Mutual, 9/17 to 1/20; Vice President of STFC and State Auto Mutual, 10/15 to 9/17; vice president of American Insurance Group ("AIG"), 1/04 to 7/15.	2017
Melissa A. Centers, Senior Vice President, Secretary and General Counsel	48	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, Personal & Commercial Lines and State Auto Labs	54	Senior Vice President of Personal & Commercial Lines of STFC and State Auto Mutual, and State Auto Labs, 1/20 to present, Senior Vice President of Commercial Lines of STFC and State Auto Mutual, 9/17 to 1/20; 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, 2/12 to 12/12; chief operating officer of UGC, 6/09 to 12/12.	2015
Elise D. Spriggs, Senior Vice President, Associate and External Relations	49	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	62	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	51	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 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.	2015
Scott A. Jones, Vice President, Chief Investment Officer	55	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	51	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	54	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 February 27, 2020.

(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.

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.

GENERAL RISK FACTORS

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 as part of 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, wildfires 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;
- 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 ability to use credit scoring, education and occupation, and other data methodologies in pricing and underwriting;
- 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, wildfires, 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.

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. See Privacy section for further information.

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.

PRIVACY

Privacy protection requirements for consumers are expanding from simply protecting personal information to a more consumer-driven model that allows individuals in some respects to control a company's ongoing storage and use of their personal information. Our failure to comply with such privacy laws could have an adverse effect on our business.

We continue to see increased regulation of data privacy and security, including the adoption of more stringent subject matter specific state laws, and federal laws regulating the collection and use of data, as well as security and data breach obligations. Privacy protection requirements for consumers are expanding from simply protecting personal information to a more consumer-driven model that allows individuals in some respects to control a company's ongoing storage and use of their personal information. This expansion places an increased burden on us to be able to respond to a consumer's request to know or request to permanently anonymize their data, and failure to comply could result in fines, penalties, or litigation which could have an adverse effect on our business.

The regulatory framework for privacy issues is evolving in the U.S. and worldwide, and various government and consumer agencies and public advocacy groups have called for new regulation and changes in industry practices. It is possible that new laws and regulations will be adopted at the state or federal level, or both, or existing laws and regulations may be interpreted in new ways that would affect our business. Complying with any new regulatory requirements could force us to incur substantial costs or require us to change our business practices in a manner that could negatively impact the way we conduct business.

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 prior to 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 under insured 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.

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.

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.

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. There can be no assurance that our effective tax rate or tax positions will not be adversely affected by 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 2019, 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.

Changes in U.S. immigration policies and laws could impact our ability to hire and retain foreign national employees working under visas, which could adversely affect our operations.

We have many foreign national employees who work for us under visas issued by the U.S. government. These foreign national employees are highly skilled with expertise in technology and other areas needed for the operation of our business. Recent changes to U.S. immigration policies and laws have placed more restrictions on the issuance and extension of work visas. These restrictions could make it more difficult for us to hire and retain these highly skilled employees, which could adversely affect our operations.

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.

New digital carriers have entered the insurance marketplace over the past few years. These carriers typically market personal lines automobile or homeowners products direct to the consumer and do not utilize the independent agency system. As these carriers grow, their new customers will either be first time buyers of insurance products or customers leaving other carriers. Insuretech companies have also benefited from the evolving marketplace. Insurance companies, including State Auto, have been investing in these companies. Investing companies seek a business partner that will allow them to take advantage of new technology that can help a carrier either attract quality business or improve underwriting results, with an ultimate goal of improved financial performance. The growth of both the digital carriers and insuretech companies could impact the potential growth of other carriers.

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.

RISKS RELATING TO STATE AUTO FINANCIAL CORPORATION

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 2019, we completed the rollout of our "State Auto Connect" digital quote and issue platform in states where we write private passenger auto and homeowners business. During 2019, we completed the launch of our new business owners', commercial auto and small commercial umbrella products. The farm and ranch product has been added to the State Auto Connect platform and will be rolled out to agents in 2020. We intend to launch State Auto Connect for middle market commercial in 2020, and workers' compensation in 2021. 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 2020 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 business, information technology or administrative functions or otherwise rely on 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 negative impact on our results of operations or financial condition.

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.

The insurance marketplace is evolving and independent insurance agency distribution systems are growing rapidly. Our success depends on our ability and our independent agents’ ability to react to these changes.

As the insurance industry changes and the growth of the independent insurance agency distribution system evolves, our ability to adapt to these changes with our agents is critical. An influx of agencies are joining larger independent network agencies. Our dependence on network agencies and the percentage of the book of business they write with us can be positively or negatively affected by the collective business decisions those network agencies make.

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, 2019, State Auto Mutual owned approximately 59.5% 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.

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 February 21, 2020, there were 1,010 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:

2019	**High**	**Low**	**Dividend**
First Quarter	**$ 34.99**	**$ 30.33**	**$ 0.10**
Second Quarter	**35.04**	**32.11**	**0.10**
Third Quarter	**36.45**	**28.46**	**0.10**
Fourth Quarter	**34.75**	**28.10**	**0.10**

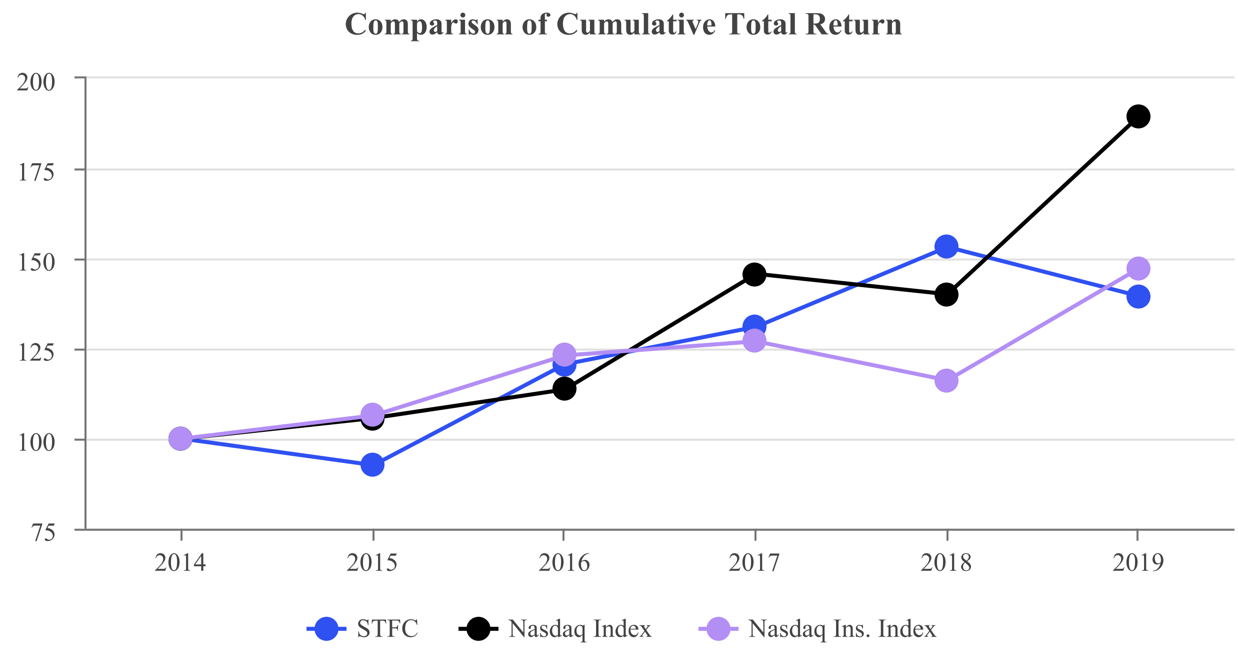
2018	High	Low	Dividend
First Quarter	$ 30.40	$ 25.92	$ 0.10
Second Quarter	34.31	27.59	0.10
Third Quarter	32.96	28.57	0.10
Fourth Quarter	35.05	28.75	0.10

(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, 2014, 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.



	2014	2015	2016	2017	2018	**2019**
STFC	100.00	92.66	120.66	131.05	153.20	**139.60**
Nasdaq Index	100.00	105.73	113.66	145.76	140.10	**189.45**
Nasdaq Ins. Index	100.00	106.45	123.10	127.02	116.21	**147.24**

Item 6. Selected Consolidated Financial Data

(dollars and shares in millions, except per share data)	Year ended December 31					
		2019	2018	2017	2016	2015
Statement of Income Data — GAAP Basis:						
Earned premiums	$	**1,253.0**	1,238.0	1,276.1	1,291.1	1,275.9
Net investment income	$	**80.4**	84.9	78.8	74.7	71.7
Total revenues	$	**1,410.0**	1,275.8	1,422.3	1,404.6	1,374.0
Net income (loss)	$	**87.4**	12.8	(17.8)	19.2	52.3
Earned premium growth (decline)		**1.2 %**	(3.0)%	(1.2)%	1.2 %	19.4 %
Return on average invested assets[1]		**3.0 %**	3.2 %	3.1 %	3.1 %	3.1 %
Balance Sheet Data — GAAP Basis:						
Total investments	$	**2,669.3**	2,598.9	2,689.7	2,612.6	2,471.7
Total assets	$	**2,985.4**	2,895.9	3,019.1	2,973.4	2,841.1
Total notes payable	$	**122.0**	122.0	122.1	122.1	100.5
Total stockholders' equity	$	**959.9**	818.5	835.0	850.5	843.2
Common shares outstanding		**43.6**	43.3	42.4	41.8	41.3
Return on average equity		**9.8 %**	1.5 %	(2.1)%	2.3 %	6.3 %
Debt to capital ratio		**11.3 %**	13.0 %	12.8 %	12.6 %	10.6 %
Per Common Share Data — GAAP Basis:						
Basic EPS	$	**2.01**	0.30	(0.42)	0.46	1.27
Diluted EPS	$	**1.96**	0.29	(0.42)	0.46	1.26
Cash dividends per share	$	**0.40**	0.40	0.40	0.40	0.40
Book value per share	$	**22.01**	18.91	19.68	20.34	20.40
Common Share Price:						
High	$	**36.45**	35.05	30.85	27.42	27.37
Low	$	**28.10**	25.92	22.11	17.84	20.01
Close at December 31	$	**31.02**	34.04	29.12	26.81	20.59
Close price to book value per share		**1.41**	1.80	1.48	1.32	1.01
GAAP Ratios:						
Loss and LAE ratio		**67.4 %**	64.3	72.0	73.0	67.8
Expense ratio		**35.3 %**	36.3	35.7	33.3	33.7
Combined ratio		**102.7 %**	100.6	107.7	106.3	101.5
Statutory Ratios:						
Loss and LAE ratio		**67.6 %**	64.5	72.1	73.1	68.4
Expense ratio		**34.7 %**	36.7	35.1	33.5	33.8
Combined ratio		**102.3 %**	101.2	107.2	106.6	102.2
Net premiums written to surplus		**1.4**	1.4	1.5	1.5	1.6

[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. For information regarding our financial results for the fiscal year ended December 31, 2017, please see the discussion included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

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 and commercial insurance. These insurance 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. Investment operations is also a reportable segment. As previously reported, we have exited our specialty business, which has resulted in the elimination of our specialty insurance segment. As a result, effective January 1, 2019, the specialty insurance business is no longer a reportable segment as it no longer is material to our results and is disclosed as "specialty run-off." See “Personal and Commercial 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 2019 is set forth in this Item 7 and in Note 16 to our consolidated financial statements included in Item 8 of this Form 10-K.

EXECUTIVE SUMMARY

In 2019, although we did not meet our goal of profitable growth, we made considerable progress toward positioning our company to be able to produce more consistent profitable results. Our personal and commercial lines' 101.2% SAP combined ratio and 10.2% net written premium growth fell short of our expectations, but were accompanied by efforts throughout our company to become more effective and efficient.

Insurance Operations

Our personal lines business did not meet our expectations for profit or growth in 2019. Personal lines were impacted by technology and pricing issues in our personal auto and homeowners' products, that should be addressed with the introduction of an updated pricing model in 2020. We also experienced execution challenges during upgrades of our platform architecture. We have addressed those issues, as well. In commercial lines, we delivered profit and strong growth. This was the result of two years of rebuilding our commercial lines teams and products. We are well positioned to continue delivering outstanding results in this part of our business.

Claims

Our Claims and Risk Engineering (CARE) organization is focused on providing an exceptional customer experience for those who rely on us during some of their greatest times of need. Our CARE team is continually exploring new ways to streamline and improve the claim process through the use of technology, while keeping in mind that people ultimately make the difference. We are committed to improving all aspects of the claim experience for our customers.

Technology

In 2019, we completed the multi-year rollout of our digital quote and issue platform for personal lines, small commercial and commercial auto, which continued to drive significant growth. The flexibility of this platform allows us to offer new products and rates and incorporates advanced data analytics, giving us the ability to more efficiently match rate to risk. Throughout 2019, our efforts were focused on delivering a stable technology experience for our agents and policyholders, while working toward a 2020 launch of farm and ranch and middle market commercial on the new platform, followed by workers' compensation in 2021.

Culture

Our culture is central to our progress to date, and will remain critical to our future success. We encourage openness, candor, transparency, creativity and challenge. Our associates are expected to act like owners by participating, asking questions, challenging assumptions and proposing solutions. We believe the culture that we have created enables us to move quickly and effectively, with agents and customers at the forefront. It also includes a shared commitment to the communities in which we live and work, which has been at the heart of our company since our founding. Our success will be measured not only in our business performance, but in the difference we make in our communities.

Moving forward

We remain focused on operational excellence, which means getting better at everything we do, every day. At the same time, we are committed to more effective execution of the many efforts underway to further strengthen our company. We strive to continually improve our digital technology platform, while adjusting to the needs of our agency partners, customers and the broader marketplace. As a result of the rebuilding of our company, we are well positioned to take advantage of the growing disruption in the P&C industry 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 2019.

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, 2019 and 2018:

($ millions, except per share data)	**2019**	2018
GAAP Basis:		
Total revenues	**$ 1,410.0**	$ 1,275.8
Income before federal income taxes	**$ 107.0**	$ 12.9
Net income	**$ 87.4**	$ 12.8
Stockholders' equity	**$ 959.9**	$ 818.5
Book value per share	**$ 22.01**	$ 18.91
Return on average equity	**9.8 %**	1.5 %
Debt to capital ratio	**11.3 %**	13.0 %
Cat loss and ALAE ratio	**8.0 %**	5.8 %
Non-cat loss and LAE ratio	**59.4 %**	58.5 %
Loss and LAE ratio	**67.4 %**	64.3 %
Expense ratio	**35.3 %**	36.3 %
Combined ratio	**102.7 %**	100.6 %
Premiums written growth	**8.9 %**	(4.7)%
Investment yield	**3.0 %**	3.2 %
SAP Basis:		
Cat loss and ALAE ratio	**8.0 %**	5.8 %
Non-cat loss and ALAE ratio	**53.5 %**	52.7 %
ULAE ratio	**6.1 %**	6.0 %
Loss and LAE ratio	**67.6 %**	64.5 %
Expense ratio	**34.7 %**	36.7 %
Combined ratio	**102.3 %**	101.2 %
Net premiums written to surplus	**1.4**	1.4

The following highlights significant factors that impacted our 2019 net income of $87.4 million:

- Net investment gain was $74.2 million, which included $73.8 million of unrealized gains from equity securities and other invested assets. Net investment income was $80.4 million, which included $62.3 million of income from the fixed maturities portfolio.
- Earned premiums were $1,253.0 million, which reflected new business growth in homeowners, commercial auto, middle market commercial, and other personal as well as increased rates in personal auto.
- The SAP catastrophe loss and ALAE ratio was 8.0%, or $100.5 million. 2019 was impacted by (i) severe wind and hail storms, approximately half of which occurred in Texas, and (ii) adverse development of prior accident year catastrophe losses in the specialty run-off business relating to Hurricanes Irma and Harvey.
- The SAP non-cat loss and ALAE ratio was 53.5%, or $669.7 million. Non-catastrophe losses and ALAE included 5.8 points of favorable development relating to prior years, or $72.4 million, primarily from the commercial insurance segment which contributed $58.8 million. The current accident year non-cat loss and ALAE was primarily impacted by non-cat weather losses and large losses, including fires.

The following highlights significant factors that impacted our 2018 net income of $12.8 million:

- Net investment loss of $49.7 million, which was impacted by $57.4 million of unrealized losses from equity securities and other invested assets due to the adoption of ASU 2016-01 effective January 1, 2018 which requires changes in fair value for equity securities and other invested assets still held to be reported through net income.

- Earned premiums were $1,238.0 million and reflected new business growth in the personal insurance segment and the exit of the specialty business.
- The catastrophe loss and ALAE ratio was 5.8%, or $71.7 million. 2018 was impacted by wind and hail storms.
- The SAP non-cat loss and ALAE ratio was 52.7%, or $653.0 million. Non-catastrophe losses and ALAE included 6.2 points of favorable development relating to prior years, or $76.6 million. The personal and commercial insurance segments contributed 7.0 points, or $79.7 million, 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.

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.

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, 2019 and 2018:

($ in millions) 2019	Personal & Commercial	Specialty run-off	Total
Net written premiums	$ 1,318.8	$ (0.7)	$ 1,318.1
Net earned premiums	1,247.9	5.1	1,253.0
Losses and LAE incurred:			
Cat loss and ALAE	89.9	10.6	100.5
Non-cat loss and ALAE:			
Prior accident years non-cat loss and ALAE	(71.3)	(1.1)	(72.4)
Current accident year non-cat loss and ALAE	736.9	5.2	742.1
Total non-cat loss and ALAE	665.6	4.1	669.7
Total Loss and ALAE	755.5	14.7	770.2
ULAE	78.3	(2.0)	76.3
Total Loss and LAE	833.8	12.7	846.5
Underwriting expenses	454.0	3.1	457.1
Net underwriting loss	$ (39.9)	$ (10.7)	$ (50.6)
Cat loss and ALAE ratio	7.2 %	N/M[1]	8.0 %
Non-cat loss and ALAE ratio:			
Prior accident years non-cat loss and ALAE ratio	(5.7)%	N/M	(5.8)%
Current accident year non-cat loss and ALAE ratio	59.0 %	N/M	59.3 %
Total non-cat loss and ALAE ratio	53.3 %	N/M	53.5 %
Total Loss and ALAE ratio	60.5 %	N/M	61.5 %
ULAE ratio	6.3 %	N/M	6.1 %
Total Loss and LAE ratio	66.8 %	N/M	67.6 %
Expense ratio	34.4 %	N/M	34.7 %
Combined ratio	101.2 %	N/M	102.3 %

[1]N/M = Not Meaningful

($ in millions)			
2018	Personal & Commercial	Specialty run-off	Total
Net written premiums	$ 1,196.3	$ 14.0	$ 1,210.3
Net earned premiums	1,138.2	99.8	1,238.0
Losses and LAE incurred:			
Cat loss and ALAE	70.3	1.4	71.7
Non-cat loss and ALAE:			
Prior accident years non-cat loss and ALAE	(79.7)	3.1	(76.6)
Current accident year non-cat loss and ALAE	659.0	70.6	729.6
Total non-cat loss and ALAE	579.3	73.7	653.0
Total Loss and ALAE	649.6	75.1	724.7
ULAE	67.9	5.5	73.4
Total Loss and LAE	717.5	80.6	798.1
Underwriting expenses	425.8	18.8	444.6
Net underwriting (loss) gain	$ (5.1)	$ 0.4	$ (4.7)
Cat loss and ALAE ratio	6.2 %	1.4 %	5.8 %
Non-cat loss and ALAE ratio:			
Prior accident years non-cat loss and ALAE ratio	(7.0)%	3.1 %	(6.2)%
Current accident year non-cat loss and ALAE ratio	57.9 %	70.8 %	58.9 %
Total non-cat loss and ALAE ratio	50.9 %	73.9 %	52.7 %
Total Loss and ALAE ratio	57.1 %	75.3 %	58.5 %
ULAE ratio	5.9 %	5.5 %	6.0 %
Total Loss and LAE ratio	63.0 %	80.8 %	64.5 %
Expense ratio	35.6 %	133.7 %	36.7 %
Combined ratio	98.6 %	214.5 %	101.2 %

Personal Insurance Segment

The following tables set forth certain key performance indicators by major product line of business for our personal insurance segment for the years ended December 31, 2019 and 2018:

Table 1

($ in millions)				
2019	Personal Auto	Homeowners	Other Personal	Total
Net written premiums	**$ 424.5**	**$ 326.0**	**$ 41.9**	**$ 792.4**
Net earned premiums	**428.3**	**295.9**	**35.0**	**759.2**
Losses and LAE incurred:				
Cat loss and ALAE	**6.0**	**60.1**	**5.0**	**71.1**
Non-cat loss and ALAE:				
Prior accident years non-cat loss and ALAE	**(10.7)**	**0.3**	**(2.1)**	**(12.5)**
Current accident year non-cat loss and ALAE	**284.8**	**142.7**	**16.1**	**443.6**
Total non-cat loss and ALAE	**274.1**	**143.0**	**14.0**	**431.1**
Total Loss and ALAE	**280.1**	**203.1**	**19.0**	**502.2**
ULAE	**30.1**	**19.9**	**1.2**	**51.2**
Total Loss and LAE	**310.2**	**223.0**	**20.2**	**553.4**
Underwriting expenses	**129.9**	**102.5**	**13.2**	**245.6**
Net underwriting (loss) gain	**$ (11.8)**	**$ (29.6)**	**$ 1.6**	**$ (39.8)**
Cat loss and ALAE ratio	**1.4 %**	**20.3 %**	**14.1 %**	**9.4 %**
Non-cat loss and ALAE ratio:				
Prior accident years non-cat loss and ALAE ratio	**(2.5)%**	**0.1 %**	**(5.9)%**	**(1.7)%**
Current accident year non-cat loss and ALAE ratio	**66.5 %**	**48.2 %**	**45.9 %**	**58.5 %**
Total non-cat loss and ALAE ratio	**64.0 %**	**48.3 %**	**40.0 %**	**56.8 %**
Total Loss and ALAE ratio	**65.4 %**	**68.6 %**	**54.1 %**	**66.2 %**
ULAE ratio	**7.0 %**	**6.8 %**	**3.4 %**	**6.7 %**
Total Loss and LAE ratio	**72.4 %**	**75.4 %**	**57.5 %**	**72.9 %**
Expense ratio	**30.6 %**	**31.4 %**	**31.6 %**	**31.0 %**
Combined ratio	**103.0 %**	**106.8 %**	**89.1 %**	**103.9 %**

Table 2

($ 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 loss and ALAE ratio	(6.1)%	(2.9)%	(4.9)%	(4.9)%
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 %

All new business is now issued through State Auto Connect, a fully digital quote and issue platform that incorporates advanced data analytics and updated pricing models. The flexibility of this platform allows us to offer new products and coverages. This platform enables our agents to submit, quote, bind, issue and bill policies through a completely digital and integrated platform. We started the rollout of State Auto Connect in five states in 2016 and launched the final state in January 2019.

The personal insurance segment's net written premiums for the year ended December 31, 2019 increased 9.1% compared to 2018 (Tables 1 - 2), primarily driven by new business growth and increased rates in homeowners and other personal. The new business growth resulted in higher levels of policies in force for homeowners during 2019 compared to 2018. Partially offsetting the 2019 net written premium growth was a decrease in personal auto net written premiums primarily driven by a decline in new business and retention when compared to 2018.

The personal insurance segment's SAP catastrophe loss ratio for the year ended December 31, 2019 was 9.4%, compared to 7.2% in 2018 (Tables 1 - 2). During 2019, catastrophe losses, primarily wind and hail storms, were more severe when compared to the same 2018 period, with most of the catastrophe losses impacting homeowners. While the number of catastrophe events in 2019 was flat when compared to 2018, the 2019 events were more severe with over half of the reported losses occurring in Texas. During 2018, catastrophe losses were primarily related to wind and hail storms with approximately one-third of the losses occurring in Texas and Colorado.

The personal insurance segment's SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 was 56.8% compared to 52.2% in 2018. (Tables 1 - 2).

The personal auto SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 increased 4.0 points when compared to the same 2018 period (Tables 1 - 2). Favorable development of prior accident year losses improved the 2019 loss ratio by 2.5 points compared to 6.1 points in 2018. The 3.6 points of less favorable development in 2019 was across multiple coverages including bodily injury and uninsured and under-insured motorist coverages as well as adverse development of property damage claims, primarily from the 2018 and 2017 accident years. The 2018 prior accident year favorable development was primarily attributable to lower than anticipated severity for bodily injury claims from the 2016 and 2017 accident years.

The homeowners SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 increased 8.3 points when compared to the same 2018 period (Tables 1 - 2). The current accident year loss ratio increased 5.3 points when compared to 2018, primarily attributable to an elevated level of non-cat weather losses. The 2019 prior accident year losses were minimally impacted by development compared to favorable development of 2.9 points in 2018. The 2018 prior accident year favorable development was primarily attributable to favorable emergence on liability claims from multiple accident years.

Commercial Insurance Segment

The following tables set forth certain key performance indicators by major product line of business for our commercial insurance segment for the years ended December 31, 2019 and 2018:

Table 3

($ in millions)

2019	Commercial Auto	Small Commercial Package	Middle Market Commercial	Workers' Comp	Farm & Ranch	Other Commercial	Total
Net written premiums	$ 109.5	$ 122.4	$ 149.2	$ 76.7	$ 50.0	$ 18.6	$ 526.4
Net earned premiums	91.4	119.2	134.3	78.2	48.5	17.1	488.7
Losses and LAE incurred:							
Cat loss and ALAE	0.3	7.9	8.2	—	2.4	—	18.8
Non-cat loss and ALAE							
Prior accident years non-cat loss and ALAE	(4.7)	(15.2)	(11.8)	(20.9)	(3.0)	(3.2)	(58.8)
Current accident year non-cat loss and ALAE	57.9	64.0	83.5	54.4	23.2	10.3	293.3
Total non-cat loss and ALAE	53.2	48.8	71.7	33.5	20.2	7.1	234.5
Total Loss and ALAE	53.5	56.7	79.9	33.5	22.6	7.1	253.3
ULAE	5.7	5.7	6.3	6.9	1.8	0.7	27.1
Total Loss and LAE	59.2	62.4	86.2	40.4	24.4	7.8	280.4
Underwriting expenses	43.9	47.2	59.8	27.2	22.7	7.6	208.4
Net underwriting (loss) gain	$ (11.7)	$ 9.6	$ (11.7)	$ 10.6	$ 1.4	$ 1.7	$ (0.1)
Cat loss and ALAE ratio	0.4 %	6.6 %	6.1 %	— %	4.9 %	— %	3.9 %
Non-cat loss and ALAE ratio							
Prior accident years non-cat loss and ALAE ratio	(5.1)%	(12.8)%	(8.8)%	(26.8)%	(6.0)%	(18.8)%	(12.0)%
Current accident year non-cat loss and ALAE ratio	63.3 %	53.8 %	62.2 %	69.7 %	47.8 %	60.1 %	60.0 %
Total non-cat loss and ALAE ratio	58.2 %	41.0 %	53.4 %	42.9 %	41.8 %	41.3 %	48.0 %
Total Loss and ALAE ratio	58.6 %	47.6 %	59.5 %	42.9 %	46.7 %	41.3 %	51.9 %
ULAE ratio	6.2 %	4.8 %	4.7 %	8.8 %	3.7 %	4.1 %	5.5 %
Total Loss and LAE ratio	64.8 %	52.4 %	64.2 %	51.7 %	50.4 %	45.4 %	57.4 %
Expense ratio	40.1 %	38.6 %	40.1 %	35.5 %	45.4 %	40.9 %	39.6 %
Combined ratio	104.9 %	91.0 %	104.3 %	87.2 %	95.8 %	86.3 %	97.0 %

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	$ 121.3	$ 89.0	$ 46.8	$ 16.4	$ 469.8
Net earned premiums	75.1	120.9	116.8	90.7	45.0	15.8	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)	(8.0)	(13.3)	(2.7)	(4.9)	(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	63.5	43.2	19.4	3.3	227.5
Total Loss and ALAE	39.1	69.9	70.7	43.2	22.7	3.5	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	76.3	50.4	24.5	4.6	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)	$ (9.0)	$ 11.2	$ (0.8)	$ 3.0	$ (8.4)
Cat loss and ALAE ratio	0.3 %	8.8 %	6.1 %	— %	7.3 %	1.4 %	4.6 %
Non-cat loss and ALAE ratio							
Prior accident years non-cat loss and ALAE ratio	(11.2)%	(7.9)%	(6.8)%	(14.7)%	(6.0)%	(31.0)%	(10.1)%
Current accident year non-cat loss and ALAE ratio	63.0 %	56.9 %	61.2 %	62.3 %	49.2 %	52.3 %	59.1 %
Total non-cat loss and ALAE ratio	51.8 %	49.0 %	54.4 %	47.6 %	43.2 %	21.3 %	49.0 %
Total Loss and ALAE ratio	52.1 %	57.8 %	60.5 %	47.6 %	50.5 %	22.7 %	53.6 %
ULAE ratio	5.6 %	5.1 %	4.8 %	7.9 %	3.9 %	6.8 %	5.6 %
Total Loss and LAE ratio	57.7 %	62.9 %	65.3 %	55.5 %	54.4 %	29.5 %	59.2 %
Expense ratio	46.5 %	44.9 %	40.8 %	32.7 %	45.6 %	50.0 %	42.0 %
Combined ratio	104.2 %	107.8 %	106.1 %	88.2 %	100.0 %	79.5 %	101.2 %

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. This 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 for small commercial package. We anticipate launching our farm and ranch product in State Auto Connect during the first quarter of 2020, our middle market commercial product during the second half of 2020 followed by workers' compensation in 2021.

The commercial insurance segment's net written premiums for the year ended December 31, 2019 increased 12.0% compared to 2018 (Tables 3 - 4), primarily driven by new business growth in commercial auto and middle market commercial. The 2019 increases were partially offset by a decrease in net written premiums in workers' compensation due to lower retention as a result of the continued intense competition in this market.

The commercial insurance segment's SAP catastrophe loss and ALAE ratio for the year ended December 31, 2019 was 3.9% compared to 4.6% in 2018 (Tables 3 - 4). Catastrophe events impacting the commercial insurance segment for 2019 were less severe when compared to 2018.

The commercial insurance segment's SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 was 48.0% compared to 49.0% in 2018. (Tables 3 - 4).

The commercial auto SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 increased 6.4 points when compared to 2018 (Tables 3 - 4). The non-catastrophe loss and ALAE ratio for 2019 was impacted by less favorable development of prior accident year losses of 5.1 points compared to favorable development of 11.2 points in 2018. The 2019 favorable development was primarily from the 2017 and 2018 accident years. The 2018 favorable development was primarily attributable to lower than anticipated bodily injury severity from the 2016 and 2017 accident years.

The small commercial package SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 improved 8.0 points compared to 2018 (Tables 3 - 4) primarily driven by greater favorable development of prior accident year losses attributable to lower than expected bodily injury severity from multiple accident years. In addition, 2019 was impacted by a lower level of current accident year property losses when compared to the same 2018 period, which was impacted by more weather-related claims and large fire losses.

The middle market commercial SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 improved 1.0 point compared to 2018 (Tables 3 - 4). The 2019 improvement was primarily driven by greater favorable development of prior accident year losses due to lower than expected bodily injury claim severity from multiple accident years. Partially offsetting the 2019 improvement in the non-catastrophe loss and ALAE ratio when compared to 2018 were large fire losses in the current accident year, including a single large loss that added 2.0 points to the loss ratio.

The workers' compensation SAP non-catastrophe loss and ALAE ratio for the year ended December 31, 2019 improved 4.7 points when compared to the same 2018 period. The 2019 loss ratio was impacted by greater favorable development of prior accident year losses when compared to the same 2018 period, primarily due to lower than anticipated severity from multiple accident years. Partially offsetting the 2019 improvement was a higher current accident year loss ratio when compared to 2018, which reflected (i) elevated claim frequency and severity, and (ii) a single large loss that added 3.5 points to the loss ratio.

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, 2019 and 2018:

($ millions)	**2019**	**% GAAP Loss and LAE Ratio**	2018	% GAAP Loss and LAE Ratio
Provision for losses and loss expenses occurring:				
Current year	**$ 913.5**	**72.9 %**	$ 876.6	70.8 %
Prior years	**(68.7)**	**(5.5)%**	(80.2)	(6.5)%
Total losses and loss expenses	**$ 844.8**	**67.4 %**	$ 796.4	64.3 %

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, 2019 and 2018:

($ millions)	**2019**	2018
	(Redundancy)/Deficiency	
Non-cat loss and ALAE:		
Personal Insurance Segment:		
Personal Auto	**$ (10.7)**	$ (24.4)
Homeowners	**0.3**	(7.3)
Other Personal	**(2.1)**	(1.1)
Total Personal Insurance Segment	**(12.5)**	(32.8)
Commercial Insurance Segment:		
Commercial Auto	**(4.7)**	(8.4)
Small Commercial Package	**(15.2)**	(9.6)
Middle Market Commercial	**(11.8)**	(8.0)
Workers' Compensation	**(20.9)**	(13.3)
Farm & Ranch	**(3.0)**	(2.7)
Other Commercial	**(3.2)**	(4.9)
Total Commercial Insurance Segment	**(58.8)**	(46.9)
Specialty run-off	**(1.1)**	3.1
Total non-cat loss and ALAE	**(72.4)**	(76.6)
Cat loss and ALAE:		
Personal Insurance Segment	**(4.2)**	0.3
Commercial Insurance Segment	**(0.8)**	2.7
Specialty run-off	**10.7**	0.5
Total cat loss and ALAE	**5.7**	3.5
ULAE	**(2.0)**	(7.1)
Total	**$ (68.7)**	$ (80.2)

For further information, see the discussion below and the "Personal Insurance Segment" and "Commercial 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, 2019:

($ millions) Accident Year	**2019**
	(Redundancy)/Deficiency
2009 and prior	**$ (2.6)**
2010	**(1.9)**
2011	**(1.6)**
2012	**(2.0)**
2013	**(3.5)**
2014	**(4.6)**
2015	**(10.8)**
2016	**(5.9)**
2017	**(11.9)**
2018	**(23.9)**
Total	**$ (68.7)**

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 2019 development were as follows:

- The commercial insurance segment non-catastrophe loss and ALAE reserves contributed $58.8 million of favorable development, driven by workers' compensation, small commercial package, and middle market commercial which contributed $20.9 million, $15.2 million, and $11.8 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 $12.5 million of the favorable development, driven by personal auto which contributed $10.7 million of favorable development, primarily due to lower than anticipated bodily injury severity.
- ULAE was $2.0 million lower than anticipated in the reserves at December 31, 2018.
- Catastrophe reserves in specialty run-off contributed $10.7 million of adverse development primarily from Hurricanes Irma and Harvey. Partially offsetting the adverse development in specialty run-off was $5.0 million of favorable development in the personal and commercial insurance segments.

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)

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, small commercial package, commercial auto, and middle market commercial, which contributed $13.3 million, $9.6 million, $8.4 million and $8.0 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 run-off 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 loss and loss expenses payable by major line of business at 2019 and 2018:

($ millions)	2019	2018	$ Change
Personal Insurance Segment:			
Personal auto	$ **162.9**	$ 173.2	$ (10.3)
Homeowners	**69.2**	53.2	16.0
Other Personal	**15.1**	14.1	1.0
Total Personal Insurance Segment	**247.2**	240.5	6.7
Commercial Insurance Segment:			
Commercial Auto	**76.7**	78.9	(2.2)
Small Commercial Package	**110.5**	120.0	(9.5)
Middle Market Commercial	**152.8**	147.2	5.6
Workers' Compensation	**187.8**	195.4	(7.6)
Farm & Ranch	**13.3**	12.9	0.4
Other Commercial	**30.9**	27.5	3.4
Total Commercial Insurance Segment	**572.0**	581.9	(9.9)
Specialty run-off:			
E&S Property	**27.8**	33.1	(5.3)
E&S Casualty	**145.9**	186.8	(40.9)
Programs	**60.0**	99.0	(39.0)
Total Specialty run-off	**233.7**	318.9	(85.2)
Total losses and loss expenses payable net of reinsurance recoverable on losses and loss expenses payable	$ **1,052.9**	$ 1,141.3	$ (88.4)

The loss and loss expenses payable at December 31, 2019 decreased $88.4 million from the loss and loss expenses payable at December 31, 2018, primarily due to the run-off of specialty 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 $442.0 million in 2019 compared to $449.8 million in 2018. Acquisition and operating expenses for 2019 decreased when compared to 2018 primarily due to a decrease in variable incentive compensation and amortization of deferred acquisition costs, partially offset by increases in report ordering costs and EDP software cost amortization.

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.

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 compared to how we manage our large-cap equity holdings.

At December 31, 2019, our investments in fixed maturities, equity securities and certain other invested assets were 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 gain (loss)" in the condensed consolidated statements of income for the years ended December 31, 2019 and 2018, respectively.

Composition of Investment Portfolio

The following table sets forth the composition of our investment portfolio at carrying value at December 31, 2019 and 2018:

($ millions)	2019	% of Total	2018	% of Total
Cash and cash equivalents	**$ 78.0**	**2.8 %**	$ 59.8	2.2 %
Fixed maturities, at fair value:				
Fixed maturities	**1,992.3**	**72.5 %**	2,017.1	75.9 %
Treasury inflation-protected securities	**135.6**	**5.0 %**	142.4	5.4 %
Total fixed maturities	**2,127.9**	**77.5 %**	2,159.5	81.3 %
Notes receivable from affiliate [(1)]	**70.0**	**2.5 %**	70.0	2.6 %
Equity securities:				
Large-cap securities	**104.4**	**3.8 %**	77.2	2.9 %
Mutual and exchange traded funds	**290.8**	**10.6 %**	237.8	8.9 %
Total equity securities	**395.2**	**14.4 %**	315.0	11.8 %
Other invested assets:				
International instruments	**56.4**	**2.1 %**	38.5	1.5 %
Other invested assets	**13.3**	**0.5 %**	10.3	0.4 %
Total other invested assets	**69.7**	**2.6 %**	48.8	1.9 %
Other invested assets, at cost	**6.5**	**0.2 %**	5.6	0.2 %
Total portfolio	**$ 2,747.3**	**100.0 %**	$ 2,658.7	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. In May 2019, the Company refinanced the two credit agreements at an interest rate of 4.05%, with principal payable in May 2029.

The following table sets forth the amortized cost and fair value of available-for-sale fixed maturities by contractual maturity at December 31, 2019:

($ millions)	Amortized Cost	Fair Value
Due in 1 year or less	**$ 107.9**	**$ 108.8**
Due after 1 year through 5 years	**565.4**	**575.0**
Due after 5 years through 10 years	**158.1**	**166.2**
Due after 10 years	**602.6**	**625.4**
U.S. government agencies residential mortgage-backed securities	**646.0**	**652.5**
Total	**$ 2,080.0**	**$ 2,127.9**

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, 2019, our equity portfolio consisted of approximately 38 different large-cap stocks and 17 mutual and exchange traded funds. The largest single fund holding was 18.7% of the equity portfolio based on fair value and the top ten positions accounted for 68.6% of the equity portfolio. 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.

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 4.17 and 4.23 as of December 31, 2019 and 2018, 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, 2019:

($ 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	$ 664.3	$ 618.5	$ 578.2	$ 540.7	$ 506.3
Obligations of states and political subdivisions	459.5	442.0	425.4	409.1	390.8
Corporate securities	501.1	486.1	471.8	457.6	443.7
U.S. government agencies mortgage-backed securities	687.3	670.1	652.5	639.3	611.9
Balance as of December 31, 2019	$ 2,312.2	$ 2,216.7	$ 2,127.9	$ 2,046.7	$ 1,952.7

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 88.9% of the bonds we own are rated A 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, 2019, approximately $652.5 million, or 30.7%, 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, 2019:

($ millions)

Rating	Total fair value	%
AAA	**$ 31.8**	**7.5**
AA*	**308.5**	**72.5**
A	**75.6**	**17.8**
BBB	**9.5**	**2.2**
Total	**$ 425.4**	**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 4.9% 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 15% 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 61.3% of our Muni Portfolio and state and local government general obligation bonds make up 22.7% 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, 2019, our large-cap equity portfolio had a weighted beta of 1.02 using the S&P 500 Index as the benchmark. At December 31, 2019, our mutual and exchange traded funds portfolio had a weighted beta of 1.00 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, 2019:

Large-cap equity portfolio:					
Fair value ($ millions)	$ 125.7	$ 115.0	$ 104.4	$ 93.7	$ 83.1
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)	$ 348.9	$ 319.9	$ 290.8	$ 261.7	$ 232.6
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, 2019, we had one international fund, which was included in other invested assets. The international fund had a beta of 0.71 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, 2019:

International fund:					
Fair value *($ millions)*	$ 64.4	$ 60.4	$ 56.4	$ 52.4	$ 48.4
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, 2019 and 2018:

($ millions)	Year Ended December 31	
	2019	2018
Gross investment income:		
Fixed maturities	**$ 62.3**	$ 65.3
Equity securities	**13.2**	13.4
Other	**5.5**	7.2
Total gross investment income	**81.0**	85.9
Less: Investment expenses	**0.6**	1.0
Net investment income	**$ 80.4**	$ 84.9
Average invested assets (at cost)	**$ 2,635.4**	$ 2,691.1
Annualized investment yield	**3.0 %**	3.2 %
Annualized investment yield, after tax	**2.5 %**	2.6 %
Net investment income, after tax	**$ 65.7**	$ 69.3
Effective tax rate	**18.2 %**	18.3 %

Our investment operations revenue for the year ended December 31, 2019 decreased when compared to the same 2018 period due to (i) lower yields on bonds purchased and bonds owned in the portfolio, (ii) decreased income from our TIPS bonds, driven by the change in the CPI Index, and (iii) a slightly smaller bond portfolio.

The following table sets forth realized gains (losses) and the proceeds received on sale for our investment portfolio for the years ended December 31, 2019 and 2018:

($ millions)	**2019**		2018	
	Realized gains (losses)	**Proceeds received on sale**	Realized gains (losses)	Proceeds received on sale
Realized gains:				
Fixed maturities	**$ 3.5**	**$ 308.8**	$ 2.0	$ 98.0
Equity securities	**2.4**	**25.2**	6.6	88.5
Total realized gains	**$ 5.9**	**$ 334.0**	$ 8.6	$ 186.5
Realized losses:				
Equity securities:				
Sales	**$ (4.2)**	**$ 20.2**	$ (0.9)	$ 9.3
Other invested assets	**—**	**1.3**	—	1.2
Total realized losses	**$ (4.2)**	**$ 21.5**	$ (0.9)	$ 10.5
Net realized gains on investments	**$ 1.7**	**$ 355.5**	$ 7.7	$ 197.0

We did not recognize any impairments on our fixed maturity portfolio during 2019 or 2018. 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. Future increases or decreases in fair value, if not other-than-temporary, are included in accumulated other comprehensive income (loss). See "Critical Accounting Policies – Investments" included in this Item 7 for OTTI impairment indicators.

Gross Unrealized Investment Gains and Losses

Based upon our review of our investment portfolio at December 31, 2019, 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, 2019:

($ 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
Available-for-sale fixed maturities:						
U.S. treasury securities and obligations of U.S. government agencies	**$ 569.2**	**$ 12.3**	**36**	**$ (3.3)**	**28**	**$ 578.2**
Obligations of states and political subdivisions	**404.3**	**21.1**	**86**	**—**	**—**	**425.4**
Corporate securities	**460.5**	**11.7**	**58**	**(0.4)**	**7**	**471.8**
U.S. government agencies mortgage-backed securities	**646.0**	**11.1**	**57**	**(4.6)**	**47**	**652.5**
Total available-for-sale fixed maturities	**$ 2,080.0**	**$ 56.2**	**237**	**$ (8.3)**	**82**	**$ 2,127.9**

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, 2019 and 2018, and the change in unrealized holding gains, net of deferred tax, for the year ended December 31, 2019:

($ millions)	**2019**	2018	$ Change
Available-for-sale investments			
Unrealized holding gains (losses):			
Fixed maturities	**$ 47.9**	$ (28.7)	$ 76.7
Net deferred federal income tax	**(10.1)**	6.0	(16.1)
Unrealized gains (losses), net of tax	**$ 37.8**	$ (22.7)	$ 60.6

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 3, “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, 2019.

Other Items

Income Taxes

For the year ended December 31, 2019, the federal income tax expense was $19.6 million compared to $0.1 million for 2018. Our effective tax rate for 2019 was 18.3% compared with 0.5% in 2018. The change in our effective tax rate in 2019 when compared to 2018 was primarily due to unrealized gains in 2019 versus unrealized losses in 2018 in relation to the tax exempt income that remained comparable.

See “Critical Accounting Policies — Income Taxes” included in this Item 7. See Note 9, “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, 2019 and 2018.

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, which includes funding for any of our 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 2019 or 2018.

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, 2019 and 2018, we had $78.0 million and $59.8 million, respectively, in cash and cash equivalents, and $2,592.8 million and $2,523.3 million, respectively, of total investments. Our available-for-sale fixed maturities included $9.3 million and $8.9 million, respectively, of securities on deposit with insurance regulators, as required by law, at December 31, 2019 and 2018. 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 $43.9 million and $13.4 million in 2019 and 2018, respectively. Net cash from operations will vary from period to period if there are significant changes in underwriting results, primarily the level of premiums written or loss and loss expenses paid, and in cash flows from investment income.

Net cash provided by investing activities was $74.1 million in 2019, compared to net cash used by investing activities of $16.0 million in 2018. The change from 2019 compared to 2018 was primarily driven by increases in the proceeds from the sales and maturities of fixed maturities partially offset by an increase in the purchases of fixed maturities.

Net cash used in financing activities was $12.0 million and $2.3 million in 2019 and 2018, respectively. The change was primarily driven by a decrease in stock option exercises in 2019 when compared to 2018.

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. The OLC matures in April 2020, and our current intention is to renew the OLC for another year. 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, 2019, 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 matures in September 2021 and may be prepaid without 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 matures in May 2033 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 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, 2019 and 2018 were 6.11% and 6.94%, respectively.

Notes Payable Summary

The following table sets forth our notes payable at December 31, 2019:

($ 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**	**6.11 %**
FHLB loan due 2033: issued $85.0 million, May 2018 with fixed interest	**85.3**	**97.8**	**3.96 %**
FHLB loan due 2021: issued $21.5 million , September 2016 with fixed interest	**21.5**	**21.5**	**1.73 %**
Total notes payable	**$ 122.0**	**$ 134.5**	

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, 2019, 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, that provides for $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, 2019. 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. There is also an automatic restatement of the limit, for 125% of the deposit premium.

Property Per Risk Treaty

As of July 1, 2019, 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. 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, 2019, 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.

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 $20.0 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.

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.

Oil & Gas Quota Share

Effective March 1, 2018, the State Auto Group entered into a quota share agreement ("Oil & Gas Quota Share") covering its gas & propane distribution book of business. The Oil & Gas Quota Share expired February 28, 2019 on a run-off basis.

Contractual Obligations

The following table sets forth our significant contractual obligations at December 31, 2019:

($ 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]	$ 1,052.9	$ 463.1	$ 370.1	$ 117.1	$ 102.6
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	0.8	0.4	0.4	—	—
FHLB loan due 2033; issued $85.0 million, May 2018 with fixed interest	48.8	3.4	6.7	6.7	32.0
Subordinated Debentures due 2033: issued $15.5, May 2003 with variable interest[3] adjusting quarterly	13.7	0.9	1.9	1.9	9.0
Total interest payable	63.3	4.7	9.0	8.6	41.0
Postretirement benefits	18.0	2.1	3.9	3.6	8.4
Pension funding[4]	66.1	6.3	13.7	14.0	32.1
Total	$ 1,322.3	$ 476.2	$ 418.2	$ 143.3	$ 284.6

(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, 2019 of 1.9138% plus 4.20%, or 6.1138%.

(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 10, "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, 2019 and 2018, 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, 2019 and 2018:

Statutory Leverage Ratios	**2019**	2018
State Auto P&C	**1.5**	1.4
Milbank	**1.5**	1.7
Weighted Average	**1.5**	1.4

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, $91.3 million is available for payment to State Auto Financial from its insurance subsidiaries in 2020 without prior approval. State Auto Financial received dividends from its insurance subsidiaries in the amount of $10.0 million and $10.0 million in 2019 and 2018.

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, 2019, the ratio of total adjusted statutory capital to authorized control level of State Auto Financial's insurance subsidiaries ranged from 482% to 21,472%.

Credit and Financial Strength Ratings

As of June 20, 2019, 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 gain (loss)" in the condensed consolidated statements of income for the year ended December 31, 2019 and 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 claims that have not yet been reported. 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 allocated loss adjustment expenses incurred, and subtract all amounts already paid or held as case or formula reserves. Note that reference to losses below implicitly includes allocated loss adjustment expenses.

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 ultimate losses, and thus 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 ultimate losses, and thus indicated IBNR reserves. This method uses paid loss experience as well as the outstanding amounts (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 outstanding amounts, 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 actuaries. 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 to rely upon 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 or other sources.

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 to-date as the weight on the Incurred Loss Development Method. This method is particularly useful where there is a low volume of data in the more recent accident periods 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 Loss Development Method, using the percentage of losses paid to-date as the weight on the Paid Loss Development Method. 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, open claim severity, and prior period development. For example, if more than one method provides a reasonable projection, the actuary may select a weighted 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, 2019, loss and loss expenses payable were $1,052.9 million, within an estimated range of $927.7 million to $1,094.4 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, $1,094.4 million, the reserve increase of $41.5 million corresponds to an after-tax decrease of $32.7 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, $927.7 million, the $125.2 million reserve decrease would add $98.9 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, 2019, workers' compensation loss and ALAE reserve balance 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 $111.3 million on reserves, or a $88.0 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, 2019 and 2018. The STFC Pooled Companies net additional share of transactions assumed from State Auto Mutual through the Pooling Arrangement for the years ended December 31, 2019 and 2018, respectively, has been reflected in the table below as assumed by STFC Pooled Companies.

($ millions)	**2019**	2018
Direct loss and ALAE reserve:		
STFC Pooled Companies	**$ 534.3**	$ 523.1
Assumed by STFC Pooled Companies	**537.8**	633.0
Total direct loss and ALAE reserve	**1,072.1**	1,156.1
Direct ULAE reserve:		
STFC Pooled Companies	**29.0**	28.7
Assumed by STFC Pooled Companies	**28.2**	30.7
Total direct ULAE reserve	**57.2**	59.4
Direct salvage and subrogation recoverable:		
STFC Pooled Companies	**(23.2)**	(20.9)
Assumed by STFC Pooled Companies	**(3.2)**	(3.9)
Total direct salvage and subrogation recoverable	**(26.4)**	(24.8)
Reinsurance recoverable	**(13.6)**	(5.5)
Assumed reinsurance	**6.4**	22.3
Reinsurance assumed by STFC Pooled Companies	**(42.8)**	(66.2)
Total losses and loss expenses payable, net of reinsurance recoverable on losses and loss expenses payable of $13.6 million and $5.5 million in 2019 and 2018, respectively	**$ 1,052.9**	$ 1,141.3

The following tables set forth the net losses and loss expenses payable by major line of business at December 31, 2019 and 2018:

($ millions) **December 31, 2019**	Ending Loss & ALAE Case & Formula	Ending Loss & ALAE IBNR	Ending ULAE Bulk	Total Reserves
Personal Insurance Segment:				
Personal Auto	**$ 112.1**	**$ 43.7**	**$ 7.1**	**$ 162.9**
Homeowners	**36.7**	**28.1**	**4.4**	**69.2**
Other personal	**5.4**	**9.0**	**0.7**	**15.1**
Total Personal Insurance Segment	**154.2**	**80.8**	**12.2**	**247.2**
Commercial Insurance Segment:				
Commercial Auto	**46.3**	**27.6**	**2.8**	**76.7**
Small Commercial Package	**41.1**	**64.1**	**5.3**	**110.5**
Middle Market Commercial	**62.4**	**76.5**	**13.9**	**152.8**
Workers' Compensation	**67.6**	**106.6**	**13.6**	**187.8**
Farm & Ranch	**8.4**	**4.4**	**0.5**	**13.3**
Other Commercial	**2.5**	**28.4**	**—**	**30.9**
Total Commercial Insurance Segment	**228.3**	**307.6**	**36.1**	**572.0**
Specialty run-off:				
E&S Property	**14.9**	**12.2**	**0.7**	**27.8**
E&S Casualty	**44.4**	**94.7**	**6.8**	**145.9**
Programs	**34.8**	**23.0**	**2.2**	**60.0**
Total Specialty run-off	**94.1**	**129.9**	**9.7**	**233.7**
Total losses and loss expenses payable net of reinsurance recoverable on losses and loss expenses payable	**$ 476.6**	**$ 518.3**	**$ 58.0**	**$ 1,052.9**

($ 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 run-off:				
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 run-off	120.9	185.2	12.8	318.9
Total losses and loss expenses payable net of reinsurance recoverable on losses and loss expenses payable	$ 520.1	$ 561.4	$ 59.8	$ 1,141.3

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.

At December 31, 2019, asbestos reserves were $2.2 million and environmental reserves were $20.8 million, for a total reserve of $23.0 million, or 2.2% of net losses and loss expenses payable. Relative to December 31, 2018, asbestos and environmental reserves increased $1.0 million and $4.1 million, respectively.

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, 2019 and 2018 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, 2019 and 2018 actuarial reports of the benefit plans included these revised mortality assumptions.

To calculate the State Auto Group's December 31, 2019 benefit obligation for each of the benefit plans, we used a discount rate of 3.10% 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, 2019 and net periodic benefit cost for the year ended December 31, 2020, a discount rate of 3.10% and an expected long-term rate of return on plan assets of 6.50% 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 decreased $3.6 million for the year ended December 31, 2019 and increased $5.0 million for the year ended December 31, 2018.

The following table sets forth an illustration of variability with respect to the discount rate on the December 31, 2019 benefit obligation and expected net periodic benefit cost for the year ending December 31, 2020, along with the variability of the expected return on plan assets to the expected net periodic benefit cost for the year ending December 31, 2020. 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		
	2.85%	3.10%	3.35%	2.85%	3.10%	3.35%
Benefit obligation	$ 493.6	478.2	459.2	$ 25.6	25.0	24.5
Net periodic benefit cost (benefit)	$ 6.8	5.8	4.9	$ (4.8)	(4.8)	(4.8)
	Expected return on plan assets					
	6.25%	6.50%	6.75%			
Net periodic benefit cost	$ 6.5	5.8	5.1			

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, 2019, our ABO and PBO were $453.8 million and $478.2 million, respectively. At December 31, 2019, our defined benefit pension plan's fair value of the assets was $442.1 million, which resulted in an underfunded status within our balance sheet of $36.1 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 $10.0 million in 2020.

The unfunded status on the pension plan and supplemental executive retirement plan decreased from $57.5 million at December 31, 2018, to $47.9 million at December 31, 2019. 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 10, "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 2019, we recognized federal income tax benefit of $19.6 million compared to a federal income tax expense of $0.1 million for 2018.

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.

The net operating loss carryforwards do not begin to expire until 2032 and will not fully expire until 2038. Management anticipates generating future taxable income that will allow for the realization of all of our net operating loss carryforwards before expiration.

The following table sets forth the components of our federal income tax expense (benefit) for the years ended December 31, 2019 and 2018:

($ millions)	2019	2018
Income before federal income taxes	$ 107.0	$ 12.9
Current tax benefit	(0.4)	(1.1)
Deferred tax expense	20.0	1.2
Total federal income tax expense	19.6	0.1
Net income	$ 87.4	$ 12.8

See Note 9, "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, 2019 and 2018, 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, 2019, 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, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, 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, 2019, 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 February 27, 2020 expressed an unqualified opinion thereon.

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

February 27, 2020

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, 2019, 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, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, 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, 2019, and the related notes and financial statement schedules listed in the Index at Item 15(a)(2) and our report dated February 27, 2020, 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

February 27, 2020

Consolidated Balance Sheets

($ and shares in millions, except per share amounts)	December 31	
	2019	2018
Assets		
Fixed maturities, available-for-sale, at fair value (amortized cost $2,080.0 and $2,188.2, respectively)	**$ 2,127.9**	$ 2,159.5
Equity securities	**395.2**	315.0
Other invested assets	**69.7**	48.8
Other invested assets, at cost	**6.5**	5.6
Notes receivable from affiliate	**70.0**	70.0
Total investments	**2,669.3**	2,598.9
Cash and cash equivalents	**78.0**	59.8
Accrued investment income and other assets	**31.7**	32.4
Deferred policy acquisition costs (affiliated net assumed $20.2 and $19.9, respectively)	**111.1**	101.9
Reinsurance recoverable on losses and loss expenses payable	**13.6**	5.5
Prepaid reinsurance premiums	**7.5**	6.6
Due from affiliate	**21.5**	—
Current federal income taxes	**6.3**	5.9
Net deferred federal income taxes	**42.2**	77.8
Property and equipment, at cost (net of accumulated depreciation of $5.9 and $7.5, respectively)	**4.2**	7.1
Total assets	**$ 2,985.4**	$ 2,895.9
Liabilities and Stockholders' Equity		
Losses and loss expenses payable (affiliated net assumed $500.8 and $593.6, respectively)	**$ 1,066.5**	$ 1,146.8
Unearned premiums (affiliated net assumed $116.7 and $112.4, respectively)	**649.2**	584.2
Notes payable (affiliates $15.2 and $15.2, respectively)	**122.0**	122.0
Pension and postretirement benefits	**72.9**	83.0
Due to affiliate	**—**	22.4
Other liabilities (affiliated net assumed $19.5 and $17.7, respectively)	**114.9**	119.0
Total liabilities	**2,025.5**	2,077.4
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; 50.4 and 50.0 shares issued, respectively, at stated value of $2.50 per share	**125.9**	125.0
Treasury stock, 6.9 and 6.8 shares, respectively, at cost	**(117.5)**	(117.0)
Additional paid-in capital	**206.7**	194.2
Accumulated other comprehensive loss	**(37.9)**	(96.4)
Retained earnings	**782.7**	712.7
Total stockholders' equity	**959.9**	818.5
Total liabilities and stockholders' equity	**$ 2,985.4**	$ 2,895.9

See accompanying notes to consolidated financial statements.

Consolidated Statements of Income

($ millions, except per share amounts)	Year ended December 31		
	2019	2018	2017
Earned premiums (affiliated net assumed $220.3, $318.3, and $459.0, respectively)	**$ 1,253.0**	$ 1,238.0	$ 1,276.1
Net investment income (affiliates $3.6, $4.9, and $4.9, respectively)	**80.4**	84.9	78.8
Net investment gain (loss):			
Total other-than-temporary impairment losses	**—**	—	(3.5)
Other investment gain (loss)	**74.2**	(49.7)	68.6
Total net investment gain (loss)	**74.2**	(49.7)	65.1
Other income from affiliates	**2.4**	2.6	2.3
Total revenues	**1,410.0**	1,275.8	1,422.3
Losses and loss expenses (affiliated net assumed $169.3, $180.5, and $379.4, respectively)	**844.8**	796.4	918.3
Acquisition and operating expenses (affiliated net assumed $69.1, $108.7, and $160.7, respectively)	**442.0**	449.8	455.2
Interest expense (affiliates $1.1, $1.0, and $0.8, respectively)	**4.9**	5.7	5.9
Other expenses	**11.3**	11.0	7.9
Total expenses	**1,303.0**	1,262.9	1,387.3
Income before federal income taxes	**107.0**	12.9	35.0
Federal income tax expense			
Current	**(0.4)**	(1.1)	0.4
Deferred	**20.0**	1.2	52.4
Total federal income tax expense	**19.6**	0.1	52.8
Net income (loss)	**$ 87.4**	$ 12.8	$ (17.8)
Earnings (loss) per common share:			
Basic	**$ 2.01**	$ 0.30	$ (0.42)
Diluted	**$ 1.96**	$ 0.29	$ (0.42)
Dividends paid per common share	**$ 0.40**	$ 0.40	$ 0.40

See accompanying notes to consolidated financial statements.

Consolidated Statements of Comprehensive Income (Loss)

($ millions)	Year ended December 31		
	2019	2018	2017
Net income (loss)	**$ 87.4**	$ 12.8	$ (17.8)
Other comprehensive income (loss), net of tax:			
Net change in unrealized holding gain (loss) on available-for-sale investments:			
Unrealized holding gains (losses) arising during year	**80.2**	(46.4)	69.0
Reclassification adjustments for gains realized in net income	**(3.5)**	(2.0)	(65.1)
Income tax (expense) benefit	**(16.1)**	10.1	(0.7)
Total change in net unrealized holding gain (loss) on available-for-sale investments	**60.6**	(38.3)	3.2
Net unrecognized benefit plan obligations:			
Net actuarial loss arising during period	**(5.9)**	(4.3)	(1.5)
Reclassification adjustments for amortization to statements of income:			
Negative prior service cost	**(6.3)**	(6.3)	(6.3)
Net actuarial gain	**9.6**	13.2	12.5
Income tax benefit (expense)	**0.5**	(0.6)	(1.7)
Total net unrecognized benefit plan obligations	**(2.1)**	2.0	3.0
Other comprehensive income (loss)	**58.5**	(36.3)	6.2
Comprehensive income (loss)	**$ 145.9**	$ (23.5)	$ (11.6)

See accompanying notes to consolidated financial statements.

Consolidated Statements of Stockholders' Equity

(in millions)	Year ended December 31		
	2019	2018	2017
Common shares:			
Balance at beginning of year	**50.0**	49.2	48.6
Issuance of shares	**0.4**	0.8	0.6
Balance at end of year	**50.4**	50.0	49.2
Treasury shares:			
Balance at beginning of year	**(6.8)**	(6.8)	(6.8)
Issuance of shares	**(0.1)**	—	—
Balance at end of year	**(6.9)**	(6.8)	(6.8)
Common stock:			
Balance at beginning of year	**$ 125.0**	$ 123.0	$ 121.6
Issuance of shares	**0.9**	2.0	1.4
Balance at end of year	**$ 125.9**	$ 125.0	$ 123.0
Treasury stock:			
Balance at beginning of year	**$ (117.0)**	$ (116.8)	$ (116.5)
Shares acquired on stock award exercises and vested restricted shares	**(0.5)**	(0.2)	(0.3)
Balance at end of year	**$ (117.5)**	$ (117.0)	$ (116.8)
Additional paid-in capital:			
Balance at beginning of year	**$ 194.2**	$ 171.8	$ 159.9
Issuance of common stock	**5.1**	13.3	8.8
Stock awards granted	**7.4**	9.1	3.1
Balance at end of year	**$ 206.7**	$ 194.2	$ 171.8
Accumulated other comprehensive (loss) income:			
Balance at beginning of year	**$ (96.4)**	$ 3.8	$ (2.4)
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)	—
Change in unrealized holding gain (loss) on investments, net of tax	**60.6**	(38.3)	3.2
Change in unrecognized benefit plan obligations, net of tax	**(2.1)**	2.0	3.0
Balance at end of year	**$ (37.9)**	$ (96.4)	$ 3.8
Retained earnings:			
Balance at beginning of year	**$ 712.7**	$ 653.2	$ 687.9
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	—
Net income (loss)	**87.4**	12.8	(17.8)
Dividends declared (affiliates $10.4, $10.4 and $10.4, respectively)	**(17.4)**	(17.2)	(16.9)
Balance at end of year	**$ 782.7**	$ 712.7	$ 653.2
Total stockholders' equity at end of year	**$ 959.9**	$ 818.5	$ 835.0

See accompanying notes to consolidated financial statements.

Consolidated Statements of Cash Flows

($ millions)	Year ended December 31		
	2019	2018	2017
Cash flows from operating activities:			
Net income (loss)	**$ 87.4**	$ 12.8	$ (17.8)
Adjustments to reconcile net income (loss) to net cash (used in) provided by operating activities:			
Depreciation and amortization, net	**9.4**	8.9	12.5
Share-based compensation	**6.1**	11.1	4.2
Net investment (gain) loss	**(74.2)**	49.7	(65.1)
Changes in operating assets and liabilities:			
Deferred policy acquisition benefits	**(9.2)**	8.4	11.5
Accrued investment income and other assets	**0.7**	3.9	3.5
Postretirement and pension benefits	**(14.5)**	(16.9)	(14.8)
Reinsurance recoverable on losses and loss expenses payable and prepaid reinsurance premiums	**(9.0)**	(2.6)	0.2
Other liabilities and due to/from affiliates, net	**(44.9)**	47.6	11.3
Losses and loss expenses payable	**(80.3)**	(108.8)	74.0
Unearned premiums	**65.0**	(27.6)	(6.0)
Deferred tax expense on share-based awards	**(0.9)**	0.9	—
Federal income taxes	**20.5**	(0.8)	54.4
Net cash (used in) provided by operating activities	**$ (43.9)**	$ (13.4)	$ 67.9
Cash flows from investing activities:			
Purchases of fixed maturities available-for-sale	**$ (592.6)**	$ (349.6)	$ (505.4)
Purchases of equity securities	**(63.4)**	(91.4)	(185.9)
Purchases of other invested assets	**(13.3)**	(1.8)	(1.4)
Maturities, calls and pay downs of fixed maturities available-for-sale	**386.3**	229.8	233.6
Sales of fixed maturities available-for-sale	**308.8**	98.0	184.8
Sales of equity securities	**45.4**	97.8	252.7
Sales of other invested assets	**1.3**	1.2	1.1
Net disposals of property and equipment	**1.6**	—	—
Net cash provided by (used in) investing activities	**$ 74.1**	$ (16.0)	$ (20.5)
Cash flows from financing activities:			
Proceeds from issuance of common stock	**$ 5.9**	$ 15.4	$ 10.2
Payments to acquire treasury stock	**(0.5)**	(0.2)	(0.3)
Payments of dividends (affiliates $10.4, $10.4 and $10.4, respectively)	**(17.4)**	(17.1)	(16.9)
Payment of prepayment fee	**—**	(0.4)	—
Net cash used in financing activities	**$ (12.0)**	$ (2.3)	$ (7.0)
Net increase (decrease) in cash and cash equivalents	**18.2**	(31.7)	40.4
Cash and cash equivalents at beginning of year	**59.8**	91.5	51.1
Cash and cash equivalents at end of year	**$ 78.0**	$ 59.8	$ 91.5
Supplemental disclosures:			
Interest paid (affiliates $1.1, $1.0, and $0.8, respectively)	**$ 4.8**	$ 5.7	$ 5.7
Federal income tax refund	**$ —**	$ —	$ (1.6)

See accompanying notes to consolidated financial statements.

Notes to Consolidated Financial Statements

1. Summary of Significant Accounting Policies

a. Principles of Consolidation

The consolidated financial statements include State Auto Financial Corporation ("State Auto Financial"), an Ohio corporation, and the following wholly owned subsidiaries of State Auto Financial:

- State Auto Property and Casualty Insurance Company ("State Auto P&C"), an Iowa corporation
- Milbank Insurance Company ("Milbank"), an Iowa corporation
- State Auto Insurance Company of Ohio ("SA Ohio"), an Ohio corporation
- Stateco Financial Services, Inc. ("Stateco"), an Ohio corporation

The consolidated financial statements also include the operations and financial position of 518 Property Management and Leasing, LLC ("518 PML"), an Ohio limited liability company whose only members are State Auto P&C and Stateco.

State Auto Financial is a majority-owned subsidiary of State Automobile Mutual Insurance Company ("State Auto Mutual"), an Ohio corporation. State Auto Financial and its subsidiaries are referred to herein as the "Company." All intercompany balances and transactions have been eliminated in consolidation.

b. Description of Business

The Company markets its insurance products throughout the United States primarily through independent agencies, which include retail agencies and wholesale brokers. The Company's principal lines of insurance include personal and commercial automobile, homeowners, commercial multi-peril, workers' compensation, general liability and fire insurance. State Auto P&C, Milbank and SA Ohio are chartered and licensed property and casualty insurers. As such, they are subject to the regulations of the applicable Departments of Insurance of their respective states of domicile (the "Departments") and the regulations of each state in which they operate. These property and casualty insurance companies undergo periodic financial examination by the Departments and insurance regulatory agencies of the states that choose to participate. A large portion of the Company's revenues are derived from a reinsurance pooling agreement with State Auto Mutual and its affiliates. The underwriting activity and geographic distribution of State Auto Mutual and its affiliates is generally the same as the underwriting activity and geographic distribution of the Company.

Through the employees of State Auto P&C, the Company provides management and operation services under management agreements for all of its insurance and non-insurance affiliates.

Through Stateco, the Company provides investment management services to affiliated companies.

518 PML owns and leases property to the Company's affiliates.

c. Basis of Presentation

The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP"), which vary in certain respects from statutory accounting practices ("SAP") followed by State Auto P&C, Milbank and SA Ohio that are prescribed or permitted by the Departments.

The Company's insurance subsidiaries, domiciled in Ohio and Iowa, are required to prepare statutory basis financial statements in accordance with the accounting practices prescribed or permitted by the insurance departments of the states of domicile. Prescribed statutory accounting practices are those practices that are incorporated directly or by reference in state laws, regulations, and general administrative rules applicable to all insurance enterprises domiciled in a particular state. The Ohio and Iowa Departments of Insurance require insurers domiciled in their respective states to prepare statutory financial statements in accordance with National Association of Insurance Commissioners' ("NAIC") statutory accounting practices. Permitted statutory accounting practices are those practices that differ either from state-prescribed statutory accounting practices or NAIC statutory accounting practices. The Company's insurance subsidiaries do not apply any statutory accounting practices that would be considered a prescribed statutory accounting practice that differs from NAIC statutory accounting practices.

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 periods then ended, and 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 herein.

Material estimates that are particularly susceptible to significant change in the near term relate to the determination of losses and loss expenses payable and the realization of deferred tax assets. In connection with the determination of losses and loss expenses payable, management uses historical data, current business conditions and assumptions about future conditions to formulate estimates of the ultimate cost to settle claims. Deferred tax assets are evaluated periodically by management to determine if they are realizable, requiring management to make certain judgments and assumptions. In evaluating the ability to recover deferred tax assets, management considers all available evidence, including loss carryback potential, past operating results, existence of cumulative losses in the most recent years, projected performance of the business, future taxable income, including the ability to generate capital gains, and prudent and feasible tax planning strategies. If, based on available information, it is more likely than not that the deferred income tax assets will not be realized, then a valuation allowance must be established with a corresponding charge to net income and/or other comprehensive loss. These estimates by their nature are subject to uncertainties for various reasons.

d. Investments

Investments in fixed maturities are classified as available-for-sale and are carried at fair value. The unrealized holding gains and losses, net of applicable deferred income taxes, are shown as a separate component of stockholders' equity as a part of accumulated other comprehensive income and, as such, are not included in the determination of net income. Realized gains and losses on the sales of investments are computed using the first-in, first-out method.

The Company views gross unrealized losses on fixed maturities as being temporary since it is its assessment that these securities will recover in the near term, allowing the Company to realize the anticipated long-term economic value. The Company regularly monitors its investments that have fair values less than cost or amortized cost for signs of other-than-temporary impairment, 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. Among the factors that management considers for fixed maturity securities are the financial condition of the issuer, including receipt of scheduled principal and interest cash flows, and intent to sell, including if it is more likely than not that the Company will be required to sell the investments before recovery. When a fixed maturity security 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 income. Future increases or decreases in fair value, if not other-than-temporary, are included in other comprehensive income.

e. Cash Equivalents

The Company considers all liquid debt instruments with a maturity of three months or less to be cash equivalents. The carrying amounts reported approximate their fair value.

f. 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. 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.

The following table sets forth net deferred acquisition costs for the years ended December 31, 2019, 2018 and 2017:

($ millions)	**2019**	2018	2017
Balance, beginning of year	**$ 101.9**	$ 110.3	$ 121.8
Acquisition costs deferred	**225.7**	211.5	230.8
Acquisition costs amortized to expense	**(216.5)**	(220.0)	(242.3)
Balance, end of year	**$ 111.1**	$ 101.9	$ 110.3

g. Federal Income Taxes

The Company files a consolidated federal income tax return. Pursuant to a written tax sharing agreement, each entity within the consolidated group pays or receives its share of federal income taxes based on separate return calculations.

The Company recognizes deferred income tax assets and liabilities for the expected future tax effects attributable to temporary differences between the financial statement and tax return bases of assets and liabilities, based on enacted tax rates and other provisions of the tax law. The effect of a change in tax laws or rates on deferred tax assets and liabilities is recognized in income in the period in which such change is enacted. Deferred tax assets and liabilities include provisions for unrealized investment gains and losses as well as the net funded status of pension and other postretirement benefit obligations with the changes for each period included in the respective components of other comprehensive income. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that all or some portion of the deferred tax assets will not be realized.

Interest and penalties related to uncertain tax positions are recorded in the balance sheet as other liabilities, and recognized in the income statement as other expenses.

h. Losses and Loss Expenses Payable

Losses and loss expenses payable are based on formula and case-basis estimates for reported claims and on estimates, based on experience and perceived trends, for unreported claims and loss expenses. The liability for unpaid losses and loss expenses, net of estimated salvage and subrogation recoverable of $26.4 million and $24.8 million at December 31, 2019 and 2018, respectively, has been established to cover the estimated ultimate cost to settle insured losses. The amounts are based on estimates of future rates of inflation and other factors, and accordingly, there can be no assurance that the ultimate liability will not vary materially from such estimates. The estimates are continually reviewed and adjusted as necessary; such adjustments are included in current operations (see Note 4). Anticipated salvage and subrogation is estimated using historical experience. As such, losses and loss expenses payable represent management's best estimate of the ultimate liability related to reported and unreported claims.

i. Premiums

Premiums are recognized as earned pro rata over the policy period. Unearned premiums represent the portion of premiums written relative to the unexpired terms of coverage.

As a result of the Pooling Arrangement, the Company has 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. When settling the intercompany balances, State Auto Mutual provides the STFC Pooled Companies with full credit for the premiums written and net losses paid during the quarter and retains all receivable amounts from insureds and agents and reinsurance recoverable on paid losses from unaffiliated reinsurers. Any 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. Based on historical data, this credit risk exposure is not considered to be material to our financial position or results of operations.

j. Comprehensive Income

Comprehensive income (loss) is defined as all changes in an enterprise's equity during a period other than those resulting from investments by owners and distributions to owners. Comprehensive income (loss) includes net income (loss) and other comprehensive income (loss). Other comprehensive income (loss) includes all other non-owner related changes to equity and includes net unrealized gains and losses on available-for-sale investments and unrecognized benefit plan obligations, adjusted for deferred federal income taxes.

k. New Accounting Standards

Adoption of Recent Accounting Pronouncements

Leases

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)" that amended previous guidance on lease accounting. The new guidance requires the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous GAAP. The guidance became effective beginning January 1, 2019 and it did not have a material impact on the Company's results of operations, consolidated financial position or cash flows, as the Company is not a party to any material leases as a lessee or lessor as defined by the guidance. The Company elected the practical expedients contained in ASC 842-10-65-1(f) and therefore did not reassess the lease classification of its existing leases.

Pending Adoption of Recent Accounting Pronouncements

Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326)" that amended previous guidance on the impairment of financial instruments by adding an impairment model that requires an entity to recognize expected credit losses as an allowance rather than impairing as they are incurred. The new guidance is intended to reduce complexity of credit impairment models and result in a more timely recognition of expected credit losses. The measurement of credit losses for available-for-sale debt securities measured at fair value is not affected except that credit losses recognized are limited to the amount by which fair value is below amortized cost and the carrying value adjustment is recognized as an allowance rather than impairing as they are incurred. The effective date of ASU 2016-13 is for interim and annual reporting periods beginning after December 15, 2019. The Company will adopt the guidance when it becomes effective for the Company on January 1, 2020.

The Company will adopt ASC 326 using the modified retrospective method for all financial assets measured at amortized cost and off-balance-sheet credit exposures, which include reinsurance recoverables and premiums receivables. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. The Company will record a net decrease to retained earnings as of January 1, 2020 for the cumulative effect of adopting ASC 326, which will not have a material impact on the Company's results of operations, consolidated financial position, or cash flows.

The Company will adopt ASC 326 using the prospective transition approach for available-for-sale debt securities. As a result, the amortized cost basis remains the same before and after the effective date of ASC 326 and no adjustment will be made upon adoption.

Disclosure Framework —Changes to the Disclosure Requirements for Fair Value Measurement

In August 2018, the FASB issued ASU 2018-13 which changes the fair value measurement disclosure requirements of ASC 820 by adding, eliminating and modifying disclosures. The effective date of ASU 2018-13 is for interim and annual reporting periods beginning after December 15, 2019. The ASU has not yet been adopted; however, it is not expected to have a material impact on the Company's results of operations, consolidated financial position, or cash flows.

Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans

In August 2018, the FASB issued ASU 2018-14 which changes the defined benefit pension and other postretirement plan disclosure requirements of ASC 715 by adding, eliminating and modifying disclosures. The effective date of ASU 2018-14 is for annual reporting periods ending after December 15, 2020. The ASU has not yet been adopted; however, it is not expected to have a material impact on the Company's results of operations, consolidated financial position, or cash flows.

2. Investments

The following tables set forth the cost or amortized cost and fair value of investments by lot at December 31, 2019 and 2018:

($ millions) **December 31, 2019**	Cost or amortized cost	Gross unrealized holding gains	Gross unrealized holding losses	Fair value
Available-for-sale fixed maturities:				
U.S. treasury securities and obligations of U.S. government agencies	**$ 569.2**	**$ 12.3**	**$ (3.3)**	**$ 578.2**
Obligations of states and political subdivisions	**404.3**	**21.1**	**—**	**425.4**
Corporate securities	**460.5**	**11.7**	**(0.4)**	**471.8**
U.S. government agencies mortgage-backed securities	**646.0**	**11.1**	**(4.6)**	**652.5**
Total available-for-sale fixed maturities	**$ 2,080.0**	**$ 56.2**	**$ (8.3)**	**$ 2,127.9**

($ millions) December 31, 2018	Cost or amortized cost	Gross unrealized holding gains	Gross unrealized holding losses	Fair value
Available-for-sale fixed maturities:				
U.S. treasury securities and obligations of U.S. government agencies	$ 438.4	$ 3.2	$ (9.2)	$ 432.4
Obligations of states and political subdivisions	408.2	7.3	(0.9)	414.6
Corporate securities	551.7	0.6	(11.7)	540.6
U.S. government agencies mortgage-backed securities	789.9	3.3	(21.3)	771.9
Total available-for-sale fixed maturities	$ 2,188.2	$ 14.4	$ (43.1)	$ 2,159.5

The following tables set forth the Company's gross unrealized losses and fair value on its investments by lot, aggregated by investment category and length of time for individual securities that have been in a continuous unrealized loss position at December 31, 2019 and 2018:

($ millions, except # of positions)	Less than 12 months			12 months or more			Total		
December 31, 2019	Fair value	Unrealized losses	Number of positions	Fair value	Unrealized losses	Number of positions	Fair value	Unrealized losses	Number of positions
Fixed maturities:									
U.S. treasury securities and obligations of U.S. government agencies	**$136.0**	**$ (2.5)**	**17**	**$157.6**	**$ (0.8)**	**11**	**$ 293.6**	**$ (3.3)**	**28**
Corporate securities	**—**	**—**	**—**	**40.8**	**(0.4)**	**7**	**40.8**	**(0.4)**	**7**
U.S. government agencies mortgage-backed securities	**126.6**	**(1.5)**	**15**	**137.9**	**(3.1)**	**32**	**264.5**	**(4.6)**	**47**
Total fixed maturities	**$262.6**	**$ (4.0)**	**32**	**$336.3**	**$ (4.3)**	**50**	**$ 598.9**	**$ (8.3)**	**82**

($ millions, except # of positions)	Less than 12 months			12 months or more			Total		
December 31, 2018	Fair value	Unrealized losses	Number of positions	Fair value	Unrealized losses	Number of positions	Fair value	Unrealized losses	Number of positions
Fixed maturities:									
U.S. treasury securities and obligations of U.S. government agencies	$ 83.1	$ (1.8)	7	$259.6	$ (7.4)	35	$ 342.7	$ (9.2)	42
Obligations of states and political subdivisions	63.6	(0.5)	7	39.6	(0.4)	8	103.2	(0.9)	15
Corporate securities	244.0	(3.0)	31	189.5	(8.7)	30	433.5	(11.7)	61
U.S. government agencies mortgage-backed securities	169.5	(2.8)	18	385.5	(18.5)	70	555.0	(21.3)	88
Total fixed maturities	$ 560.2	$ (8.1)	63	$874.2	$ (35.0)	143	$1,434.4	$ (43.1)	206

The Company reviewed its investments at December 31, 2019 and 2018 and determined that no additional other-than-temporary impairment existed in the gross unrealized holding losses. The following table sets forth the realized losses related to other-than-temporary impairments on the Company's investment portfolio recognized for the year ended December 31, 2017:

($ millions)	2017
Equity securities:	
Large-cap securities	$ (1.5)
Small-cap securities	(2.0)
Total other-than-temporary impairments	$ (3.5)

The following table sets forth the amortized cost and fair value of available-for-sale fixed maturities by contractual maturity at December 31, 2019:

($ millions)	Amortized cost	Fair value
Due in 1 year or less	**$ 107.9**	**$ 108.8**
Due after 1 year through 5 years	**565.4**	**575.0**
Due after 5 years through 10 years	**158.1**	**166.2**
Due after 10 years	**602.6**	**625.4**
U.S. government agencies mortgage-backed securities	**646.0**	**652.5**
Total	**$ 2,080.0**	**$ 2,127.9**

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

At December 31, 2019, State Auto P&C had fixed maturity securities, with a carrying value of approximately $106.5 million, that were pledged as collateral for the FHLB Loan (as defined in Note 8). In accordance with the terms of the FHLB Loan, State Auto P&C retains all rights regarding these securities, which are included in the "U.S. government agencies mortgage-backed securities" classification of the Company's fixed maturity securities portfolio.

At December 31, 2019, State Auto P&C had fixed maturities with fair values of approximately $27.3 million pledged as collateral for the performance obligations under its reinsurance agreement with Home State County Mutual Insurance Company ("Home State") as defined in Note 6. In accordance with the terms of the trust agreement, State Auto P&C retains all rights regarding these securities, which are included in the "U.S. treasury securities and obligations of U.S. government agencies" classification of the Company's fixed maturity securities portfolio.

Fixed maturities with fair values of approximately $9.3 million and $8.9 million were on deposit with insurance regulators as required by law at December 31, 2019 and 2018, respectively.

The following table sets forth the components of net investment income for the years ended December 31, 2019, 2018 and 2017:

($ millions)	**2019**	2018	2017
Fixed maturities	**$ 62.3**	$ 65.3	$ 63.2
Equity securities	**13.2**	13.4	10.5
Cash and cash equivalents, and other	**5.5**	7.2	6.3
Investment income	**81.0**	85.9	80.0
Investment expenses	**0.6**	1.0	1.2
Net investment income	**$ 80.4**	$ 84.9	$ 78.8

The Company's current investment strategy does not rely on the use of derivative financial instruments.

Proceeds on sales of investments in 2019, 2018 and 2017 were $355.5 million, $197.0 million and $438.6 million, respectively.

The following table sets forth the realized and unrealized holding gains (losses) on the Company's investment portfolio for the years ended December 31, 2019, 2018 and 2017:

($ millions)	**2019**	2018	2017
Investment gain (loss), net:			
Fixed maturities:			
Realized gains on sales of securities	**$ 3.5**	$ 2.0	$ 2.8
Net gain on fixed maturities	**3.5**	2.0	2.8
Equity securities:			
Realized (losses) gains on sales of securities, net	**(1.8)**	5.7	62.1
Unrealized gain (loss) on securities still held, net	**63.9**	(49.7)	—
Net gain (loss) on equity securities	**62.1**	(44.0)	62.1
Other invested assets:			
Realized gains on sales of securities	**—**	—	0.2
Unrealized gain (loss) on securities still held, net	**9.9**	(7.7)	—
Net gain (loss) on other invested assets	**9.9**	(7.7)	0.2
Other net realized loss	**(1.3)**	—	—
Net gain (loss) on investments	**$ 74.2**	$ (49.7)	$ 65.1
Change in net unrealized holding gains (losses), net of tax			
Fixed maturities	**$ 76.7**	$ (48.4)	$ 6.3
Equity securities	**—**	—	(13.0)
Other invested assets	**—**	—	10.6
Deferred federal income tax (liability) benefit	**(16.1)**	10.1	(0.7)
Change in net unrealized holding gains (losses), net of tax	**$ 60.6**	$ (38.3)	$ 3.2

3. Fair Value of Financial Instruments

Below is the fair value hierarchy that categorizes into three levels the inputs to valuation techniques that are used to measure fair value.

- Level 1 includes observable inputs which reflect quoted prices for identical assets or liabilities in active markets at the measurement date.
- Level 2 includes observable inputs for assets or liabilities other than quoted prices included in Level 1, and it includes valuation techniques which use prices for similar assets and liabilities.
- Level 3 includes unobservable inputs which reflect the reporting entity's estimates of the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk).

The Company utilizes a nationally recognized pricing service to estimate the majority of its investment portfolio's fair value. The Company obtains one price per security. The Company's processes and control procedures are designed to ensure the price is accurately recorded on an unadjusted basis. Through discussions with the pricing service, the Company obtains 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, the Company compares the valuations received to other fair value pricing from other independent pricing sources. At December 31, 2019 and 2018, the Company did not adjust any of the prices received from the pricing service.

Transfers between levels may occur due to changes in the availability of market observable inputs. Transfers in and out of levels are reported as having occurred at the beginning of the quarter in which the transfer occurred. There were no transfers between levels during the years ended December 31, 2019 and 2018.

The following sections describe the valuation methods used by the Company for each type of financial instrument carried at fair value.

Fixed Maturities

The fair value estimate of the Company's fixed maturity investments are determined by evaluations that are based on observable market information rather than market quotes. Inputs to the evaluations include, but are not limited to, market prices from recently completed transactions and transactions of comparable securities, interest rate yield curves, credit spreads, and other market-observable information. The fixed maturity portfolio pricing obtained from the pricing service is reviewed for reasonableness. Regularly, samples of security prices are referred back to the pricing service for more detailed explanation as to how the pricing service arrived at that particular price. The explanations are reviewed for reasonableness by the portfolio manager or investment officer. Additionally, the prices and assumptions are verified against an alternative pricing source for reasonableness and accuracy. Any discrepancies with the pricing are returned to the pricing service for further explanation and if necessary, adjustments are made. To date, the Company has not identified any significant discrepancies in the pricing provided by its third party pricing service. Investments valued using these inputs include U.S. treasury securities and obligations of U.S. government agencies, obligations of states and political subdivisions, corporate securities, and U.S. government agencies mortgage-backed securities. All unadjusted estimates of fair value for fixed maturities priced by the pricing service are included in the amounts disclosed in Level 2 of the hierarchy. If market inputs are unavailable, then no fair value is provided by the pricing service. For these securities, fair value is determined either by requesting brokers who are knowledgeable about these securities to provide a quote; or the Company internally determines the fair values by employing widely accepted pricing valuation models, and depending on the level of observable market inputs, renders the fair value estimate as Level 2 or Level 3.

Equities

The fair value of each equity security is based on an observable market price for an identical asset in an active market and is priced by the same pricing service discussed above. All equity securities are recorded using unadjusted market prices and have been disclosed in Level 1.

Other Invested Assets

Included in other invested assets is one international fund ("the fund") that invests in equity securities of foreign issuers and is managed by third party investment managers. The fund had a fair value of $56.4 million and $38.5 million at December 31, 2019 and 2018, respectively, which was determined using the fund's net asset value. The Company employs procedures to assess the reasonableness of the fair value of the fund including obtaining and reviewing the fund's audited financial statements. There is no unfunded commitment related to the fund. The Company may not sell its investment in the fund; however, the Company may redeem all or a portion of its investment in the fund at net asset value per share with the appropriate prior written notice. In accordance with Accounting Standard Codification 820-10, this investment is measured at fair value using the net asset value per share practical expedient and has not been classified in the fair value hierarchy. Fair values presented here are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheets.

The remainder of the Company's other invested assets consist of holdings in publicly-traded mutual funds. The Company believes that its prices for these publicly-traded mutual funds, based on an observable market price for an identical asset in an active market, reflect their fair values and consequently these securities have been disclosed in Level 1.

The following tables set forth the Company's investments within the fair value hierarchy at December 31, 2019 and 2018:

($ millions) **December 31, 2019**	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)
Available-for-sale fixed maturities:			
U.S. treasury securities and obligations of U.S. government agencies	**$ 578.2**	**$ —**	**$ 578.2**
Obligations of states and political subdivisions	**425.4**	**—**	**425.4**
Corporate securities	**471.8**	**—**	**471.8**
U.S. government agencies mortgage-backed securities	**652.5**	**—**	**652.5**
Total available-for-sale fixed maturities	**2,127.9**	**—**	**2,127.9**
Equity securities:			
Large-cap securities	**104.4**	**104.4**	**—**
Mutual and exchange traded funds	**290.8**	**290.8**	**—**
Total equity securities	**395.2**	**395.2**	**—**
Other invested assets	**13.3**	**13.3**	**—**
Total investments	**$ 2,536.4**	**$ 408.5**	**$ 2,127.9**

($ millions) December 31, 2018	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)
Fixed maturities:			
U.S. treasury securities and obligations of U.S. government agencies	$ 432.4	$ —	$ 432.4
Obligations of states and political subdivisions	414.6	—	414.6
Corporate securities	540.6	—	540.6
U.S. government agencies mortgage-backed securities	771.9	—	771.9
Total fixed maturities	2,159.5	—	2,159.5
Equity securities:			
Large-cap securities	77.2	77.2	—
Mutual and exchange traded funds	237.8	237.8	—
Total equity securities	315.0	315.0	—
Other invested assets	10.3	10.3	—
Total investments	$ 2,484.8	$ 325.3	$ 2,159.5

Financial Instruments Disclosed, But Not Carried, At Fair Value

Other Invested Assets

Included in other invested assets are common stock of the Federal Home Loan Bank of Cincinnati (the "FHLB"), and the Trust Securities (as defined in Note 7b). The Trust Securities and FHLB common stock are carried at cost, which approximates fair value. The fair value of the FHLB common stock at December 31, 2019 was $6.0 million and the fair value of the Trust Securities were $0.5 million. Both investments have been placed in Level 3 of the fair value hierarchy.

Notes Receivable from Affiliates

In May 2009, the Company entered into two separate credit agreements with State Auto Mutual pursuant to which it loaned State Auto Mutual a total of $70.0 million at an interest rate of 7.00%. In May 2019, the Company refinanced the two credit agreements with State Auto Mutual at an interest rate of 4.05%, with principal payable in May 2029. The Company estimates the fair value of the notes receivable from affiliates using market quotations for U.S. treasury securities with similar maturity dates and applies an appropriate credit spread. This has been placed in Level 2 of the fair value hierarchy.

($ millions, except interest rates)	**December 31, 2019**			December 31, 2018		
	Carrying value	**Fair value**	**Interest rate**	Carrying value	Fair value	Interest rate
Notes receivable from affiliate, May 2009	**$ —**	**$ —**	**— %**	$ 70.0	$ 71.1	7.00 %
Notes receivable from affiliate, May 2019	**$ 70.0**	**$ 74.6**	**4.05 %**	$ —	$ —	— %

Notes Payable

Included in notes payable are the FHLB Loans (as defined in Note 8) and Subordinated Debentures. The Company estimates the fair value of the FHLB Loans by discounting cash flows using a borrowing rate currently available to the Company for a loan with similar terms. The FHLB Loans have been placed in Level 3 of the fair value hierarchy. The carrying amount of the Subordinated Debentures approximates its fair value as the interest rate adjusts quarterly and has been disclosed in Level 3.

($ millions, except interest rates)	**December 31, 2019**			December 31, 2018		
	Carrying value	**Fair Value**	**Interest rate**	Carrying value	Fair value	Interest rate
FHLB Loan due 2021:, issued $21.5, September 2016 with fixed interest	**$ 21.5**	**$ 21.5**	**1.73 %**	$ 21.5	$ 20.9	1.73 %
FHLB Loan due 2033: issued $85.0, May 2018 with fixed interest	**85.3**	**97.8**	**3.96 %**	85.3	89.0	3.96 %
Affiliate Subordinated Debentures due 2033: issued $15.5, May 2003 with variable interest	**15.2**	**15.2**	**6.11 %**	15.2	15.2	6.94 %
Total notes payable	**$ 122.0**	**$ 134.5**		$ 122.0	$ 125.1	

4. Losses and Loss Expenses Payable

The following table sets forth the activity in the liability for losses and loss expenses for the years ended December 31:

($ millions)	**2019**	2018	2017
Losses and loss expenses payable, at beginning of year	**$ 1,146.8**	$ 1,255.6	$ 1,181.6
Less: reinsurance recoverable on losses and loss expenses payable	**5.5**	3.1	3.6
Net balance at beginning of year	**1,141.3**	1,252.5	1,178.0
Incurred related to:			
Current year	**913.5**	876.6	964.9
Prior years	**(68.7)**	(80.2)	(46.6)
Total incurred	**844.8**	796.4	918.3
Paid related to:			
Current year	**530.4**	456.5	445.2
Prior years	**402.8**	451.1	398.6
Total paid	**933.2**	907.6	843.8
Net balance at end of year	**1,052.9**	1,141.3	1,252.5
Plus: reinsurance recoverable on losses and loss expenses payable	**13.6**	5.5	3.1
Losses and loss expenses payable (affiliated net assumed $500.8, $593.6, and $711.4 respectively)	**$ 1,066.5**	$ 1,146.8	$ 1,255.6

The Company recorded favorable development related to prior years' loss and loss expense reserves in 2019 of $68.7 million. Favorable development of prior accident years' non-catastrophe loss and ALAE reserves was due to $71.3 million of favorable development in the personal and commercial insurance segments. In the personal insurance segment, personal auto contributed $10.7 million of favorable development, primarily from the 2018 and 2017 accident years. In the commercial insurance segment, workers' compensation, small commercial package, and middle market commercial contributed $20.9 million, $15.2 million, and $11.8 million, respectively, of favorable development from multiple accident years. The favorable development from prior years' non-catastrophe loss and ALAE reserves was partially offset by $5.7 million of adverse development in catastrophe reserves driven by $10.7 million of adverse development from specialty run-off, primarily from the 2017 accident year.

The Company recorded favorable development related to prior years' loss and loss expense reserves in 2018 of $80.2 million. Favorable development of prior accident years' non-catastrophe loss and ALAE reserves was due to $79.7 million of favorable development in the personal and commercial insurance segments. In the personal insurance segment, personal auto contributed $24.4 million of favorable development primarily driven by lower than anticipated severity emerging from accident years 2016 and 2017, and homeowners contributed favorable development of $7.3 million, spread across several accident years. In the commercial insurance segment, workers' compensation, small commercial package, commercial auto, and middle market commercial contributed $13.3 million, $9.6 million, $8.4 million, and $8.0 million, respectively, of favorable development. Slightly offsetting the favorable development was adverse development in the specialty insurance segment of $3.1 million, primarily driven by E&S casualty and programs with adverse development of $2.7 million and $1.2 million, respectively. The E&S casualty adverse development for prior accident years was due primarily to development within our healthcare and umbrella books of business. The programs adverse development for prior accident years was driven by increased ultimate loss estimates for commercial auto liability and contractors liability coverages. Favorable development of prior years' unallocated loss adjustment expenses was $7.1 million of the 2018 development.

The Company recorded favorable development related to prior years' loss and loss expense reserves in 2017 of $46.6 million. Favorable development of prior accident years' non-catastrophe loss and ALAE reserves was primarily driven by $44.0 million of favorable development in the commercial insurance segment. 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 accounted for $1.6 million of the favorable development in 2017. Personal auto contributed $4.4 million of favorable development primarily driven by lower than anticipated severity emerging from accident years 2015 and 2016. Slightly offsetting the favorable development was adverse development in homeowners and other personal of $1.5 million and $1.3 million, respectively. Homeowners adverse development was primarily from accident year 2016. Adverse development in other personal was driven by higher than anticipated severity emerging from accident years 2015 and 2016. The specialty insurance segment non-catastrophe loss and ALAE reserves accounted for $4.2 million of adverse development, primarily 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 business in run-off.

5. Short-Duration Insurance Contracts

The following tables set forth:

- undiscounted, incurred and paid claims and allocated claim adjustment expenses by accident year, on a net basis after reinsurance;
- the sum of IBNR claims liabilities + expected development on reported claims ("IBNR+") included within the incurred claims development tables, for each accident year, for the most recent reporting period;
- cumulative claim frequency information for each accident year; and
- average annual percentage payout of incurred claims by age, net of reinsurance.

The above information is provided for each of the Company's reportable insurance segments and specialty run-off and then is further disaggregated between short and long-tail where "tail" refers to the time period between the occurrence of a loss and the ultimate settlement of the claims. See Note 16 for discussion of the Company's reportable segments.

The personal insurance segment generally consists of only short-tail business, whereas the commercial insurance segment and specialty run-off have both short and long-tail business. The Company determined that these disaggregated groupings have more homogeneous risk characteristics with similar development patterns and are generally subject to similar trends.

Short-Tail Business: For short-tail business, claims are typically settled within five years, and the most common actuarial estimates are based on development method projections of incurred losses, paid losses, claim counts and claim severities. Each of these methods is described in the "Losses and Loss Expenses Payable" section of "Critical Accounting Policies" included in Item 7 of this Form 10-K. Separate projections are made for catastrophes that are in the very early stages of development based on specific information known through the reporting date.

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 as described in the "Losses and Loss Expenses Payable" section of "Critical Accounting Policies" included in Item 7 of this Form 10-K.

Cumulative Claim Frequency: Cumulative claim frequency is defined as the cumulative number of reported claims ("reported claims"). Reported claims include claims that do not result in a liability (e.g. those below a deductible). Reported claims disclosed in the tables below are for the State Auto Group and have not been pooled (see Note 7a for additional information regarding the Pooling Arrangement).

Personal Insurance Segment - Short-Tail

The change in incurred losses and loss adjustment expenses for prior accident years was due to lower than expected emergence of all personal insurance products. The emergence was primarily attributable to lower severity for bodily injury claims from the 2017 and 2018 accident years.

($ in millions except number of claims)

	Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance					**As of December 31, 2019**	
	For the Years Ended December 31,						
Accident Year	2015*	2016*	2017*	2018*	**2019**	**IBNR+**	**Reported Claims (1)**
2015	$ 339.0	$ 345.5	$ 341.0	$ 339.0	**$ 337.2**	**$ 0.7**	**153,017**
2016		368.5	370.0	361.4	**360.8**	**1.4**	**151,554**
2017			372.4	355.0	**351.9**	**2.3**	**151,458**
2018				418.5	**411.4**	**11.9**	**154,173**
2019					**497.5**	**65.8**	**153,602**
				Total	**$ 1,958.8**		

* Supplementary information and unaudited

(1) Personal insurance segment - short-tail is an aggregation of the homeowners and personal auto product lines. Homeowners reported claims are counted by claimant and personal auto claims are counted by coverage.

($ in millions)

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance				
	For the Years Ended December 31,				
Accident Year	2015*	2016*	2017*	2018*	**2019**
2015	$ 216.5	$ 290.8	$ 318.0	$ 330.7	**$ 334.1**
2016		231.9	316.2	342.6	**352.1**
2017			236.8	315.8	**335.7**
2018				276.4	**375.1**
2019					**343.7**
				Total	**$ 1,740.7**
All outstanding liabilities before 2015, net of reinsurance					**$ 2.5**
Losses and allocated loss adjustment expenses payable, net of reinsurance					**$ 220.6**

* Supplementary information and unaudited

Commercial Insurance Segment - Short-Tail

The change in incurred losses and loss adjustment expenses for prior accident years was primarily driven by lower than expected emergence for the small commercial package and middle market commercial products. The emergence in these products was driven by lower than expected bodily injury claim severity from multiple accident years.

($ in millions except number of claims)

	Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance					As of December 31, 2019	
	For the Years Ended December 31,						
Accident Year	2015*	2016*	2017*	2018*	**2019**	**IBNR+**	**Reported Claims[(1)]**
2015	$ 239.4	$ 239.9	$ 232.5	$ 227.3	**$ 222.5**	**$ 10.6**	**37,819**
2016		237.0	227.6	225.2	**220.6**	**11.8**	**34,801**
2017			236.8	225.5	**215.9**	**20.7**	**31,948**
2018				228.4	**216.4**	**42.3**	**30,603**
2019					**248.2**	**85.3**	**29,491**
				Total	**$ 1,123.6**		

* Supplementary information and unaudited

(1) Commercial insurance segment - short-tail is an aggregation of the commercial auto, small commercial package, middle market commercial and farm & ranch product lines. Commercial auto reported claims are counted by coverage and small commercial package, middle market commercial and farm & ranch reported claims are counted by claimant.

($ in millions)

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance				
	For the Years Ended December 31,				
Accident Year	2015*	2016*	2017*	2018*	**2019**
2015	$ 101.5	$ 148.3	$ 169.6	$ 192.9	**$ 204.5**
2016		99.2	147.3	176.7	**196.1**
2017			104.9	153.9	**175.5**
2018				98.7	**144.6**
2019					**108.4**
				Total	**$ 829.1**
All outstanding liabilities before 2015, net of reinsurance					**$ 36.3**
Losses and allocated loss adjustment expenses payable, net of reinsurance					**$ 330.8**

* Supplementary information and unaudited

Commercial Insurance Segment - Long-Tail

The change in incurred losses and loss adjustment expenses for prior accident years was due to lower than expected emergence in the workers' compensation product, primarily driven by lower than expected severity.

($ in millions except number of claims)

	Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance										As of December 31, 2019	
	For the Years Ended December 31,											
Accident Year	2010*	2011*	2012*	2013*	2014*	2015*	2016*	2017*	2018*	**2019**	**IBNR+**	**Reported Claims[1]**
2010	$ 38.8	$ 41.3	$ 41.6	$ 40.4	$ 40.3	$ 40.4	$ 40.8	$ 40.2	$ 39.8	**$ 39.6**	**$ 1.8**	**5,260**
2011		44.6	47.4	45.5	44.8	44.8	44.9	43.9	42.9	**42.3**	**2.5**	**12,228**
2012			49.7	45.8	43.7	44.1	43.9	42.9	41.7	**40.5**	**2.7**	**12,761**
2013				48.7	45.4	44.1	43.4	42.9	41.5	**40.5**	**4.8**	**11,317**
2014					51.6	50.0	47.1	45.7	45.3	**43.4**	**7.6**	**11,570**
2015						59.7	59.4	56.5	53.7	**51.3**	**9.6**	**11,158**
2016							62.6	60.6	57.2	**53.9**	**14.8**	**12,443**
2017								59.0	56.4	**53.7**	**15.3**	**12,558**
2018									56.4	**53.6**	**18.2**	**12,470**
2019										**54.4**	**27.6**	**11,379**
									Total	**$473.2**		

* Supplementary information and unaudited

[1] Commercial insurance segment-long-tail consists of the workers' compensation product. Workers' compensation reported claims are counted by a combination of claimant and coverage.

($ in millions)

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance									
	For the Years Ended December 31,									
Accident Year	2010*	2011*	2012*	2013*	2014*	2015*	2016*	2017*	2018*	**2019**
2010	$ 9.0	$ 21.6	$ 28.0	$ 31.4	$ 33.2	$ 34.6	$ 35.4	$ 35.8	$ 36.4	**$ 36.6**
2011		12.4	25.4	31.9	35.0	36.9	37.7	38.1	38.6	**38.9**
2012			12.6	23.5	29.8	32.7	34.7	35.8	36.4	**36.6**
2013				12.3	23.3	29.0	32.3	33.7	34.2	**34.4**
2014					12.4	24.4	30.0	32.8	34.1	**34.6**
2015						13.9	28.2	35.7	38.3	**39.5**
2016							12.6	26.8	32.3	**35.6**
2017								13.2	27.0	**32.8**
2018									13.2	**26.4**
2019										**14.7**
										$ 330.1
All outstanding liabilities before 2010, net of reinsurance										**$ 31.1**
Losses and allocated loss adjustment expenses payable, net of reinsurance										**$ 174.2**

* Supplementary information and unaudited

Specialty run-off - Short-Tail

($ in millions except number of claims)

	Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance					As of December 31, 2019	
	For the Years Ended December 31,						
Accident Year	2015*	2016*	2017*	2018*	**2019**	**IBNR+**	**Reported Claims[(1)]**
2015	$ 75.5	$ 85.4	$ 87.8	$ 90.3	**$ 90.4**	**$ 2.9**	**8,151**
2016		99.3	99.5	102.7	**105.7**	**9.8**	**7,440**
2017			134.2	129.7	**138.3**	**17.4**	**9,162**
2018				18.5	**20.5**	**4.6**	**2,065**
2019					**1.0**	**0.1**	**46**
				Total	**$ 355.9**		

* Supplementary information and unaudited

(1) Specialty run-off-short-tail is an aggregation of the E&S Property and programs product lines. E&S Property and programs reported claims are counted by claimant.

($ in millions)

	Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance				
	For the Years Ended December 31,				
Accident Year	2015*	2016*	2017*	2018*	**2019**
2015	$ 24.0	$ 48.3	$ 62.8	$ 76.7	**$ 83.2**
2016		25.2	50.2	69.9	**87.4**
2017			39.0	77.5	**101.2**
2018				6.3	**10.7**
2019					**0.5**
				Total	**$ 283.0**
		All outstanding liabilities before 2015, net of reinsurance			**$ 12.0**
		Losses and allocated loss adjustment expenses payable, net of reinsurance			**$ 84.9**

* Supplementary information and unaudited

Specialty run-off - Long-Tail

($ in millions except number of claims)

	Incurred Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance										As of December 31, 2019	
	For the Years Ended December 31,											
Accident Year	2010*	2011*	2012*	2013*	2014*	2015*	2016*	2017*	2018*	**2019**	**IBNR+**	**Reported Claims[1]**
2010	$ 11.2	$ 10.9	$ 9.9	$ 9.7	$ 9.8	$ 9.9	$ 10.3	$ 10.1	$ 10.0	**$ 9.4**	**$ 0.8**	**1,382**
2011		11.9	10.7	10.7	10.2	10.1	10.9	10.5	9.7	**9.5**	**$ 0.8**	**1,104**
2012			16.7	16.7	15.4	17.6	17.4	16.5	16.0	**16.1**	**$ 0.7**	**1,027**
2013				20.1	18.9	17.9	16.5	15.9	15.3	**15.0**	**1.2**	**1341**
2014					23.3	25.2	27.1	28.3	29.5	**30.0**	**2.8**	**1,695**
2015						38.6	44.9	44.8	45.7	**45.0**	**5.5**	**2,410**
2016							60.8	62.9	64.8	**64.3**	**16.7**	**5,062**
2017								71.6	73.1	**70.5**	**33.9**	**6,379**
2018									53.0	**53.3**	**31.3**	**4,054**
2019										**4.1**	**4.1**	**1,499**
									Total	**$317.2**		

* Supplementary information and unaudited

(1) Specialty run-off-long-tail consists of the E&S Casualty product line. E&S Casualty reported claims are counted by claimant.

($ in millions)

Cumulative Paid Losses and Allocated Loss Adjustment Expenses, Net of Reinsurance

For the Years Ended December 31,

Accident Year	2010*	2011*	2012*	2013*	2014*	2015*	2016*	2017*	2018*	**2019**
2010	$ 0.8	$ 2.2	$ 5.2	$ 6.5	$ 7.7	$ 7.6	$ 8.1	$ 8.2	$ 8.3	**$ 8.4**
2011		0.9	3.0	5.2	6.6	7.1	7.9	8.1	8.4	**8.6**
2012			0.9	4.0	7.3	10.3	12.5	14.0	14.1	**14.7**
2013				1.1	3.7	6.7	9.0	10.5	12.0	**13.3**
2014					1.2	7.2	12.5	16.7	21.5	**24.2**
2015						2.7	10.9	20.6	29.1	**34.7**
2016							6.0	15.7	31.5	**39.7**
2017								5.5	16.4	**25.2**
2018									2.7	**12.7**
2019										**0.1**
									Total	**$ 181.6**
					All outstanding liabilities before 2010, net of reinsurance					**$ 3.5**
				Losses and allocated loss adjustment expenses payable, net of reinsurance						**$ 139.1**

* Supplementary information and unaudited

The following table sets forth the reconciliation of the claims development tables to the balance sheet losses and loss expenses payable, with separate disclosure of unallocated loss adjustment expenses, net of reinsurance ("ULAE") and reinsurance recoverable on losses and loss expenses payable, for the years ended December 31:

($ in millions)	**2019**	2018	2017
Net losses and allocated loss adjustment expenses payable:			
Personal Insurance Segment			
Short-tail	**$ 220.6**	$ 216.0	$ 229.4
Other personal	**14.4**	13.5	13.2
Commercial Insurance Segment			
Short-tail	**330.8**	336.4	360.2
Long-tail	**174.2**	182.1	180.8
Other commercial	**30.9**	27.4	26.4
Specialty run-off			
Short-tail	**84.9**	128.5	210.6
Long-tail	**139.1**	177.6	167.9
Net losses and loss expenses payable	**994.9**	1,081.5	1,188.5
ULAE	**58.0**	59.8	64.0
Reinsurance recoverable on losses and loss expenses payable	**13.6**	5.5	3.1
Total losses and loss expenses payable	**$ 1,066.5**	$ 1,146.8	$ 1,255.6

The following table sets forth the historical average annual payout of incurred losses and allocated loss adjustment expenses (claims duration) for short-duration contracts, based on the disaggregated information in the paid loss development tables, net of reinsurance:

	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	Years									
Segment	1*	2*	3*	4*	5*	6*	7*	8*	9*	10*
Personal Insurance:										
Short-tail	66.4 %	23.0 %	7.0 %	3.2 %	1.0 %	N/A	N/A	N/A	N/A	N/A
Commercial Insurance:										
Short-tail	45.7 %	21.7 %	11.0 %	9.6 %	5.2 %	N/A	N/A	N/A	N/A	N/A
Long-tail	26.9 %	27.7 %	13.7 %	7.0 %	3.8 %	2.1 %	1.2 %	0.9 %	1.2 %	0.4 %
Specialty run-off:										
Short-tail	33.5 %	25.0 %	17.3 %	16.0 %	7.2 %	N/A	N/A	N/A	N/A	N/A
Long-tail	6.5 %	18.0 %	21.6 %	15.3 %	11.7 %	7.0 %	4.0 %	2.8 %	1.6 %	0.8 %

* Supplementary information and unaudited

6. Reinsurance

In the ordinary course of business, the Company assumes and cedes reinsurance with other insurers and reinsurers and is a member in various pools and associations. See Note 7a for discussion of reinsurance with affiliates. The voluntary arrangements provide greater diversification of business and limit the maximum net loss potential arising from large risks and catastrophes. Most of the ceded reinsurance is effected under reinsurance contracts known as treaties; the remainder is by negotiation on individual risks. Although the ceding of reinsurance does not discharge the original insurer from its primary liability to its policyholder, the insurance company that assumes the coverage assumes the related liability.

Amounts recoverable from reinsurers are estimated in a manner consistent with the claim liability associated with the reinsured business. The recoverability of these assets depends on the reinsurers' ability to perform under the reinsurance agreements. The Company evaluates and monitors the financial condition and concentrations of credit risk associated with its reinsurers under voluntary reinsurance arrangements to minimize its exposure to significant losses from reinsurer insolvencies. The Company has reported ceded losses and loss expenses payable and prepaid reinsurance premiums with other insurers and reinsurers as assets. All reinsurance contracts provide for indemnification against loss or liability relating to insurance risk and have been accounted for as reinsurance.

Effective June 1, 2017, State Auto P&C entered into a quota share agreement with Home State to assume 100% of the business issued under this agreement, defined as Texas Private Passenger Automobile. Home State receives a variable fee (capped at 2%) in consideration for this arrangement.

The following table sets forth the effect of the Company's external reinsurance on its balance sheets at December 31, 2019 and 2018, prior to the reinsurance transaction with State Auto Mutual under the Pooling Arrangement, as discussed in Note 7a:

($ millions)	**2019**	2018
Losses and loss expenses payable:		
Direct	**$ 540.1**	$ 530.9
Assumed	**25.6**	22.3
Ceded	**(13.6)**	(5.5)
Net losses and loss expenses payable	**$ 552.1**	$ 547.7
Unearned premiums:		
Direct	**$ 495.8**	$ 436.2
Assumed	**36.7**	35.5
Ceded	**(7.5)**	(6.6)
Net unearned premiums	**$ 525.0**	$ 465.1

The following table sets forth the effect of the Company's external reinsurance on its income statements for the years ended December 31, 2019, 2018 and 2017, prior to the reinsurance transaction with State Auto Mutual under the Pooling Arrangement, as discussed in Note 7a:

($ millions)	**2019**	2018	2017
Written premiums:			
Direct	**$ 1,036.9**	$ 915.1	$ 835.6
Assumed	**82.5**	75.1	31.1
Ceded	**(26.3)**	(22.7)	(22.9)
Net written premiums	**$ 1,093.1**	$ 967.5	$ 843.8
Earned premiums:			
Direct	**$ 976.8**	$ 881.3	$ 828.7
Assumed	**81.3**	61.0	11.0
Ceded	**(25.4)**	(22.6)	(22.6)
Net earned premiums	**$ 1,032.7**	$ 919.7	$ 817.1
Losses and loss expenses incurred:			
Direct	**$ 631.4**	$ 572.5	$ 530.9
Assumed	**59.6**	48.4	10.4
Ceded	**(15.6)**	(4.9)	(2.5)
Net losses and loss expenses incurred	**$ 675.4**	$ 616.0	$ 538.8

7. Transactions with Affiliates

a. Reinsurance

The insurance subsidiaries of State Auto Financial, including State Auto P&C, Milbank and SA Ohio (collectively referred to as the "STFC Pooled Companies") participate in a quota share reinsurance pooling arrangement ("the Pooling Arrangement") with State Auto Mutual and its subsidiaries and affiliates, State Auto Insurance Company of Wisconsin, Meridian Security Insurance Company, Patrons Mutual Insurance Company of Connecticut, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company and Bloomington Compensation Insurance Company, (collectively referred to as the "Mutual Pooled Companies"). RIC, Plaza, American Compensation and Bloomington Compensation are referred to as the "Rockhill Insurers." The STFC Pooled Companies, the Mutual Pooled Companies and the Rockhill Insurers are collectively referred to as the "State Auto Group."

In general, under the Pooling Arrangement, the STFC Pooled Companies and the Mutual Pooled Companies other than State Auto Mutual cede to State Auto Mutual all of their insurance business and assume from State Auto Mutual an amount equal to their respective participation percentages in the Pooling Arrangement. All premiums, losses and loss expenses and underwriting expenses are allocated among the participants on the basis of each Company's participation percentage in the Pooling Arrangement. The Pooling Arrangement provides indemnification against loss or liability relating to insurance risk and has been accounted for as reinsurance.

The Pooling Arrangement does not relieve each individual pooled subsidiary of its primary liability as the originating insurer; consequently, there is a concentration of credit risk arising from business ceded to State Auto Mutual. As the Pooling Arrangement provides for the right of offset, the Company has reported losses and loss expenses payable and prepaid reinsurance premiums to State Auto Mutual as assets only in situations when net amounts ceded to State Auto Mutual exceed net amounts assumed. All parties that participate in the Pooling Arrangement have an A.M. Best rating of A- (Excellent).

The following table sets forth the reinsurance transactions on the Company's balance sheets for the Pooling Arrangement between the STFC Pooled Companies and State Auto Mutual at December 31, 2019 and 2018:

($ millions)	**2019**	2018
Assets		
Deferred policy acquisition costs:		
Ceded	**$ (90.9)**	$ (82.0)
Assumed	**111.1**	101.9
Net assumed	**$ 20.2**	$ 19.9
Liabilities		
Losses and loss expenses payable:		
Ceded	**$ (552.1)**	$ (547.7)
Assumed	**1,052.9**	1,141.3
Net assumed	**$ 500.8**	$ 593.6
Unearned premiums:		
Ceded	**$ (525.0)**	$ (465.2)
Assumed	**641.7**	577.6
Net assumed	**$ 116.7**	$ 112.4
Other liabilities:		
Ceded	**$ (17.2)**	$ (24.6)
Assumed	**36.7**	42.3
Net assumed	**$ 19.5**	$ 17.7

The following table sets forth the reinsurance transactions on the Company's income statements for the Pooling Arrangement between the STFC Pooled Companies and State Auto Mutual for the years ended December 31, 2019, 2018 and 2017:

($ millions)	**2019**	2018	2017
Written premiums:			
Ceded	**$ (1,093.1)**	$ (967.5)	$ (843.8)
Assumed	**1,318.1**	1,210.3	1,270.3
Net assumed	**$ 225.0**	$ 242.8	$ 426.5
Earned premiums:			
Ceded	**$ (1,032.7)**	$ (919.7)	$ (817.1)
Assumed	**1,253.0**	1,238.0	1,276.1
Net assumed	**$ 220.3**	$ 318.3	$ 459.0
Losses and loss expenses incurred:			
Ceded	**$ (677.2)**	$ (617.6)	$ (540.4)
Assumed	**846.5**	798.1	919.8
Net assumed	**$ 169.3**	$ 180.5	$ 379.4
Acquisition and operating expenses:			
Ceded	**(370.0)**	(341.1)	(299.2)
Assumed	**439.1**	449.8	459.9
Net assumed	**$ 69.1**	$ 108.7	$ 160.7

Intercompany Balances

Pursuant to the Pooling Arrangement, State Auto Mutual receives all premiums and pays all losses and expenses associated with the insurance business produced by the pool participants and then settles the intercompany balances generated by these transactions with the participating companies on a quarterly basis within 60 days following each quarter end. No interest is paid on this balance. When settling the intercompany balances, State Auto Mutual provides the pool participants with full credit for the premiums written and net losses paid during the quarter and retains 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 members on the basis of pool participation. As a result, the Company has an off-balance sheet credit risk related to the balances due to State Auto Mutual from insurers, agents and reinsurers, which are offset by the unearned premium from the respective policies. The Company's share of the premium balances due to State Auto Mutual from agents and insureds at December 31, 2019 and 2018 is approximately $371.0 million and $347.8 million, respectively.

b. Notes Payable

In May 2003, State Auto Financial formed a Delaware business trust (the "Capital Trust") to issue $15.0 million of mandatorily redeemable preferred capital securities to a third party and $0.5 million of common securities to State Auto Financial (the capital and common securities are collectively referred to as the "Trust Securities"). The Capital Trust loaned $15.5 million, the proceeds from the issuance of its Trust Securities, to State Auto Financial in the form of Floating Rate Junior Subordinated Debt Securities due in 2033 (the "Subordinated Debentures"). The Subordinated Debentures and interest accrued thereon are the Capital Trust's only assets. Interest on the Trust Securities is payable quarterly at a rate equal to the three-month LIBOR rate plus 4.20% adjusted quarterly (total 6.11% at December 31, 2019). Because the interest rate and interest payment dates on the Subordinated Debentures are the same as the interest rate and interest payment dates on the Trust Securities, payments from the Subordinated Debentures finance the distributions paid on the Trust Securities. State Auto Financial has the right to redeem the Subordinated Debentures, in whole or in part, on or after May 2008. State Auto Financial has unconditionally and irrevocably guaranteed payment of any required distributions on the capital securities, the redemption price when the capital securities are to be redeemed, and any amounts due if the Capital Trust is liquidated or terminated. State Auto Financial's equity interest in the Capital Trust is included in other invested assets. In accordance with the Consolidation Topic of the FASB ASC 810, State Auto Financial determined that the business trust is a variable interest entity for which it is not the primary beneficiary and therefore, does not consolidate the Capital Trust with the Company.

c. Notes Receivable

In May 2009, the Company entered into two separate credit agreements with State Automobile Mutual Insurance Company pursuant to which it loaned State Auto Mutual a total of $70.0 million at an interest rate of 7.00%. In May 2019, the Company refinanced the two credit agreements with State Auto Mutual at an interest rate of 4.05%, with principal payable in May 2029. There is no prepayment penalty, and no collateral was given as security for the payment for these loans.

Pursuant to these agreements, the Company earned interest of $3.6 million for the year ended December 31, 2019 and $4.9 million for the years ended December 31, 2018 and 2017, respectively. See Note 3 for the notes receivable fair value discussion.

d. Management Services

Stateco provides State Auto Mutual and its affiliates investment management services. Investment management income is recognized quarterly based on a percentage of the average fair value of investable assets and the equity portfolio performance of each company managed. Revenue related to these services amounted to $2.1 million, $2.0 million and $2.0 million in 2019, 2018 and 2017, respectively, and is included in other income (affiliates) on the consolidated statements of income.

8. Notes Payable and Open Line of Credit

FHLB Loans

State Auto Financial's subsidiary, State Auto P&C, is a member of the Federal Home Loan Bank of Cincinnati (the "FHLB"). On May 17, 2018, State Auto P&C refinanced its $85.0 million loan (the "2013 FHLB loan") for a period of fifteen years at a fixed rate of 3.96%. The new loan (the "2018 FHLB loan") provides for interest-only payments during its term, with principal due in full at maturity. Prepayment of the 2018 FHLB Loan would require a prepayment fee. 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. State Auto P&C has a term loan with the FHLB in the principal amount of $21.5 million (the "2016 FHLB Loan"). The 2016 FHLB Loan is a five-year term loan and 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 2016 and 2018 FHLB Loans are fully secured by a pledge of specific investment securities of State Auto P&C.

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. The OLC matures in April 2020. 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, 2019, no advances had been made under the OLC.

9. Federal Income Taxes

The following table sets forth the reconciliation between actual federal income tax expense and the amount computed at the indicated statutory rate for the years ended December 31, 2019, 2018 and 2017:

($ millions)	**2019**		2018		2017	
Amount at statutory rate	**$ 22.5**	**21.0 %**	$ 2.7	21.0 %	$ 12.3	35.0 %
Tax-exempt interest and dividends received deduction	**(2.3)**	**(2.1)**	(2.3)	(17.7)	(5.7)	(16.3)
Other, net	**(0.6)**	**(0.6)**	(0.3)	(2.8)	2.7	7.7
Federal income tax expense	**19.6**	**18.3 %**	0.1	0.5 %	9.3	26.4 %
Impact of TCJA at enactment	**—**	**—**	—	—	43.5	124.1 %
Federal income tax expense	**$ 19.6**	**18.3 %**	$ 0.1	0.5 %	$ 52.8	150.5 %

On December 22, 2017, the United States enacted the TCJA which, among other changes, reduced the U.S. federal tax rate from 35.0% to 21.0% beginning on January 1, 2018. The estimated effects of enactment of TCJA were reflected in the net deferred tax asset that was reported on the Company's balance sheet at December 31, 2017. Total income tax expense for 2017 included a provisional net charge of $43.5 million to reflect the change in tax laws and tax rates included in TCJA at the date of enactment, resulting primarily from revaluing the Company's deferred tax assets and liabilities.

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.

During 2018, the Internal Revenue Service (IRS) released proposed regulations addressing the mechanics of the reserve discounting. Under those regulations and a related Revenue Procedure 2019-06 ("Rev. Proc. 2019-06"), the interest rate term was not to exceed seventeen and one-half years. The provisional amount was based on twenty years. After discounting the January 1, 2018 reserves using the Rev. Proc. 2019-06 published factors, the impact was $47.5 million on a pretax basis down from the initial estimate of $50.9 million for a tax-effected change of $0.7 million in the impact of the transitional amount.

During 2019, the IRS released Rev. Proc. 2019-31 with final discount factors, which were used in the 2018 tax return filed in 2019. After discounting the January 1, 2018 reserves using these final factors, the impact was $42.7 million on a pretax basis down from the revised estimate of $47.5 million for a tax-effected change of $1.0 million in the impact of the transitional amount.

The following table sets forth the tax effects of temporary differences that give rise to significant portions of deferred tax assets and deferred tax liabilities at December 31, 2019 and 2018:

($ millions)	**2019**	2018
Deferred tax assets:		
Unearned premiums not currently deductible	**$ 27.0**	$ 24.3
Losses and loss expenses payable discounting	**10.6**	11.2
Postretirement and pension benefits	**20.0**	21.4
Investments	**—**	8.9
Other liabilities	**13.4**	14.8
Net operating loss carryforward	**12.1**	15.1
Tax credit carryforward	**2.5**	2.7
Other	**1.1**	0.8
Total deferred tax assets	**86.7**	99.2
Deferred tax liabilities:		
Deferral of policy acquisition costs	**23.3**	21.4
Investments	**21.2**	—
Total deferred tax liabilities	**44.5**	21.4
Net deferred federal income taxes	**$ 42.2**	$ 77.8

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. The Company periodically evaluates its deferred tax assets, which requires significant judgment, to determine if they are realizable based upon weighing all available evidence, both positive and negative, including loss carryback potential, past operating results, existence of cumulative losses in the most recent years, projected performance of the business, future taxable income, including the ability to generate capital gains, and prudent and feasible tax planning strategies. In making such judgments, significant weight is given to evidence that can be objectively verified.

At December 31, 2019, the tax benefit of the net operating loss (“NOL”) carryforward was $12.1 million. The NOL carryforwards do not begin to expire until 2032 and will not fully expire until 2038.

At December 31, 2019, the Company carried no balance for uncertain tax positions. The Company had no accrual for the payment of interest and penalties at December 31, 2019 or 2018.

State Auto Financial and its subsidiaries file a consolidated U.S. federal income tax return. State Auto Financial and its subsidiaries also file in various state jurisdictions. The Company is no longer subject to U.S. federal or state and local income tax examinations by tax authorities for years before 2016. The Company has no current U.S. federal or state and local income tax examinations on-going at this time.

10. Pension and Postretirement Benefit Plans

The Company, through the employees of State Auto P&C, provides management and operation services under management agreements for all insurance and non-insurance affiliates. The Company provides eligible employees and retirees pension and postretirement benefits and records the funded status of these plans on its 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.

The Company provides a defined benefit pension plan for eligible employees hired prior to January 1, 2010 at which time the plan was closed to new participants. All Company employees participating in the plan are vested. The Company's policy is to fund pension costs in accordance with the requirements of the Employee Retirement Income Security Act of 1974. Benefits are determined by applying factors specified in the plan to a participant's defined average annual compensation.

The defined benefit pension and postretirement benefit plans are referred to herein as "the benefit plans."

The following table sets forth information regarding the pension and postretirement benefit plans' change in benefit obligation, plan assets and funded status at December 31, 2019 and 2018:

($ millions)	Pension		Postretirement	
	2019	2018	**2019**	2018
Change in benefit obligation:				
Benefit obligation at beginning of year	**$ 428.1**	$ 468.0	**$ 25.5**	$ 28.3
Service cost	**5.8**	7.7	**—**	—
Interest cost	**17.2**	16.0	**1.0**	0.9
Actuarial loss (gain)	**60.4**	(43.6)	**1.0**	(1.3)
Benefits paid	**(33.3)**	(20.0)	**(2.5)**	(2.4)
Benefit obligation at end of year	**478.2**	428.1	**25.0**	25.5
Change in plan assets available for plan benefits:				
Fair value of plan assets available for plan benefits at beginning of year	**381.6**	407.7	**—**	—
Employer contribution	**10.0**	15.0	**—**	—
Actual return on plan assets	**83.8**	(21.1)	**—**	—
Benefits paid	**(33.3)**	(20.0)	**—**	—
Fair value of plan assets at end of year	**$ 442.1**	$ 381.6	**$ —**	$ —
Supplemental executive retirement plan	**(11.8)**	(11.0)	**—**	—
Funded status at end of year	**$ (47.9)**	$ (57.5)	**$ (25.0)**	$ (25.5)
Accumulated benefit obligation end of year	**$ 453.8**	$ 406.5		

No assets are expected to be returned during the fiscal year ending December 31, 2019.

The following table sets forth the amounts included in accumulated other comprehensive income (loss) that has not been recognized in net periodic cost at December 31, 2019 and 2018:

($ millions)	**2019**	2018
Prior service benefit	**$ (43.4)**	$ (49.7)
Net actuarial loss	**157.1**	160.8
Total	**$ 113.7**	$ 111.1

The following table sets forth the Company's share of amortization expected to be recognized as a component of net periodic cost for the year ending December 31, 2020:

($ millions)	2020
Prior service benefit	$ (5.5)
Net actuarial loss	9.4
Total	$ 3.9

The following table sets forth information regarding the Company's share of pension and postretirement benefit plans' components of net periodic cost for the years ended December 31, 2019, 2018 and 2017:

($ millions)	Pension			Postretirement		
	2019	2018	2017	**2019**	2018	2017
Components of net periodic cost:						
Service cost	**$ 3.8**	$ 5.1	$ 5.7	**$ —**	$ —	$ —
Interest cost	**11.5**	10.7	11.4	**0.7**	0.6	0.8
Expected return on plan assets	**(17.8)**	(18.0)	(16.7)	**—**	—	—
Amortization of:						
Prior service benefit	**—**	—	—	**(5.5)**	(5.5)	(5.5)
Net actuarial loss	**6.0**	8.2	7.8	**0.2**	0.3	0.2
Net periodic cost (benefit)	**$ 3.5**	$ 6.0	$ 8.2	**$ (4.6)**	$ (4.6)	$ (4.5)

The following table sets forth the benefit payments, which reflect expected future service, expected to be paid:

($ millions)	Pension	Postretirement
2020	$ 18.2	$ 2.1
2021	18.8	2.0
2022	19.6	1.9
2023	20.7	1.8
2024	21.6	1.8
2025-2029	123.1	8.4

The postretirement plan's gross benefit payments for 2019 were $2.5 million, including the prescription drug benefits. The postretirement plan's subsidy related to Medicare Prescription Drug Improvement and Modernization Act of 2003 estimates future annual subsidies to be approximately $0.3 million.

The following table sets forth the weighted average assumptions used to determine the benefit plans' obligations at December 31, 2019 and 2018:

	Pension		Postretirement	
	2019	2018	**2019**	2018
Benefit obligations weighted-average assumptions:				
Discount rate	**3.10 %**	4.12 %	**3.10 %**	4.12 %
Rates of increase in compensation levels	**3.25**	3.25	**—**	—

The following table sets forth the weighted average assumptions used to determine the benefit plans' net periodic cost for the years ended December 31, 2019, 2018 and 2017:

	Pension			Postretirement		
	2019	2018	2017	**2019**	2018	2017
Weighted-average assumptions:						
Discount rate	**4.12 %**	3.50 %	4.00 %	**4.12 %**	3.50 %	4.00 %
Expected long-term rate of return on assets	**6.75**	7.00	7.00	**—**	—	—
Rates of increase in compensation levels	**3.25**	3.25	3.50	**—**	—	—

The benefit plans' obligations are long-term in nature and consequently the investment strategies have a long-term time horizon. In establishing the long-term rate of return assumption on plan assets, management, along with its pension consulting actuary, reviews the historical performance of the plan assets and the stability in the mix of the investment portfolio. The expected inflation rate and expected real rates of return of applicable asset classes are then determined to assist in setting appropriate assumptions.

The following table sets forth the assumed health care cost trend rates used for the years ended December 31, 2019, 2018 and 2017:

	Postretirement		
	2019	2018	2017
Assumed health care cost trend rates:			
Health care cost trend rate assumed for the next year	**5.50 %**	5.50 %	6.00 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	**4.00 %**	3.80 %	3.80 %
Year that the rate reaches the ultimate trend rate	**2075**	2075	2075

The assumed health care cost trend rates have a significant effect on the amounts reported for the postretirement plan. The following table sets forth the effects of a one percentage point change in assumed health care cost trend rates for the year ended December 31, 2019:

($ millions)	Postretirement	
	Increase	(Decrease)
One percentage point change:		
Effect on total service and interest cost	$ 0.1	$ (0.1)
Effect on accumulated postretirement benefit obligation	2.2	(2.0)

The pension plan's investment policy objective is to preserve the investment principal while generating income and appreciation in fair value to meet the pension plan's obligations. The pension plan's investment strategy and risk tolerance is balanced between meeting cash obligation requirements and a long-term relatively high risk tolerance takes into account the predictable cash requirements, nature of the plan's liabilities and the plan's long term time horizon. Since the nature and timing of the benefit plans' liabilities and cash requirements are predictable, the liquidity requirements are somewhat moderate. One of the goals of diversifying the benefit plans' portfolio among different asset classes is the elimination of concentration of risk in one asset class. Management also has investment policy guidelines with respect to limiting the ownership in any single debt or equity issuer. The international fund investments are also composed of numerous securities to reduce our exposure to a single issuer. The following table sets forth the asset allocation targets, as a percentage of total fair value, which are used as a guide by management when allocating funds as they become available.

	Asset allocation target (0 to 100%)
Asset Category:	
Fixed maturity	61.0 %
U.S. large-cap equity	19.8
U.S. small-cap equity	8.3
International equity	7.6
Emerging market equity	3.3
Total	100.0 %

Effective January 1, 2014, the Investment Committee approved a change to a liability driven investment (LDI) for the pension plan assets. The primary goal of the LDI strategy is to shift the asset allocation to more closely align with the plan liability, thereby reducing the volatility of the funded status. The implementation of the LDI strategy occurred over time and the actual asset allocation at any point in time is dependent upon the funded status and the level of interest rates. This glide path helps to balance interest rate risk, curve steepness risk, and credit spread risk, as incremental changes are made to the allocation over time. This allocation strategy reduces exposure to equity holdings and increases exposure to long duration fixed maturity holdings. This change resulted in lower volatility for the plan assets. By moving more of the plan's assets to long duration fixed income, the duration of the assets increased to more closely match the duration of the plan's liabilities.

See Note 3 for the valuation methods used by the Company for each type of financial instrument the plans hold that are carried at fair value. There were no transfers between level categorizations during the years ended December 31, 2019 and 2018.

Included in the pension plan's investments are two international funds ("the funds") that invests in equity securities of foreign issuers and are managed by third party investment managers. The funds had a fair value of $38.2 million and $32.7 million at December 31, 2019 and 2018, respectively, which was determined using the funds' net asset value. In accordance with ASC 820-10, since these investments are measured at fair value using the net asset value per share practical expedient they have not been classified in the table below.

The following tables set forth the plan's investments within the fair value hierarchy at December 31, 2019 and 2018:

($ millions) **December 31, 2019**	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)
Fixed maturities:			
U.S. treasury securities and obligations of U.S. government agencies	**$ 98.6**	**$ —**	**$ 98.6**
Corporate securities	**153.1**	**—**	**153.1**
U.S. government agencies mortgage-backed securities	**4.0**	**—**	**4.0**
Total fixed maturities	**255.7**	**—**	**255.7**
Equity securities:			
Large-cap securities	**91.9**	**91.9**	**—**
Mutual and exchange traded funds	**49.7**	**49.7**	**—**
Total equity securities	**141.6**	**141.6**	**—**
Total pension plan investments	**$ 397.3**	**$ 141.6**	**$ 255.7**

($ millions) December 31, 2018	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)
Fixed maturities:			
U.S. treasury securities and obligations of U.S. government agencies	$ 90.6	$ —	$ 90.6
Corporate securities	121.4	—	121.4
U.S. government agencies mortgage-backed securities	5.2	—	5.2
Total fixed maturities	217.2	—	217.2
Equity securities:			
Large-cap securities	82.3	82.3	—
Mutual and exchange traded funds	43.4	43.4	—
Total equity securities	125.7	125.7	—
Total pension plan investments	$ 342.9	$ 125.7	$ 217.2

The actuarially prepared funding amount to the pension plan ranges from the minimum amount the Company would be required to contribute to the maximum amount that would be deductible for tax purposes. Contributed amounts in excess of the minimum amounts are deemed voluntary. Amounts in excess of the maximum amount would be subject to an excise tax and may not be deductible for tax purposes. The Company expects to contribute up to $10.0 million to the pension plan during 2020.

The Company maintains a defined contribution plan that covers substantially all employees of the Company. The Company matches the first 1% of contributions of participants' salary at the rate of one dollar for each dollar contributed. Participant contributions of 2% to 6% are matched at a rate of 50 cents for each dollar contributed. In addition, the Company contributes a percentage of the employee's annual income for those employees hired on or after January 1, 2010, and for those employees hired prior to January 1, 2010 who chose to freeze their existing accrued pension benefit effective June 30, 2010. The Company's share of the expense under the plan totaled $6.4 million, $5.6 million and $6.4 million for 2019, 2018 and 2017, respectively.

11. Other Comprehensive Income (Loss) and Accumulated Other Comprehensive Income (Loss)

The following tables set forth the changes in the Company's accumulated other comprehensive income (loss) component ("AOCI(L)"), net of tax, for the years ended December 31, 2019, 2018 and 2017:

($ millions)	Unrealized Gains and Losses on Available-for-Sale Securities	Benefit Plan Items	Total
Beginning balance at January 1, 2019	**$ (20.2)**	**$ (76.2)**	**$ (96.4)**
Other comprehensive income (loss)	**63.4**	**(5.9)**	**57.5**
Amounts reclassified from AOCI [a]	**(2.8)**	**3.8**	**1.0**
Net current period other comprehensive income (loss)	**60.6**	**(2.1)**	**58.5**
Ending balance at December 31, 2019	**$ 40.4**	**$ (78.3)**	**$ (37.9)**
Beginning balance at January 1, 2018	$ 66.0	$ (62.2)	$ 3.8
Cumulative effect of change in accounting for equity securities and other invested assets and reclassification of stranded tax effects as of January 1, 2018	(47.9)	(16.0)	(63.9)
Other comprehensive loss before reclassifications	(36.7)	(4.3)	(41.0)
Amounts reclassified from AOCI [a]	(1.6)	6.3	4.7
Net current period other comprehensive (loss) income	(38.3)	2.0	(36.3)
Ending balance at December 31, 2018	$ (20.2)	$ (76.2)	$ (96.4)
Beginning balance at January 1, 2017	$ 62.8	$ (65.2)	$ (2.4)
Other comprehensive income (loss) before	45.5	(1.5)	44.0
Amounts reclassified from AOCI [a]	(42.3)	4.5	(37.8)
Net current period other comprehensive income	3.2	3.0	6.2
Ending balance at December 31, 2017	$ 66.0	$ (62.2)	$ 3.8

[a] See separate table below for details about these reclassifications

The following tables set forth the reclassifications out of accumulated other comprehensive income (loss), by component, to the Company's consolidated statement of income for the years ended December 31, 2019, 2018 and 2017:

($ millions)

Details about Accumulated Other Comprehensive (Loss) Income Components	December 31 2019	2018	2017	Affected line item in the Condensed Consolidated Statements of Income
Unrealized gains on available for sale securities	**$ 3.5**	$ 2.0	$ 65.1	Realized gain on sale of securities
	3.5	2.0	65.1	Total before tax
	(0.7)	(0.4)	(22.8)	Tax expense
	2.8	1.6	42.3	Net of tax
Amortization of benefit plan items:				
Negative prior service costs	**6.3**	6.3	6.3	(b)
Net loss	**(9.6)**	(13.2)	(12.5)	(b)
	(3.3)	(6.9)	(6.2)	Total before tax
	(0.5)	0.6	1.7	Tax benefit
	(3.8)	(6.3)	(4.5)	Net of tax
Total reclassifications for the period	**$ (1.0)**	$ (4.7)	$ 37.8	

[b] These accumulated other comprehensive income components are included in the computation of net periodic pension cost (see pension and postretirement benefit plans footnote for additional details).

12. Stockholders' Equity

a. Dividend Restrictions and Statutory Financial Information

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 the Company 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, approximately $91.3 million is available for payment to State Auto Financial from its insurance subsidiaries in 2020 without prior approval. State Auto Financial received dividends from its insurance subsidiaries in the amount of $10.0 million, $10.0 million and $15.0 million in 2019, 2018 and 2017, respectively.

The Company's 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. As of December 31, 2019, each of the Company's insurance subsidiaries maintained adjusted statutory surplus in excess of 400% of the authorized control level RBC.

The Company's statutory capital and surplus was $913.3 million and $871.9 million at December 31, 2019 and 2018, respectively. The Company's net income, as determined using SAP, was $31.1 million, $65.1 million, and $43.5 million for the years ended December 31, 2019, 2018, and 2017, respectively.

13. Preferred Stock

State Auto Financial has two authorized classes of preferred stock. For both classes, upon issuance, the Board of Directors has authority to fix and determine the significant features of the shares issued, including, among other things, the dividend rate, redemption price, redemption rights, conversion features and liquidation price payable in the event of any liquidation, dissolution, or winding up of the affairs of State Auto Financial.

The Class A preferred stock is not entitled to voting rights until, for any period, dividends are in arrears in the amount of six or more quarterly dividends.

14. Share-Based Compensation

The Company maintains share-based compensation plans for key employees and outside, or non-employee, directors. Effective May 4, 2017, the share-based compensation plan for key employees is the State Auto Financial Corporation 2017 Long-Term Incentive Plan (the "2017 LTIP"). The 2017 LTIP replaced the State Auto Financial Corporation 2009 Equity Compensation Plan (the "2009 Equity Plan"). The stock-based compensation plan for outside directors is the Outside Directors Restricted Share Unit Plan (the "RSU Plan").

The Company's share-based compensation plans authorize the granting of various equity-based incentives including performance stock awards, performance unit awards, restricted stock, and other stock based awards to employees and non-employee directors. The expense for these equity-based incentives is based on their fair value at the date of grant and amortized over their vesting period.

The Company has reserved 2.4 million common shares under the 2017 LTIP. As of December 31, 2019, a total of 1.8 million common shares are available for issuance under the 2017 LTIP. The 2017 LTIP provides that (i) the maximum value of performance stock awards or performance unit awards settled in cash that may be granted in any calendar year is equal to the excess of the number of awards multiplied by the fair market value of the company's common shares on the applicable payment or settlement date of the award multiplied by 5 and (ii) the maximum number of common shares subject to awards of performance stock and performance units that may be granted in any calendar year to any one individual is 250,000 shares. The 2017 LTIP automatically terminates on May 4, 2027.

Restricted Stock and Performance Unit Awards

Service-based restricted stock awards granted to employees are subject to a vesting schedule based on the employee's continued employment ("Restriction Period"), for which vesting is generally on the third anniversary after the date of grant. The

Company recognizes compensation expense based on the number of restricted shares granted at the then grant date fair value over the Restriction Period. The Company recognizes forfeitures as they occur.

Awards with both service and performance conditions granted to employees are subject to (i) the Restriction Period, and (ii) the achievement of predetermined performance goals within specified time periods. All performance-based awards include a specified number of units that will vest. The number of performance based awards that are ultimately earned for each grant is dependent upon meeting specified target and performance goals that range from 0% to 500% of the target number of performance units awarded based on the extent to which the Company achieves the performance goals for the performance measures as set forth in a performance matrix established by the Compensation Committee.

Generally, service-based and performance-based equity awards are expensed pro-rata over their respective vesting periods based on the market value of the awards at the time of grant. Performance-based equity awards that contain variable vesting criteria are expensed based on management's expectation of the percentage of the award that will ultimately be earned. These estimates can change periodically throughout the measurement period.

The following table sets forth the Company's total activity and related information for performance unit award activity for the years ended December 31, 2019, 2018 and 2017:

	2019		2018		2017	
	Shares	**Weighted Average Grant Date Fair Value**	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Outstanding, beginning of year	**356,400**	**$ 27.47**	147,869	$ 27.20	—	$ —
Granted	**130,680**	**33.67**	214,449	27.65	171,617	27.20
Vested	**(12,500)**	**27.65**	—	—	—	—
Forfeited	**(14,391)**	**29.59**	(15,918)	27.37	(23,748)	27.20
Outstanding, end of year	**460,189**	**$ 29.37**	356,400	$ 27.47	147,869	$ 27.20

As of December 31, 2019, there was $5.9 million of total unrecognized compensation cost related to performance unit awards. The remaining cost is expected to be recognized over a period of 1.01 years.

The following table sets forth the Company's total activity and related information for service-based restricted stock award activity for the years ended December 31, 2019, 2018 and 2017:

	2019		2018		2017	
	Shares	**Weighted Average Grant Date Fair Value**	Shares	Weighted Average Grant Date Fair Value	Shares	Weighted Average Grant Date Fair Value
Outstanding, beginning of year	**126,946**	**$ 26.21**	71,578	$ 22.44	107,297	$ 22.04
Granted	**—**	**—**	97,049	27.65	6,229	27.20
Vested	**(58,801)**	**24.57**	(37,644)	22.88	(26,271)	21.39
Forfeited	**(211)**	**21.54**	(4,037)	24.82	(15,677)	23.45
Outstanding, end of year	**67,934**	**$ 27.65**	126,946	$ 26.21	71,578	$ 22.44

As of December 31, 2019, there was $0.7 million of total unrecognized compensation cost related to service-based restricted stock awards. The remaining cost is expected to be recognized over a period of 0.81 years.

Stock Options

In accordance with the terms of the 2009 Equity Plan, options previously granted were all vested as of December 31, 2019 and must be exercised no later than ten years from the date of grant. If not exercised, outstanding options will expire in 2026.

The fair value of each stock option was estimated on the date of grant using the Black-Scholes closed-form pricing model. The pricing model requires assumptions such as the expected life of the option and expected volatility of the Company's stock over the expected life of the option, which significantly impacts the assumed fair value. The Company used historical data to determine these assumptions

The expected life of the options for employees represented the period of time the options are expected to be outstanding and is based on historical trends. For non-employees the expected life of the option approximates the remaining contractual term of the option. The expected stock price volatility is based on the historical volatility of the Company's stock for a period approximating the expected life and the expected dividend yield is based on the Company's most recent period's dividend payout. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant and has a term approximating the expected life of the option.

The following table sets forth the Company's stock option activity and related information for the years ended December 31, 2019, 2018 and 2017:

(millions, except per share amounts)	**2019**		2018		2017	
	Options	**Weighted-Average Exercise Price**	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price
Outstanding, beginning of year	**1.0**	**$ 18.50**	1.7	$ 19.22	2.5	$ 20.63
Exercised	**(0.2)**	**16.45**	(0.7)	20.08	(0.4)	19.38
Canceled	**—**	**17.07**	—	25.17	(0.4)	28.96
Outstanding, end of year	**0.8**	**$ 19.18**	1.0	$ 18.50	1.7	$ 19.22

Intrinsic value for stock options is defined as the difference between the current market value and the grant price. For the years ended December 31, 2019, 2018 and 2017, the total intrinsic value of stock options exercised was $4.5 million, $7.2 million and $3.0 million, respectively.

The following table sets forth information pertaining to the total options outstanding and exercisable at December 31, 2019:

(Options in millions)	Options Outstanding			Options Exercisable	
	Number	Weighted-Average Remaining Contractual Life	Weighted-Average Exercise Price	Number	Weighted-Average Exercise Price
Range of Exercise Prices:					
$10.01 – $20.00	**0.4**	**2.2**	**$ 16.67**	**0.4**	**$ 16.67**
$20.01 – $30.00	**0.4**	**4.9**	**22.0**	**0.4**	**21.97**
Total	**0.8**	**3.5**	**$ 19.18**	**0.8**	**$ 19.18**

Aggregate intrinsic value for total options outstanding and exercisable at December 31, 2019 was $9.0 million, respectively.

Employee Stock Purchase Plan

The Company also has a broad-based employee stock purchase plan under which employees of the Company may choose, at two different specified time intervals each year, to have up to 6% of their annual base earnings withheld to purchase the Company's common shares. The purchase price of the common shares is 85% of the lower of its beginning-of-interval or end-of-interval market price. The Company has reserved 4.0 million common shares under this plan. As of December 31, 2019, a total of 3.6 million common shares have been purchased under this plan. This plan remains in effect until terminated by the Board of Directors.

Outside Directors Plan

The RSU Plan is an unfunded deferred compensation plan which currently provides each outside director with an award of 1,400 restricted share units (the “RSU award”) following each annual meeting of shareholders. The amount of the award may change from year to year, based on the provision described below. The RSU awards are fully vested six months after the date of grant. RSU awards are not common shares of the Company and, as such, no participant has any rights as a holder of common shares under the RSU Plan. RSU awards represent the right to receive an amount, payable in cash or common shares of the Company, as previously elected by the outside director, equal to the value of a specified number of common shares of the Company at the end of the restricted period. Such election may be changed within the constraints set forth in the RSU Plan. The restricted period for the RSU awards begins on the date of grant and expires on the date the outside director retires from or otherwise terminates service as a director of the Company. During the restricted period, outside directors are credited with dividends, equivalent in value to those declared and paid on the Company’s common shares, on all RSU awards granted to them. At the end of the restricted period, outside directors receive cash or common share distributions of their RSU awards either (i) in a single lump sum payment, or (ii) in annual installment payments over a 5- or 10-year period, as previously elected by the outside director. The administrative committee for the RSU Plan (currently the Company’s Compensation Committee) retains the right to increase the annual number of RSU awards granted to each outside director to as many as 10,000 or to decrease such annual number to not less than 500, without seeking shareholder approval, if such increase or decrease is deemed appropriate by the administrative committee to maintain director compensation at appropriate levels. The RSU Plan automatically terminates on May 31, 2026. The Company accounts for the RSU Plan as a liability plan. There were 18,837 RSUs, 23,080 RSUs, and 26,323 RSUs granted in 2019, 2018 and 2017, respectively.

During 2019 and 2018, common shares valued at approximately $1,217,996 and $110,256, respectively, were distributed by the Company under the RSU Plan.

Share-based compensation expense recognized during 2019, 2018 and 2017 was $6.1 million, $11.1 million and $4.2 million, respectively. Share-based compensation is recognized as a component of loss and loss adjustment expense and acquisition and operating expense in a manner consistent with other employee compensation. As of December 31, 2019, there was $6.6 million of total unrecognized compensation cost related to compensation arrangements granted under the plans. The remaining cost is expected to be recognized over a period of 0.98 years.

15. Net Earnings (Loss) Per Common Share

The following table sets forth the compilation of basic and diluted net earnings (loss) per common share for the years ended December 31, 2019, 2018 and 2017:

(millions, except per share amounts)	**2019**	2018	2017
Numerator:			
Net earnings (loss) for basic net earnings per common share	**$ 87.4**	$ 12.8	$ (17.8)
Effect of dilutive share-based awards	**(1.1)**	—	—
Adjusted net earnings (loss) for dilutive net earnings (loss) per common share	**$ 86.3**	$ 12.8	$ (17.8)
Denominator:			
Weighted average shares for basic net earnings (loss) per common share	**43.4**	42.8	42.1
Effect of dilutive share-based awards	**0.6**	0.6	—
Adjusted weighted average shares for diluted net earnings (loss) per common share	**44.0**	43.4	42.1
Basic net earnings (loss) per common share	**$ 2.01**	$ 0.30	$ (0.42)
Diluted net earnings (loss) per common share	**$ 1.96**	$ 0.29	$ (0.42)

The following table sets forth the options to purchase shares of common stock and the restricted share units ("RSU award") provided to each outside director of the Company, that were not included in the computation of diluted earnings per common share because the exercise price of the options, or awards, was greater than the average market price or their inclusion would have been antidilutive for the years ended December 31, 2018 and 2017:

(millions)	2018	2017
Total number of antidilutive options and awards	0.1	0.5

16. Reportable Segments

The Company changed its reportable segments from four to three effective January 1, 2019. The exit from the specialty insurance business resulted in the elimination of specialty insurance as a reportable segment. Specialty results, labeled as "specialty run-off," are included in the tables below to enable reconciliation to total underwriting results.

The three remaining reportable segments are: personal insurance, commercial insurance, and investment operations. The reportable insurance segments are business units managed separately because of the differences in the type of customers they serve, the products they provide or services they offer.

The personal insurance segment primarily provides personal automobile and homeowners to the personal insurance market. The commercial insurance segment primarily provides commercial automobile, commercial multi-peril, fire & allied, general liability, workers' compensation insurance covering small-to-medium sized commercial exposures in the commercial insurance market. In addition, the commercial insurance segment provides farm & ranch insurance.

The Company evaluates the performance of its insurance segments using industry financial measurements based on SAP, which include loss and loss adjustment expense ratios, underwriting expense ratios, combined ratios, statutory underwriting gain (loss), net premiums earned and net written premiums. One of the most significant differences between SAP and GAAP is that SAP requires all underwriting expenses to be expensed immediately and not deferred and amortized over the same period the premium is earned.

The investment operations segment, managed by Stateco, provides investment services and is evaluated based on investment returns of assets. Asset information by segment is not reported for the insurance segments because the Company does not produce such information internally.

The Company's reportable insurance segments, and the products within each, 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 & ranch, and other commercial

The following table sets forth financial information regarding the Company's reportable segments for the years ended December 31, 2019, 2018 and 2017:

($ millions)	**2019**	2018	2017
Revenues from external sources:			
Insurance operations			
Personal insurance	**$ 759.2**	$ 673.9	$ 580.6
Commercial insurance	**488.7**	464.3	455.7
Specialty run-off	**5.1**	99.8	239.8
Total insurance operations	**1,253.0**	1,238.0	1,276.1
Investment operations segment			
Net investment income	**80.4**	84.9	78.8
Net investment gain (loss)	**74.2**	(49.7)	65.1
Total investment operations	**154.6**	35.2	143.9
All other	**2.4**	2.6	2.3
Total revenues from external sources	**1,410.0**	1,275.8	1,422.3
Intersegment revenues	**6.5**	6.5	6.0
Total revenues	**1,416.5**	1,282.3	1,428.3
Reconciling items:			
Eliminate intersegment revenues	**(6.5)**	(6.5)	(6.0)
Total consolidated revenue	**$ 1,410.0**	$ 1,275.8	$ 1,422.3
Segment (loss) income before federal income taxes:			
Insurance operations SAP underwriting (loss) gain			
Personal insurance	**$ (39.8)**	$ 3.3	$ (23.0)
Commercial insurance	**(0.1)**	(8.4)	(10.6)
Specialty run-off	**(10.7)**	0.4	(56.0)
Total insurance operations	**(50.6)**	(4.7)	(89.6)
Investment operations segment:			
Net investment income	**80.4**	84.9	78.8
Net investment gain (loss)	**74.2**	(49.7)	65.1
Total investment operations	**154.6**	35.2	143.9
All other	**0.3**	0.4	0.6
Reconciling items:			
GAAP adjustments	**14.7**	(3.7)	(9.9)
Interest expense on corporate debt	**(4.9)**	(5.7)	(5.9)
Corporate expenses	**(7.1)**	(8.6)	(4.1)
Total reconciling items	**$ 2.7**	$ (18.0)	$ (19.9)
Total consolidated income before federal income taxes	**$ 107.0**	$ 12.9	$ 35.0

The following table sets forth financial information regarding the Company's reportable segments at December 31, 2019 and 2018:

($ millions)	**2019**	2018
Segment assets:		
Investment operations segment	**$ 2,747.3**	$ 2,658.7
Total segment assets	**2,747.3**	2,658.7
Reconciling items:		
Corporate assets	**238.1**	237.2
Total consolidated assets	**$ 2,985.4**	$ 2,895.9

Assets attributed to the investment operations segment include the total investments and cash and cash equivalent categories from the balance sheet. All other assets are corporate assets and are not assigned to a segment.

17. Quarterly Financial Data (unaudited)

The following tables set forth quarterly financial data for 2019 and 2018:

($ millions, except per share amounts)	**2019**			
	For three months ended			
	March 31	**June 30**	**September 30**	**December 31**
Total revenues	**$ 367.6**	**$ 340.1**	**$ 334.5**	**$ 367.8**
Income (loss) before federal income taxes	**61.6**	**(7.6)**	**12.7**	**40.3**
Net income (loss)	**49.4**	**(6.2)**	**11.5**	**32.7**
Income (loss) per common share:				
Basic	**$ 1.14**	**$ (0.14)**	**$ 0.26**	**$ 0.75**
Diluted	**$ 1.12**	**$ (0.14)**	**$ 0.25**	**$ 0.72**

	2018			
	For three months ended			
	March 31	June 30	September 30	December 31
Total revenues	$ 323.7	$ 341.7	$ 346.0	$ 264.4
(Loss) income before federal income taxes	(3.3)	7.7	41.0	(32.5)
Net (loss) income	(2.1)	6.0	33.4	(24.5)
(Loss) earnings per common share:				
Basic	$ (0.05)	$ 0.14	$ 0.78	$ (0.57)
Diluted	$ (0.05)	$ 0.14	$ 0.76	$ (0.57)

18. Contingencies

In accordance with the Contingencies Topic of the Financial Accounting Standards Board's Accounting Standards Codification, the Company accrues for a litigation-related liability when it is probable that such a liability has been incurred and the amount can be reasonably estimated. The Company reviews all litigation on an ongoing basis when making accrual and disclosure decisions. For certain legal proceedings, the Company cannot reasonably estimate losses or a range of loss, if any, particularly for proceedings that are in their early stages of development or where the plaintiffs seek indeterminate damages. Various factors, including, but not limited to, the outcome of potentially lengthy discovery and the resolution of important factual questions, may need to be determined before probability can be established or before a loss or range of loss can be reasonably estimated. If the loss contingency in question is not both probable and reasonably estimable, the Company does not establish an accrual and the matter will continue to be monitored for any developments that would make the loss contingency both probable and reasonably estimable. Based on currently available information known to the Company, it believes that its reserves for litigation-related liabilities are reasonable. However, in the event that a legal proceeding results in a substantial judgment against, or settlement by, the Company, there can be no assurance that any resulting liability or financial commitment would not have a material adverse effect on the financial condition, results of operations or cash flows of the consolidated financial statements of the Company.

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

Additionally, the Company may be impacted by adverse regulatory actions and adverse court decisions where insurance coverages are expanded beyond the scope originally contemplated in its insurance policies. The Company believes that the effects, if any, of such regulatory actions and published court decisions are not likely to have a material adverse effect on its results of operations or have a material adverse effect on its consolidated financial position or cash flows.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosures

Information concerning the change in our independent registered public accounting firm from Ernst & Young LLP to PricewaterhouseCoopers LLP for 2020 was previously reported on a Form 8-K filed with the SEC on September 3, 2019, which information will be supplemented pursuant to a Form 8-K/A to be filed with the SEC at the conclusion of the Ernst & Young LLP engagement.

Item 9A. Controls and Procedures

Management's Annual Report on Internal Control Over Financial Reporting

Our management's annual report on internal control over financial reporting required by Item 308(a) of Regulation S-K follows. The attestation report of our independent registered public accounting firm required by Item 308(b) of Regulation S-K is found under the caption "Report of the Independent Registered Public Accounting Firm on Internal Control over Financial Reporting" in Item 8 of this Form 10-K.

The following report is provided by our management on the Company's internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act):

1. Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company.
2. Our management has used the Committee of Sponsoring Organizations of the Treadway Commission (COSO) 2013 framework to evaluate the effectiveness of our internal control over financial reporting. Our management believes that the COSO 2013 framework is a suitable framework for its evaluation of our internal control over financial reporting because it is free from bias, permits reasonably qualitative and quantitative measurements of our internal controls, is sufficiently complete so that those relevant factors that would alter a conclusion about the effectiveness of our internal controls are not omitted and is relevant to an evaluation of internal control over financial reporting.
3. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can only provide reasonable assurance with respect to financial reporting.
4. Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2019, and has concluded that such internal control over financial reporting was effective.
5. Ernst & Young LLP, the independent registered public accounting firm that audited the consolidated financial statements included in this Form 10-K, has issued their attestation report on the Company's internal control over financial reporting, which is included herein.

Disclosure Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)). Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective in timely alerting them to material information relating to the Company (including its consolidated subsidiaries) required to be included in the Company's periodic filings with the Securities and Exchange Commission.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information regarding our directors required by Items 401(a) and (d)-(f) of Regulation S-K will be found under the caption "Proposal One: Election of Directors" in the 2020 Proxy Statement, which information is incorporated herein by reference. Information regarding our executive officers required by Items 401(b) and (d)-(f) of Regulation S-K is found under the caption "Executive Officers of the Registrant" at the end of Item 1 of this Form 10-K, which information is also incorporated by reference into this Item 10.

We have a separately-designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. As of February 27, 2020, the members of our Audit Committee were Eileen A. Mallesch, Kym M. Hubbard, David R. Meuse and Setareh Pouraghabagher. Ms. Pouraghabagher is Chairperson of our Audit Committee. Our Board of Directors has determined that Ms. Mallesch and Ms. Pouraghabagher are both an "audit committee financial expert," as that term is defined in Item 407(d)(5) of Regulation S-K, and "independent," as that term is defined in Rule 10A-3 of the Exchange Act.

Information regarding the filing of reports of ownership under Section 16(a) of the Exchange Act by our officers and directors and persons owning more than 10% of a registered class of our equity securities required by Item 405 of Regulation S-K will be found under the caption "Ownership of Equity Securities of the Company—Section 16(a) Beneficial Ownership Reporting Compliance" in the 2020 Proxy Statement, which information is incorporated herein by reference.

Information concerning the procedures by which shareholders may recommend nominees to our Board of Directors will be found under the caption "Corporate Governance and Board of Directors—Nomination of Directors" in the 2020 Proxy Statement. There has been no material change to the nomination procedures previously disclosed in the proxy statement for our 2020 annual meeting of shareholders.

Our Board of Directors has adopted a code of ethics that applies to our principal executive officer, principal financial officer, principal accounting officer, controller, and persons performing similar functions. This code of ethics has been posted on our website at www.StateAuto.com under "Investor Relations" then "Corporate Governance." Any amendment (other than any technical, administrative or other non-substantive amendment) to, or waiver from, a provision of this code will be posted on our website described above within four business days following its occurrence.

Item 11. Executive Compensation

The 2020 Proxy Statement will contain information regarding the following matters: information regarding executive compensation required by Item 402 of Regulation S-K will be found under the captions "Corporate Governance and Board of Directors—Compensation of Outside Directors and Outside Director Compensation Table" and "Compensation Discussion and Analysis"; information required by Item 407(e)(4) of Regulation S-K will be found under the caption "Compensation Committee Matters—Compensation Committee Interlocks and Insider Participation"; information required by Item 407(e)(5) of Regulation S-K will be found under the caption "Compensation Committee Matters—Compensation Committee Report of the Fiscal Year Ended December 31, 2019" This information is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information regarding security ownership of certain beneficial owners and management required by Item 403 of Regulation S-K will be found under the caption "Ownership of Equity Securities of the Company" in the 2020 Proxy Statement, which information is incorporated herein by reference.

Information regarding equity compensation plan information required by Item 201(d) of Regulation S-K will be found under the caption "Equity Compensation Plan Information and Burn Rate" in the 2020 Proxy Statement, which information is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information regarding certain relationships and related transactions required by Item 404 of Regulation S-K will be found under the caption "Related Party Transactions" in the 2020 Proxy Statement, which information is incorporated herein by reference.

Information regarding the independence of our directors required by Item 407(a) of Regulation S-K will be found under the caption "Corporate Governance and Board of Directors—Directors—Director Independence" in the 2020 Proxy Statement, which is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

Information regarding principal accountant fees and services required by Item 9(e) of Schedule 14A will be found under the caption “Audit Committee Matters—Independent Registered Public Accounting Firm - Audit and Other Services Fees” in our 2020 Proxy Statement, which information is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a)(1) LISTING OF FINANCIAL STATEMENTS

The following consolidated financial statements of the Company are filed as part of this Form 10-K and are included in Item 8:

Reports of Independent Registered Public Accounting Firm

Consolidated Balance Sheets as of December 31, 2019 and 2018

Consolidated Statements of Income for each of the three years in the period ended December 31, 2019

Consolidated Statements of Comprehensive Income for each of the three years in the period ended December 31, 2019

Consolidated Statements of Stockholders' Equity for each of the three years in the period ended December 31, 2019

Consolidated Statements of Cash Flows for each of the three years in the period ended December 31, 2019

Notes to Consolidated Financial Statements

(a)(2) LISTING OF FINANCIAL STATEMENT SCHEDULES

The following financial statement schedules of the Company for the years 2019, 2018 and 2017 are included in Item 14(d) following the signatures and should be read in conjunction with our consolidated financial statements contained in our Form 10-K.

Schedule Number	Schedule
I.	Summary of Investments—Other Than Investments in Related Parties
II.	Condensed Financial Information of Registrant
III.	Supplementary Insurance Information
IV.	Reinsurance
V.	Valuation and Qualifying Accounts

All other schedules and footnotes are omitted because they are not applicable or the required information is included in the consolidated financial statements or notes thereto.

(a)(3) LISTING OF EXHIBITS

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
3.01	State Auto Financial Corporation's Amended and Restated Articles of Incorporation	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 3.01 therein)
3.02	State Auto Financial Corporation's Amendment to the Amended and Restated Articles of Incorporation	1933 Act Registration Statement No. 33-89400 on Form S-8 (see Exhibit 4(b) therein)
3.03	State Auto Financial Corporation Certificate of Amendment to the Amended and Restated Articles of Incorporation as of June 2, 1998	Form 10-K Annual Report for the year ended December 31, 1998 (see Exhibit 3(A)(3) therein)
3.04	State Auto Financial Corporation's Amended and Restated Code of Regulations	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 3.04 therein)
3.05	First Amendment to State Auto Financial Corporation's Amended and Restated Code of Regulations	Form 10-Q Quarterly Report for the period ended September 30, 2010 (see Exhibit 3.05 therein)
3.06	Second Amendment to State Auto Financial Corporation's Amended and Restated Code of Regulations	Form 10-Q Quarterly Report for the period ended June 30, 2016 (see Exhibit 3.01 therein)
4.01	Description of Securities	Included herein

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.01	Investment Management Agreement between Stateco Financial Services, Inc. and State Automobile Mutual Insurance Company, effective April 1, 1993	Form 10-K Annual Report for the year ended December 31, 1992 (see Exhibit 10 (N) therein)
10.02	First Amendment to the Investment Management Agreement between Stateco Financial Services, Inc. and State Automobile Mutual Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.09 therein)
10.03	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and State Automobile Mutual Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.10 therein)
10.04	Investment Management Agreement between Stateco Financial Services, Inc. and Meridian Security Insurance Company, effective June 1, 2001	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.17 therein)
10.05	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and Meridian Security Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.12 therein)
10.06	Investment Management Agreement between Stateco Financial Services, Inc. and Midwest Security Insurance Company effective January 1, 1997	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.19 therein)
10.07	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and Midwest Security Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.15 therein)
10.08	Investment Management Agreement between Stateco Financial Services, Inc. and Meridian Citizens Mutual Insurance Company effective June 1, 2001	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.20 therein)
10.09	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and Meridian Citizens Mutual Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.17 therein)
10.10	Amended and Restated Investment Management Agreement dated as of December 31, 2007, among Stateco Financial Services, Inc. and Patrons Mutual Insurance Company of Connecticut, Patrons Fire Insurance Company of Rhode Island, and Provision State Insurance Company	Form 10-K Annual Report for the year ended December 31, 2007 (see Exhibit 10.22 therein)
10.11	Investment Management Agreement between Stateco Financial Services, Inc. and Plaza Insurance Company effective October 1, 2010	Form 10-K Annual Report for year ended December 31, 2010 (see Exhibit 10.26 therein)
10.12	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and Plaza Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.22 therein)
10.13	Investment Management Agreement between Stateco Financial Services, Inc. and Rockhill Insurance Company effective October 1, 2010	Form 10-K Annual Report for year ended December 31, 2010 (see Exhibit 10.27 therein)
10.14	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and Rockhill Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.24 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.15	Investment Management Agreement between Stateco Financial Services, Inc. and American Compensation Insurance Company and Bloomington Compensation Insurance Company effective October 1, 2010	Form 10-K Annual Report for year ended December 31, 2010 (see Exhibit 10.28) therein)
10.16	Amended and Restated Exhibit A to the Investment Management Agreement between Stateco Financial Services, Inc. and American Compensation Insurance Company and Bloomington Compensation Insurance Company, effective January 1, 2013	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.26 therein)
10.17	Midwest Security Insurance Company Management Agreement amended and restated as of January 1, 2000 by and among State Automobile Mutual Insurance Company, State Auto Property and Casualty Insurance Company and Midwest Security Insurance Company (nka State Auto Insurance Company of Wisconsin)	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.45 therein)
10.18	Management and Operations Agreement, Amended and Restated as of January 1, 2015 by and among State Automobile Mutual Insurance Company, State Auto Financial Corporation, State Auto Property and Casualty Insurance Company, State Auto Insurance Company of Ohio, Milbank Insurance Company, Meridian Security Insurance Company, Patrons Mutual Insurance Company, Stateco Financial Services, Inc., 518 Property Management and Leasing, LLC, State Auto Holdings, Inc., Facilitators, Inc., CDC Holding, Inc., Partners General Insurance Agency, LLC, and Network E&S Brokers, LLC	Form 10-Q Quarterly Report for the period ended June 30, 2015 (see Exhibit 10.01 therein)
10.19	First Amendment, effective as of September 5 , 2017, to the Management and Operations Agreement, Amended and Restated as of January 1, 2015 by and among State Automobile Mutual Insurance Company, State Auto Financial Corporation, State Auto Property and Casualty Insurance Company, State Auto Insurance Company of Ohio, Milbank Insurance Company, Meridian Security Insurance Company, Patrons Mutual Insurance Company, Stateco Financial Services, Inc., 518 Property Management and Leasing, LLC, State Auto Holdings, Inc., Facilitators, Inc., Partners General Insurance Agency, LLC, Network E&S Brokers, LLC, and	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.26 therein)
10.20	Second Amendment, effective as of March 1, 2018, to the Management and Operations Agreement, Amended and Restated as of January 1, 2015 by and among State Automobile Mutual Insurance Company, State Auto Financial Corporation, State Auto Property and Casualty Insurance Company, State Auto Insurance Company of Ohio, Milbank Insurance Company, Meridian Security Insurance Company, Patrons Mutual Insurance Company, Stateco Financial Services, Inc., 518 Property Management and Leasing, LLC, State Auto Holdings, Inc., Facilitators, Inc., Network E&S Brokers, LLC, and State Auto Labs Corp.	Form 10-Q Quarterly Report for the period ended March 31, 2018 (see Exhibit 10.01 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.21	Consulting Services Agreement dated as of November 1, 2009, by and between State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Meridian Security Insurance Company, Meridian Citizens Mutual Insurance Company, Farmers Casualty Insurance Company, Milbank Insurance Company, and RTW, Inc.	Form 10-Q Quarterly Report for the period ended September 30, 2009 (see Exhibit 10.01 therein)
10.22	Amended and Restated Appendix B , effective as of January 1, 2013, to the Consulting Service Agreement, dated as of November 1, 2009, by and between State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Meridian Security Insurance Company, Meridian Citizens Mutual Insurance Company, Farmers Casualty Insurance Company, Milbank Insurance Company, and RTW, Inc.	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.35 therein)
10.23	Underwriting Management Agreement effective as of November 20, 2009, by and between Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company, Bloomington Compensation Insurance Company, State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Meridian Security Insurance Company, Milbank Insurance Company, Farmers Casualty Insurance Company, and Risk Evaluation and Design, LLC	Form 8-K Current Report filed on November 25, 2009 (see Exhibit 10.1 therein)
10.24	Amended and Restated Management and Operations Agreement, effective as of January 1, 2011, by and among State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company, Bloomington Compensation Insurance Company, Rockhill Holding Company, National Environmental Coverage Corporation of the South, LLC, National Environmental Coverage Corporation, RTW, Inc., Rockhill Insurance Services, LLC and Rockhill Underwriting Management, LLC.	Form 8-K Current Report filed on January 7, 2011 (see Exhibit 10.2 therein)
10.25	First Amendment, effective as of January 1, 2013, to Amended and Restated Management and Operations Agreement, effective as of January 1, 2011 by and among State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company, Bloomington Compensation Insurance Company, Rockhill Holding Company, National Environmental Coverage Corporation of the South, LLC, National Environmental Coverage Corporation, RTW, Inc., Rockhill Insurance Services, LLC and Rockhill Underwriting Management, LLC.	Form 10-K Annual Report for the year ended December 31, 2012 (see Exhibit 10.39 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.26	Reinsurance Pooling Agreement Amended and Restated as of January 1, 2011, entered into as of January 3, 2011, by and among State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Milbank Insurance Company, State Auto Insurance Company of Wisconsin, Farmers Casualty Insurance Company, State Auto Insurance Company of Ohio, State Auto Florida Insurance Company, Meridian Security Insurance Company, Meridian Citizens Mutual Insurance Company, Patrons Mutual Insurance Company of Connecticut, Litchfield Mutual Fire Insurance Company, Beacon National Insurance Company, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company and Bloomington Compensation Insurance Company	Form 8-K Current Report filed on January 7, 2011 (see Exhibit 10.1 therein)
10.27	First Amendment, effective December 31, 2011, to Reinsurance Pooling Agreement Amended and Restated as of January 1, 2011 by and among State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Milbank Insurance Company, State Auto Insurance Company of Wisconsin, Farmers Casualty Insurance Company, State Auto Insurance Company of Ohio, State Auto Florida Insurance Company, Meridian Security Insurance Company, Meridian Citizens Mutual Insurance Company, Patrons Mutual Insurance Company of Connecticut, Litchfield Mutual Fire Insurance Company, Beacon National Insurance Company, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company and Bloomington Compensation Insurance Company	Form 10-K Annual Report for year ended December 31, 2011 (see Exhibit 10.45 therein)
10.28	Second Amendment, effective March 31, 2013, to Reinsurance Pooling Agreement Amended and Restated as of January 1, 2011 by and among State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Milbank Insurance Company, State Auto Insurance Company of Wisconsin, State Auto Insurance Company of Ohio, Meridian Security Insurance Company, Meridian Citizens Mutual Insurance Company, Patrons Mutual Insurance Company of Connecticut, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company and Bloomington Compensation Insurance Company	Form 10-Q Quarterly Report for the period ended March 31, 2013 (see Exhibit 10.1 therein)
10.29	Third Amendment, effective July 1, 2014, to Reinsurance Pooling Agreement Amended and Restated as of January 1, 2011 by and among State Automobile Mutual Insurance Company, State Auto Property & Casualty Insurance Company, Milbank Insurance Company, State Auto Insurance Company of Wisconsin, State Auto Insurance Company of Ohio, Meridian Security Insurance Company, Patrons Mutual Insurance Company of Connecticut, Rockhill Insurance Company, Plaza Insurance Company, American Compensation Insurance Company and Bloomington Compensation Insurance Company	Form 10-Q Quarterly Report for the period ended September 30, 2014 (see Exhibit 10.01 therein)
10.30	Amended and Restated Declaration of Trust of STFC Capital Trust I, dated as of May 22, 2003	Form 10-Q Quarterly Report for the period ended June 30, 2003 (see 10(XX) therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.31	Indenture dated as of May 22, 2003, for Floating Rate Junior Subordinated Debt Securities Due 2033	Form 10-Q Quarterly Report for the period ended June 30, 2003 (see 10(YY) therein)
10.32	Credit Agreement dated as of May 19, 2009, between State Automobile Mutual Insurance Company, as borrower, and Milbank Insurance Company, as lender	Form 8-K Current Report filed on May 26, 2009 (see Exhibit 10.1 therein)
10.33	Addendum, effective May 19, 2019, to the Credit Agreement dated as of May 19, 2009, between Milbank Insurance Company and State Automobile Mutual Insurance Company	Form 8-K Current Report filed May 8, 2019 (see Exhibit 10.02 therein)
10.34	Credit Agreement dated as of May 8, 2009, between State Automobile Mutual Insurance Company, as borrower, and State Auto Property & Casualty, as lender	Form 8-K Current Report filed on May 13, 2009 (see Exhibit 10.1 therein)
10.35	Addendum, effective May 8, 2019, to the Credit Agreement dated as of May 8, 2009, between State Auto Property & Casualty Insurance Company and State Automobile Mutual Insurance Company	Form 8-K Current Report filed May 8, 2019 (see Exhibit 10.01 therein)
10.36	Blanket Security Agreement effective February 15, 2013 between State Auto Property & Casualty Insurance Company and Federal Home Loan Bank of Cincinnati	Form 10-Q Quarterly Report for the period ended June 30, 2013 (see Exhibit 10.02 therein)
10.37	Insurance Company Member Addendum to Blanket Security Agreement effective February 15, 2013 between State Auto Property & Casualty Insurance Company and Federal Home Loan Bank of Cincinnati	Form 10-Q Quarterly Report for the period ended June 30, 2013 (see Exhibit 10.03 therein)
10.38	Application for Callable Advance signed September 2, 2016 by State Auto Property & Casualty Insurance Company with respect to Blanket Security Agreement effective February 15, 2013 between State Auto Property & Casualty Insurance Company and Federal Home Loan Bank of Cincinnati	Form 10-Q Quarterly Report for the period ended September 30, 2016 (see Exhibit 10.01 therein)
10.39	Open Line of Credit Application dated as of April 2, 2019, between State Auto Property & Casualty and Federal Home Loan Bank of Cincinnati.	Form 8-K Current Report filed on April 2, 2019 (see Exhibit 10.01 therein)
10.40	Advance dated as of May 17, 2018, between State Auto Property & Casualty and Federal Home Loan Bank of Cincinnati.	Form 8-K Current Report filed on May 23, 2018 (see Exhibit 10.1 therein)
10.41*	Employment Agreement, dated as of November 28, 2017, commencing as of January 1, 2018, among State Auto Financial Corporation, State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company and Michael E. LaRocco	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.42 therein)
10.42*	Executive Change of Control Agreement dated as of October 26, 2017, among State Auto Financial Corporation, State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company and Steven E. English	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.43 therein)
10.43*	Executive Change of Control Agreement dated as of October 26, 2017, among State Auto Financial Corporation, State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company and Gregory A. Tacchetti	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.44 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.44*	Executive Change of Control Agreement dated as of November 28, 2017 among State Auto Financial Corporation, State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company and Michael E. LaRocco	Included herein
10.45*	Executive Change of Control Agreement dated as of October 26, 2017 among State Auto Financial Corporation, State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company and Kim B. Garland	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.46 therein)
10.46*	Executive Change of Control Agreement dated as of October 26, 2017 among State Auto Financial Corporation, State Auto Property & Casualty Insurance Company, State Automobile Mutual Insurance Company and Paul M. Stachura	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.47 therein)
10.47*	Form of Indemnification Agreement between State Auto Financial Corporation and each of its directors	Form 8-K Current Report filed on November 20, 2008 (see Exhibit 99.1 therein)
10.48*	Officer Indemnification Agreement dated as of March 16, 2018, between State Auto Financial Corporation and Michael E. LaRocco	Form 8-K Current Report filed on March 22, 2018 (see Exhibit 10.1 therein)
10.49*	Officer Indemnification Agreement dated as of March 16, 2018, between State Auto Financial Corporation and Paul M. Stachura	Form 8-K Current Report filed on March 22, 2018 (see Exhibit 10.2 therein)
10.50*	Officer Indemnification Agreement dated as of March 16, 2018, between State Auto Financial Corporation and Gregory A. Tacchetti	Form 8-K Current Report filed on March 22, 2018 (see Exhibit 10.3 therein)
10.51*	Officer Indemnification Agreement dated as of May 8, 2009, between State Auto Financial Corporation and Steven E. English	Form 8-K Current Report filed on May 13, 2009 (see Exhibit 10.3 therein)
10.52*	State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-Q Quarterly Report for the period ended June 30, 2017 (see Exhibit 10.01 therein)
10.53*	Form of PAU Award Agreement under the State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.50 therein)
10.54*	Form of Performance Unit Award Agreement under the State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.51 therein)
10.55*	Form of Time Based Restricted Stock Award Agreement under the State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.52 therein)
10.56*	Form of Time Based Deferred Stock Unit Award Agreement under the State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.53 therein)
10.57*	Form of Performance Based Deferred Stock Award Agreement under the State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.54 therein)
10.58*	Form of Performance Based Restricted Stock Award Agreement under the State Auto Financial Corporation 2017 Long-Term Incentive Plan	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 10.55 therein)
10.59*	Amended and Restated Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2005 (see Exhibit 10.60 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.60*	Amendment Number 1 to the Amended and Restated Equity Incentive Compensation Plan of State Auto Financial Corporation (amendment effective August 15, 2008)	Form 10-K Annual Report for the year ended December 31, 2008 (see Exhibit 10.63 therein)
10.61*	Form of Non-Qualified Stock Option Agreement under the Amended and Restated Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2005 (see Exhibit 10.62 therein)
10.62*	Form of Incentive Stock Option Agreement under the Amended and Restated Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2005 (see Exhibit 10.63 therein)
10.63*	2009 Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 8-K Current Report filed on May 13, 2009 (see Exhibit 10.7 therein)
10.64*	Amendment No. 1 to the 2009 Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2011 (see Exhibit 10.01 therein)
10.65*	Amendment No. 2 to the 2009 Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended September 30, 2013 (see Exhibit 10.01 therein)
10.66*	Amendment No. 3 to the 2009 Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-K Annual Report for the year ended December 31, 2014 (see Exhibit 10.69 therein)
10.67*	Amendment No. 4 to the 2009 Equity Incentive Compensation Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2016 (see Exhibit 10.01 therein)
10.68*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 6, 2014 between State Auto Financial Corporation and Steven E. English	Form 10-Q Quarterly Report for the period ended March 31, 2014 (see Exhibit 10.02 therein)
10.69*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 5, 2015 between State Auto Financial Corporation and Steven E. English	Form 8-K Current Report filed on May 13, 2015 (see Exhibit 10.02 therein)
10.70*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of May 7, 2015 between State Auto Financial Corporation and Michael E. LaRocco	Form 8-K Current Report filed on May 13, 2015 (see Exhibit 10.06 therein)
10.71*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 3, 2016 between State Auto Financial Corporation and Michael E. LaRocco	Form 10-Q Quarterly Report for the period ended March 31, 2016 (see Exhibit 10.01 therein)
10.72*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 3, 2016 between State Auto Financial Corporation and Steven E. English	Form 10-Q Quarterly Report for the period ended March 31, 2016 (see Exhibit 10.02 therein)
10.73*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 3, 2016 between State Auto Financial Corporation and Jessica E. Clark	Form 10-Q Quarterly Report for the period ended March 31, 2016 (see Exhibit 10.03 therein)
10.74*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of August 24, 2015 between State Auto Financial Corporation and Kim B. Garland	Form 10-Q Quarterly Report for the period ended March 31, 2016 (see Exhibit 10.04 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.75*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of August 24, 2015 between State Auto Financial Corporation and Kim B. Garland	Form 10-Q Quarterly Report for the period ended March 31, 2016 (see Exhibit 10.05 therein)
10.76*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 3, 2016 between State Auto Financial Corporation and Kim B. Garland	Form 10-Q Quarterly Report for the period ended March 31, 2016 (see Exhibit 10.06 therein)
10.77*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of September 9, 2015 between State Auto Financial Corporation and Paul M. Stachura	Form 10-K Annual Report for the year ended December 31, 2016 (see Exhibit 10.74 therein)
10.78*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of September 9, 2015 between State Auto Financial Corporation and Paul M. Stachura	Form 10-K Annual Report for the year ended December 31, 2016 (see Exhibit 10.75 therein)
10.79*	Restricted Stock Agreement under the 2009 Equity Incentive Compensation Plan dated as of March 3, 2016 between State Auto Financial Corporation and Paul M. Stachura	Form 10-K Annual Report for the year ended December 31, 2016 (see Exhibit 10.76 therein)
10.80*	Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2005 (see Exhibit 10.61 therein)
10.81*	First Amendment to the Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.54 therein)
10.82*	Third Amendment to the Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation	Form 10-K Annual Report for the year ended December 31, 2008 (see Exhibit 10.73 therein)
10.83*	Fourth Amendment to the Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation effective November 1, 2010	Form 10-K Annual Report for year ended December 31, 2010 (see Exhibit 10.89 therein)
10.84*	Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2016 (see Exhibit 10.02 therein)
10.85*	Form of Restricted Share Unit Agreement for the Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2005 (see Exhibit 10.64 therein)
10.86*	Form of Designation of Beneficiary for the Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation	Form 10-Q Quarterly Report for the period ended June 30, 2005 (see Exhibit 10.65 therein)
10.87*	Supplemental Retirement Plan for Executive Employees of State Auto Insurance Companies effective as of May 1, 2010	Form 10-Q Quarterly Report for the period ended June 30, 2010 (see Exhibit 10.01 therein)
10.88*	First Amendment to the Supplemental Retirement Plan for Executive Employees of State Auto Insurance Companies (amendment effective December 1, 2010)	Form 10-K Annual Report for year ended December 31, 2010 (see Exhibit 10.96 therein)
10.89*	State Auto Financial Corporation Supplemental Executive Retirement Plan, effective January 1, 2007	Form 10-Q Quarterly Report for the period ended September 30, 2007 (see Exhibit 10.72 therein)
10.90*	First Amendment to the State Auto Financial Corporation Supplemental Executive Retirement Plan effective December 1, 2010	Form 10-K Annual Report for year ended December 31, 2010 (see Exhibit 10.98 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
10.91*	Form of Designation of Distribution Election for the State Auto Financial Corporation Supplemental Executive Retirement Plan	Form 10-Q Quarterly Report for the period ended September 30, 2007 (see Exhibit 10.73 therein)
10.92*	State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan (amended and restated as of March 1, 2001)	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.58 therein)
10.93*	First Amendment to the State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan (amendment effective as of December 1, 2005)	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.59 therein)
10.94*	Second Amendment to the State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan (amendment effective as of January 1, 2009)	Form 10-Q Quarterly Report for the period ended September 30, 2008 (see Exhibit 10.02 therein)
10.95*	Third Amendment to the State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan (amendment effective as of January 1, 2009)	Form 10-K Annual Report for the year ended December 31, 2008 (see Exhibit 10.84 therein)
10.96*	Fourth Amendment to the State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan effective November 1, 2010	1933 Act Registration Statement No. 333-170564 on Form S-8 (see Exhibit 4(j) therein)
10.97*	Fifth Amendment to the State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan effective January 1, 2012	Form 10-Q Quarterly Report for the period ended September 30, 2012 (see Exhibit 10.1 therein)
10.98*	Agreement of Assignment and Assumption dated as of March 1, 2001, among State Auto Financial Corporation, State Automobile Mutual Insurance Company, State Auto Property and Casualty Insurance Company, and Midwest Security Insurance Company (nka State Auto Insurance Company of Wisconsin) regarding the State Auto Insurance Companies Amended and Restated Directors Deferred Compensation Plan	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.60 therein)
10.99*	Form of State Auto Insurance Companies Directors Deferred Compensation Agreement	Form 10-K Annual Report for the year ended December 31, 2005 (see Exhibit 10.61 therein)
10.100*	State Auto Property & Casualty Insurance Company Amended and Restated Incentive Deferred Compensation Plan effective as of March 1, 2010	1933 Act Registration Statement No. 333-165366 on Form S-8 (see Exhibit 4(e) therein)
10.101*	First Amendment to the State Auto Property & Casualty Insurance Company Amended and Restated Incentive Deferred Compensation Plan (amendment effective July 1, 2010)	Form 10-Q Quarterly Report for the period ended June 30, 2010 (see Exhibit 10.02 therein)
10.102*	Second Amendment to the State Auto Property & Casualty Insurance Company Amended and Restated Incentive Deferred Compensation Plan (amendment effective November 1, 2010)	1933 Act Registration Statement No. 333-170568 on Form S-8 (see Exhibit 4(h) therein)
10.103*	Third Amendment to the State Auto Property & Casualty Insurance Company Amended and Restated Incentive Deferred Compensation Plan (amendment effective January 1, 2011)	Form 10-K Annual Report for year ended December 31, 2011 (see Exhibit 10.109 therein)
10.104*	State Auto Financial Corporation One Team Incentive Plan	Form 10-Q Quarterly Report for the period ended June 30, 2016 (see Exhibit 10.03 therein)

Exhibit No.	Description of Exhibit	If incorporated by reference document with which Exhibit was previously filed with SEC
21.01	List of Subsidiaries of State Auto Financial Corporation	Included herein
23.01	Consent of Independent Registered Public Accounting Firm	Included herein
24.01	Powers of Attorney - Robert E. Baker, Michael J. Fiorile, Kym M. Hubbard, Eileen A. Mallesch, David R. Meuse and S. Elaine Roberts	Form 10-K Annual Report for year ended December 31, 2016 (see Exhibit 24.01 therein)
24.02	Power of Attorney- Setareh Pouraghabagher	Form 10-K Annual Report for the year ended December 31, 2017 (see Exhibit 24.02 therein)
31.01	CEO certification required by Section 302 of Sarbanes-Oxley Act of 2002	Included herein
31.02	CFO certification required by Section 302 of Sarbanes-Oxley Act of 2002	Included herein
32.01	CEO certification required by Section 906 of Sarbanes-Oxley Act of 2002	Included herein
32.02	CFO certification required by Section 906 of Sarbanes-Oxley Act of 2002	Included herein
101.INS	The instance document does not appear in the interactive data file because its XBRL tags are embedded within	
101.SCH	XBRL Taxonomy Extension Schema Document	Included herein
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document	Included herein
101.DEF	XBRL Taxonomy Definition Linkbase Document	Included herein
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	Included herein
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	Included herein

* Constitutes either a management contract or a compensatory plan or arrangement required to be filed as an Exhibit.

(b) EXHIBITS

The exhibits included with this Form 10-K, as indicated in Item 15(a)(3), have been separately filed.

(c) FINANCIAL STATEMENT SCHEDULES

Our financial statement schedules included with this Form 10-K, as indicated in Item 15(a)(2), follow the signatures to this Form 10-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

STATE AUTO FINANCIAL CORPORATION

Dated: February 27, 2020

/s/ Michael E. LaRocco

Michael E. LaRocco

Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ Michael E. LaRocco **Michael E. LaRocco**	Chairman, President and Chief Executive Officer (principal executive officer)	February 27, 2020
/s/ Steven E. English **Steven E. English**	Senior Vice President and Chief Financial Officer (principal financial officer)	February 27, 2020
/s/ Matthew R. Pollak **Matthew R. Pollak**	Vice President, Treasurer and Chief Accounting Officer (principal accounting officer)	February 27, 2020
Robert E. Baker* **Robert E. Baker**	Director	February 27, 2020
Michael J. Fiorile* **Michael J. Fiorile**	Director	February 27, 2020
Kym M. Hubbard* **Kym M. Hubbard**	Director	February 27, 2020
Eileen A. Mallesch* **Eileen A. Mallesch**	Director	February 27, 2020
David R. Meuse* **David R. Meuse**	Director	February 27, 2020
Setareh Pouraghabagher* **Setareh Pouraghabagher**	Director	February 27, 2020
S. Elaine Roberts* **S. Elaine Roberts**	Director	February 27, 2020

* Steven E. English, by signing his name hereto, does sign this document on behalf of the person indicated above pursuant to a Power of Attorney duly executed by such person.

/s/ Steven E. English **Steven E. English**	Attorney in Fact	February 27, 2020

EXHIBIT 21.01

List of Subsidiaries of
State Auto Financial Corporation

State Auto Property and Casualty Insurance Company, an Iowa corporation

Stateco Financial Services, Inc., an Ohio corporation

Milbank Insurance Company, an Iowa corporation

State Auto Insurance Company of Ohio, an Ohio corporation

518 Property Management and Leasing, LLC, an Ohio limited liability company

EXHIBIT 23.01

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

1. Registration Statement (Form S-8, No. 33-44667 and 33-89400) pertaining to the 1991 Stock Option Plan

2. Registration Statement(Form S-8, No. 33-44666) pertaining to the 1991 Directors' Stock Option Plan

3. Registration Statement (Form S-8, No. 33-41423, 333-05755, 333-147333, 333-206148, and 333-233012) pertaining to the 1991 Employee Stock Purchase and Dividend Reinvestment Plan

4. Registration Statement (Form S-8, No. 333-43882) pertaining to the 2000 Directors' Stock Option Plan

5. Registration Statement (Form S-8, No. 333-43880) pertaining to the 2000 Stock Option Plan

6. Registration Statement (Form S-3, No. 333-41849 and 333-209878) pertaining to the Monthly Stock Purchase Plan for Independent Agents

7. Registration Statement (Form S-3, No. 333-90529) pertaining to the 1998 State Auto Agents' Stock Option Plan

8. Registration Statement (Form S-8, No. 333-127172) pertaining to the 2005 Outside Directors Restricted Share Unit Plan

9. Registration Statement (Form S-8, No. 333-165364, 333-192158, and 333-214472) pertaining to the State Auto Financial Corporation 2009 Equity Incentive Compensation Plan

10. Registration Statement (Form S-8, No. 333-165366 and 333-170568) pertaining to the State Auto Property & Casualty Insurance Company Amended and Restated Incentive Deferred Compensation Plan

11. Registration Statement (Form S-8, No. 333-170564) pertaining to the State Auto Property & Casualty Insurance Company Amended and Restated Directors Deferred Compensation Plan,

12. Registration Statement (Form S-8, No. 333-214471) pertaining to the Outside Directors Restricted Share Unit Plan of State Auto Financial Corporation, and

13. Registration Statement (Form S-8, No. 333-223305) pertaining to the 2017 Long-Term Incentive Plan;

of our reports dated February 27, 2020, with respect to the consolidated financial statements and schedules of State Auto Financial Corporation and subsidiaries and the effectiveness of internal control over financial reporting of State Auto Financial Corporation included in this Annual Report (Form 10-K) of State Auto Financial Corporation for the year ended December 31, 2019.

/s/ Ernst & Young LLP
Grandview Heights, Ohio
February 27, 2020

EXHIBIT 31.01

CERTIFICATION

I, Michael E. LaRocco, certify that:

1. I have reviewed this Form 10-K of State Auto Financial Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2020

/s/ Michael E. LaRocco

Michael E. LaRocco, Chief Executive Officer

Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.02

CERTIFICATION

I, Steven E. English, certify that:

1. I have reviewed this Form 10-K of State Auto Financial Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors:
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2020

/s/ Steven E. English

Steven E. English,

Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.01

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of State Auto Financial Corporation (the "Company") on Form 10-K for the period ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Michael E. LaRocco, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Michael E. LaRocco

Michael E. LaRocco
Chief Executive Officer
February 27, 2020

A signed original of this written statement required by Section 906 has been provided to State Auto Financial Corporation and will be retained by State Auto Financial Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.02

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of State Auto Financial Corporation (the “Company”) on Form 10-K for the period ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Steven E. English, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Steven E. English
Steven E. English
Chief Financial Officer
February 27, 2020

A signed original of this written statement required by Section 906 has been provided to State Auto Financial Corporation and will be retained by State Auto Financial Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Annual Meeting

11 a.m. ET Friday, May 8, 2020,
at Corporate Headquarters

Shareholder Inquiries

Natalie Schoolcraft
Director of Investor Relations
State Auto Financial Corporation
518 E. Broad St.
Columbus, Ohio 43215
Phone (614) 917-4341
Fax (614) 887-1640
Natalie.Schoolcraft@StateAuto.com

Independent Auditors

Ernst & Young LLP
800 Yard St., Ste. 200
Grandview Heights, Ohio 43212

Legal Counsel

Baker & Hostetler LLP
200 Civic Center Dr., Ste. 1200
Columbus, Ohio 43215

SEC Filings

This report and other filings with the Securities and Exchange Commission are available free of charge on the Company's website at StateAuto.com

Transfer Agent/Registrar

Computershare
P.O. Box 43078
Providence, R.I. 02940
Phone (800) 622-6757
www.computershare.com/investor

Stock Trading

Common shares are traded in the Nasdaq Global Select National Market System uder the symbol STFC. As of Feb. 21, 2020, there were 1,010 shareholders of the Company's common shares.

Market Price Range, Common Stock

Initial Public Offering – June 28, 1991, $2.25
The high and low sale prices for each quarterly period for the past two years as reported by Nasdaq and cash dividends paid per share are:

2019	High	Low	Dividend
Fourth Quarter	$34.75	$28.10	$0.10
Third Quarter	$36.45	$28.46	$0.10
Second Quarter	$35.04	$32.11	$0.10
First Quarter	$34.99	$30.33	$0.10

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

Corporate Headquarters

State Auto Financial Corporation
518 E. Broad St.
Columbus, Ohio 43215
StateAuto.com
(614) 464-5000

Forward-Looking Statements

This Annual Report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Please see "Important Information Regrading Forward-Looking Statements" preceding Part I of the Company's Annual Report on Form 10-K for the fiscal year ended Dec.31, 2019, which is included with this Annual Report.

STFC®

STATE AUTO FINANCIAL CORPORATION ANNUAL REPORT

STATE AUTO FINANCIAL CORPORATION

STATE AUTO PROPERTY & CASUALTY INSURANCE COMPANY

MILBANK INSURANCE COMPANY

STATE AUTO INSURANCE COMPANY OF OHIO

STATECO FINANCIAL SERVICES INC.

518 PROPERTY MANAGEMENT & LEASING LLC

STATE AUTOMOBILE MUTUAL INSURANCE COMPANY

STATE AUTO INSURANCE COMPANY OF WISCONSIN

MERIDIAN SECURITY INSURANCE COMPANY

PATRONS MUTUAL INSURANCE COMPANY OF CONNECTICUT

ROCKHILL INSURANCE COMPANY

PLAZA INSURANCE COMPANY

AMERICAN COMPENSATION INSURANCE COMPANY

BLOOMINGTON COMPENSATION INSURANCE COMPANY

STFC®

STATE AUTO FINANCIAL CORPORATION

518 E. BROAD ST.
COLUMBUS, OH 43215

STATEAUTO.COM