



TAKING ACTION

2016 Annual Report

 **EMC**[®]
INSURANCE GROUP INC.

LETTER TO OUR STOCKHOLDERS



Bruce G. Kelley, J.D., CPCU, CLU
President, Chief Executive Officer & Treasurer

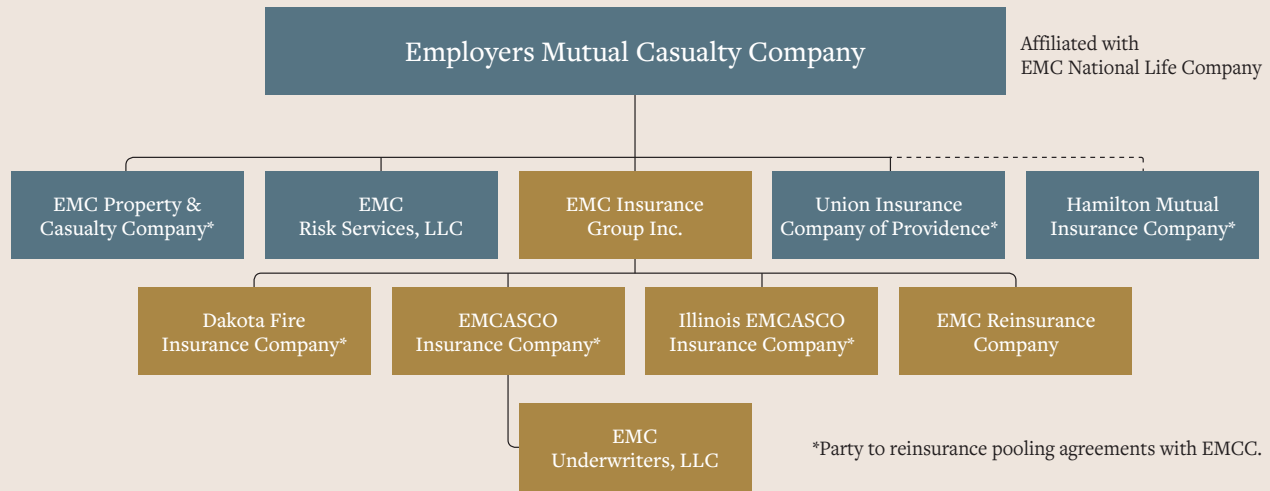
Our goal is to offer a rich, consistent experience to every customer and provide our stockholders with exceptional value. And we know this doesn't just happen. It takes action, dedication, innovation and a vision to be the best.

For 2016, we reported a GAAP combined ratio of 97.7 percent, our third best in the past 10 years. Having been in business for more than 100 years, EMC Insurance Companies has successfully navigated many market cycles and varying economic conditions, so it was no surprise that we reported another profitable year. Entering 2016 against the backdrop of a challenging market, which included rate softening and increased competition pressuring both of our operating segments, we had to take action to lessen the impact on operations. We rely on our guiding beliefs of honesty and integrity, service, teamwork and continuous improvement when we take action.

VALUED PARTNER FOR OUR INDEPENDENT AGENTS

We market exclusively through the independent agency system because independent agents bring real value and knowledge to the insurance process and can best represent their clients' interests. We rely on our agents to represent us and promote our products and services to their clients. We select independent agents who provide us with the opportunity to write profitable business within our risk appetite.

Our unique branch office structure, with 16 full-service branch offices and 4 service offices located strategically throughout the country, is ideal for cultivating close relationships with our agents in the 41 states where we actively write business. Our agents tell us that this is a true competitive advantage that sets us apart. We are available in person, on the phone or online anytime our agents need assistance or have questions.



CORPORATE PROFILE

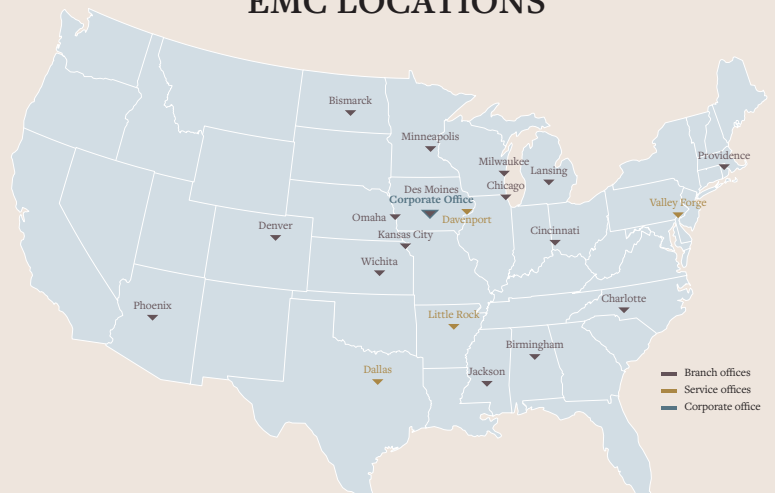
EMC Insurance Group Inc. (EMCI) is a publicly held insurance holding company with operations in property and casualty insurance and reinsurance. EMCI was formed in 1974, became publicly held in 1982, and is traded on the NASDAQ exchange under the symbol EMCI. EMCI is a controlled company in that its parent owns greater than 50 percent of its outstanding stock. As of December 31, 2016, EMCI's parent company, Employers Mutual Casualty Company, owned 55 percent of EMCI's outstanding stock, and public stockholders owned the remaining 45 percent. EMCI has no employees of its own.

Employers Mutual Casualty Company (EMCC) is a mutual insurance company founded in 1911 and is headquartered in Des Moines, Iowa. EMCC employs approximately 2,250 people countrywide and markets its products exclusively through a network of independent insurance agents.

EMC Insurance Companies (EMC) is the trade name under which EMCI and EMCC, together with each entity's subsidiary and affiliated companies, operate collectively.

The companies that comprise EMC write both commercial and personal lines property and casualty insurance, with a focus on small- and medium-sized commercial accounts. Products and services are offered through independent insurance agents who are supported by a network of 16 local branch offices. EMC is licensed in all 50 states and the District of Columbia and actively markets insurance products in 41 states. Reinsurance business is also written, with an emphasis on property business.

EMC LOCATIONS



INITIATIVES TAKING SHAPE

High-Scoring Claims Service

We rely on our team members, and they deliver. The proof is in our outstanding customer service score for our claims service: 4.6 in 2016 on a five-point scale, which is a 92 percent satisfaction rate. The survey is conducted by an independent firm and asks questions about professionalism, courtesy, timeliness and whether or not the claims process was thoroughly explained. Our team members consistently give great claims service, and for five years our score has been 4.6 or above.

EMC Named No. 2 on 40 Best Public Companies for Leaders

For the fourth consecutive year, EMC is listed as one of the 40 best public companies for leaders in the January/February 2016 issue of *Chief Executive* magazine. EMC ranked 2nd in 2016, moving up from 4th in 2015.*

We encourage the development of our team members through education and training programs as we cultivate the next generation of our company leaders. This investment in professional development enables us to fill a majority of our open management positions with internal candidates, and these knowledgeable team members give EMC a competitive advantage over other companies.

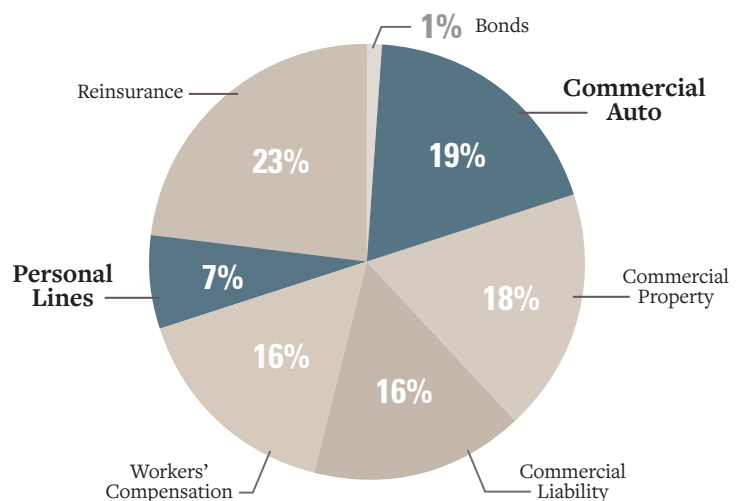
*The annual ranking is based on a survey of organizations worldwide conducted by *Chief Executive* in cooperation with GrowthPlay. For more information on the 40 Best Companies for Leaders, go to <http://chiefexecutive.net/2016-best-companies-for-leaders>.

PERSONAL LINES

In order to be the carrier of choice for our independent agents, we must have a comprehensive suite of products and services to meet the insurance needs of policyholders. With this in mind, we took action by developing new personal lines products and creating Personal Lines Operations, which marked its first year in 2016. This centralized operation includes underwriting, research, claims and marketing. Our new personal auto and homeowners products were implemented effectively in the 22 states where we write personal lines business. As we re-underwrite our existing book of personal lines business, our independent agents are enthusiastic about these new products and our competitive position in the marketplace.

The personal lines new business premium trend is now positive after several years of declining premium as we took action by reducing exposure concentrations and limiting the impact of underperforming business. We now have an opportunity to carefully grow personal lines business and prudently achieve a more diversified book of business.

EMCI 2016 PREMIUMS EARNED



ACCELERATE COMMERCIAL AUTO PROFITABILITY

The commercial auto line of business is a challenge. Increases in distracted drivers on the road and in miles driven due to lower gas prices have resulted in higher loss frequency. When coupled with an increase in loss severity, these macroeconomic and industry trends offset the benefits we gained from the efforts of our commercial auto task force that was charged with improving the performance of this business.

More intensive work is required to turn this line around, so we took action by implementing the multiyear Accelerate Commercial Auto Profitability project. It was developed with the goal of returning commercial auto to profitability by mid-2019. This would represent a big improvement to our results, with incremental improvement anticipated each year of the project. This comprehensive project includes eight teams complementing local branch efforts, each focusing on different opportunities to improve results in areas such as pricing, claims handling and underwriting.

INTERCOMPANY REINSURANCE PROGRAMS

The new intercompany reinsurance agreement between EMCI's three property and casualty insurance subsidiaries and EMCC was effective at the beginning of the year and is in place to provide additional protection against excessive catastrophe and storm losses. It performed as expected, given the reported quarterly amount of catastrophe and storm losses. EMC Reinsurance Company also enhanced its existing intercompany reinsurance agreement with EMCC and strengthened its protection from both the frequency and severity of catastrophe and storm losses. We expect our stockholders will continue to benefit from more consistency in our quarterly results as the programs were renewed for the 2017 calendar year.

50 Most Trustworthy Financial Companies List by Forbes

For the third consecutive year, EMCI was listed among the 50 Most Trustworthy Financial Companies, announced by *Forbes* in 2016. EMCI was previously listed among the *Forbes* 100 Most Trustworthy Companies in 2013.*

*In 2014, MSCI ESG Research began compiling the 50 Most Trustworthy Financial Companies list separately from the *Forbes* 100 Most Trustworthy Companies list. To create the list, MSCI ESG Research reviewed nearly 700 publicly-traded North American financial companies with market caps of \$250 million or greater for the year ending December 2015. For more information, go to <http://www.forbes.com/sites/kathryndill/2016/08/02/americas-50-most-trustworthy-financial-companies-3/#5687140d567a>.

INVESTING IN INNOVATION

We're focused on finding innovative solutions and using technology to create products and services that set our agents apart. That's what makes EMC different—our approach to innovation gives our agents more to sell, and benefits our policyholders and stockholders.



The New Peak Fleet™ Program

We are building a new platform, Peak Fleet™, that will be agency-branded and introduced to our agents in 2017. We anticipate this unique platform will help fleet managers improve maintenance and uptime, increase fuel economy and reduce costs associated with replacing drivers.

DATA-DRIVEN SOLUTIONS

In late 2015, we formed a Strategic Analytics department focused on utilizing abundant high-quality data to make better decisions. We then created an innovation lab, led by team members who are empowered to collaborate, make quick decisions and take action. The first successful outcome from the innovation lab is our telematics program, currently being piloted with select agencies. While many telematics solutions only focus on improving safety, we believe our unique solution will help commercial auto insureds improve not only their safety records, but their fuel economy, uptime and driver retention, representing significant cost savings to our policyholders. Using the data and feedback gathered from the pilot project will allow us to enhance the program so our agents can differentiate themselves from non-EMC agents through special value-added services.

GLOBAL INSURANCE ACCELERATOR

But our investment in innovation does not stop there. This past year, EMC joined the Global Insurance Accelerator, a business accelerator focused on developing and growing innovative insurance-centric startups. It fosters innovation and builds solutions to solve contemporary insurance issues such as data sharing, security and risk management.

As an investor, EMC is funding the insurance technology startups accepted into the program. We have also committed staff and company expertise to mentor these startups through the critical early stages of growth to foster their success.

LOSS CONTROL INNOVATIONS

We have been an innovator of loss control services for the past 90 years. Early in our company's history, we identified the best way to control losses—prevent them before they happen, which is why we invest more per dollar of premium in loss control services than most of our competitors. These value-added services are available to all commercial policyholders, improve workplace safety and potentially reduce future losses. Implementation of a strong loss control program could lead to a future reduction in their cost of insurance, while benefiting the independent agent and EMC through improved underwriting results. These services provide us with another competitive advantage and differentiator in this complex business environment.

Recent loss control innovations include:

Walkway CheckSM

The average cost of a slip and fall injury exceeds \$12,000.* With the Walkway Check app, organizations can easily identify and report hazards that lead to slip and fall incidents—the leading cause of unintentional injuries in the United States.

Sensors for Real-Time Monitoring in Schools

EMC, in partnership with Hartford Steam Boiler, started a pilot program in late 2016 that uses a monitoring system to help schools manage risks using real-time data. It features remote-operated sensors that monitor doors, temperature, humidity, vibration and water. If triggered, the sensors will send alerts so policyholders can find solutions to improve their work environment and safety.

MākuSafe Partnership

Recognizing the potential benefits offered from sensors through real-time monitoring, EMC partnered with MākuSafe in early 2017. MākuSafe is an innovative startup that developed patent-pending wearable technology that monitors environmental exposures to identify risks in industrial workplaces.

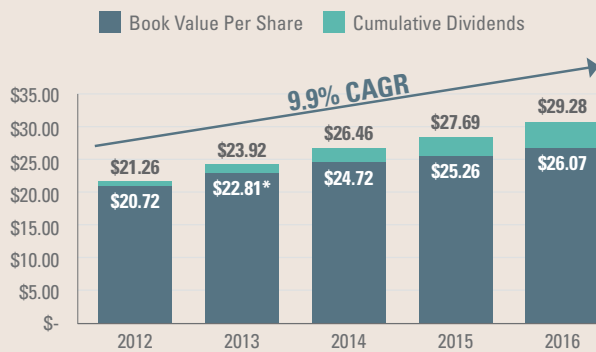
*Occupational Safety and Health Administration



PILLAR OF FINANCIAL STRENGTH

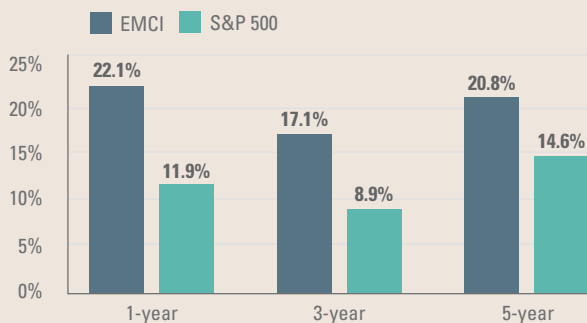
Proven Ability to Deliver Attractive Returns to Stockholders

Book Value and Cumulative Dividends Per Share



*Approximately \$0.88 per share of the increase in 2013 is attributable to a change in EMCC's postretirement healthcare plan

Total Stockholder Return



Total stockholder return is the percentage change in the stock price plus the amount of dividends paid, assuming dividend reinvestment, to the stock price at the beginning of the one-year, three-year and five-year periods ending December 31, 2016.

Source: Bloomberg

Our balance sheet remains strong, with more than \$1.4 billion in invested assets; \$1.2 billion of which is invested in a laddered bond portfolio designed to meet day-to-day liquidity obligations and generate a strong risk-adjusted return. The affirmation of the A (Excellent) rating of EMC Insurance Companies pool members and Reinsurance Company by A.M. Best Co. also demonstrates our financial strength. This competitive advantage reassures our independent agents and policyholders that we will fulfill the promises made to pay the claims we owe.

We also have a responsibility to you, our stockholders, to be good stewards of your investment in EMCI, which is why we have increased our quarterly cash dividend at an 8.7 percent compound annual growth rate since 2011. The fourth quarter dividend was increased to \$0.21 per share, representing a 10.5 percent increase over the previous quarterly dividend of \$0.19 per share, as this remains our preferred way of returning excess capital to you.

It takes vision. It takes innovation. It takes dedication. It takes every part of EMC taking action to deliver the best value and service to our customers and stakeholders as we strive to increase the value of your investment.

Thank you for your continued investment in EMC Insurance Group Inc.

Sincerely,

Bruce G. Kelley, J.D., CPCU, CLU

President, Chief Executive Officer & Treasurer

FINANCIAL HIGHLIGHTS

	2016	2015	2014
(in thousands)			
Revenues	\$ 640,909	\$ 617,573	\$ 590,118
Realized investment gains	4,074	6,153	4,349
Income before income taxes	63,207	71,656	40,907
Net income	\$ 46,203	\$ 50,162	\$ 29,992
(per share)			
Net income	\$ 2.20	\$ 2.43	\$ 1.48
Catastrophe and storm losses (after tax)	1.48	1.40	1.84
Dividends paid	0.78	0.69	0.63
Book value	\$ 26.07	\$ 25.26	\$ 24.72
(\$ in thousands)			
Average return on equity (ROE)	8.6%	9.8%	6.3%
Total assets	\$ 1,588,813	\$ 1,535,955	\$ 1,497,820
Stockholders' equity	\$ 553,342	\$ 524,938	\$ 502,886

COMMON STOCK PRICE AND DIVIDEND DATA

Quarter:	2016				2015			
	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th
High	\$ 25.99	\$ 28.01	\$ 29.01	\$ 31.18	\$ 23.93	\$ 26.00	\$ 26.52	\$ 26.83
Low	21.62	24.02	24.71	23.45	19.84	21.67	20.23	22.20
Period-end close	25.65	27.72	26.93	30.01	22.53	25.07	23.21	25.30
Cash dividends declared	\$ 0.190	\$ 0.190	\$ 0.190	\$ 0.210	\$ 0.167	\$ 0.167	\$ 0.170	\$ 0.190

CAUTIONARY STATEMENT

FORWARD-LOOKING STATEMENTS: The Private Securities Litigation Reform Act of 1995 provides issuers the opportunity to make cautionary statements regarding forward-looking statements. Accordingly, any forward-looking statement contained in this report is based on management's current beliefs, assumptions and expectations of the Company's future performance, taking into account all information currently available to management. These beliefs, assumptions and expectations can change as the result of many possible events or factors, not all of which are known to management. If a change occurs, the Company's business, financial condition, liquidity, results of operations, plans and objectives may vary materially from those expressed in the forward-looking statements. The risks and uncertainties that may affect the actual results of the Company include, but are not limited to, the following:

- catastrophic events and the occurrence of significant severe weather conditions;
- the adequacy of loss and settlement expense reserves;
- state and federal legislation and regulations;
- changes in the property and casualty insurance industry, interest rates or the performance of financial markets and the general economy;
- rating agency actions;
- "other-than-temporary" investment impairment losses; and
- other risks and uncertainties inherent to the Company's business, including those discussed under the heading "Risk Factors" in the Company's Annual Report on Form 10-K.

Management intends to identify forward-looking statements when using the words "believe," "expect," "anticipate," "estimate," "project," or similar expressions. Undue reliance should not be placed on these forward-looking statements.

COMMON STOCK

EMC Insurance Group Inc.'s common stock trades on the Global Select Market tier of the NASDAQ Stock Market under the symbol EMCI. As of February 20, 2017, the number of registered stockholders was 672.

There are certain regulatory restrictions relating to the payment of dividends by the Company's insurance subsidiaries (see Note 6 of Notes to Consolidated Financial Statements in the Company's 2016 Form 10-K). It is the present intention of the Company's Board of Directors to declare quarterly cash dividends, but the amount and timing thereof, if any, are determined by the Board of Directors at its discretion.

DIVIDEND REINVESTMENT AND COMMON STOCK PURCHASE PLAN

EMC Insurance Group Inc. makes available to holders of its common stock an automatic dividend reinvestment and stock purchase plan (see Note 13 of Notes to Consolidated Financial Statements in the Company's 2016 Form 10-K). For more information about the plan, contact American Stock Transfer & Trust Company, LLC, the Company's stock transfer agent and plan administrator.

ANNUAL MEETING

We welcome attendance at our annual meeting on May 25, 2017, at 1:30 p.m. CDT.

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Des Moines, IA 50309

STOCKHOLDER SERVICES

Corporate Headquarters

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Des Moines, IA 50309

Insurance Counsel

Bradshaw, Fowler, Proctor & Fairgrave, P.C.
801 Grand Avenue, Suite 3700
Des Moines, IA 50309

Independent Registered Public Accounting Firm

Ernst & Young LLP
801 Grand Avenue, Suite 3000
Des Moines, IA 50309

Information Availability

Interested parties can request annual reports, Forms 10-Q and 10-K, proxy statements and other information at no cost by contacting:

Investor Relations

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**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, 2016**

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: 0-10956

EMC INSURANCE GROUP INC.

(Exact name of registrant as specified in its charter)

Iowa

42-6234555

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

717 Mulberry Street, Des Moines, Iowa

50309

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code:

(515) - 345 - 2902

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

Common Stock, Par Value \$1.00

The NASDAQ Global Select Market

(Title of Class)

(Name of each exchange on which registered)

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company (as defined in Rule 12b-2 of the Exchange Act).

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2016 was \$256,645,260.

The number of shares outstanding of the registrant's common stock, \$1.00 par value, on February 28, 2017, was 21,269,368.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for the Annual Meeting of Stockholders to be held on May 25, 2017, and to be filed pursuant to Regulation 14A within 120 days after the registrant's fiscal year ended December 31, 2016, are incorporated by reference under Part III.

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PART I

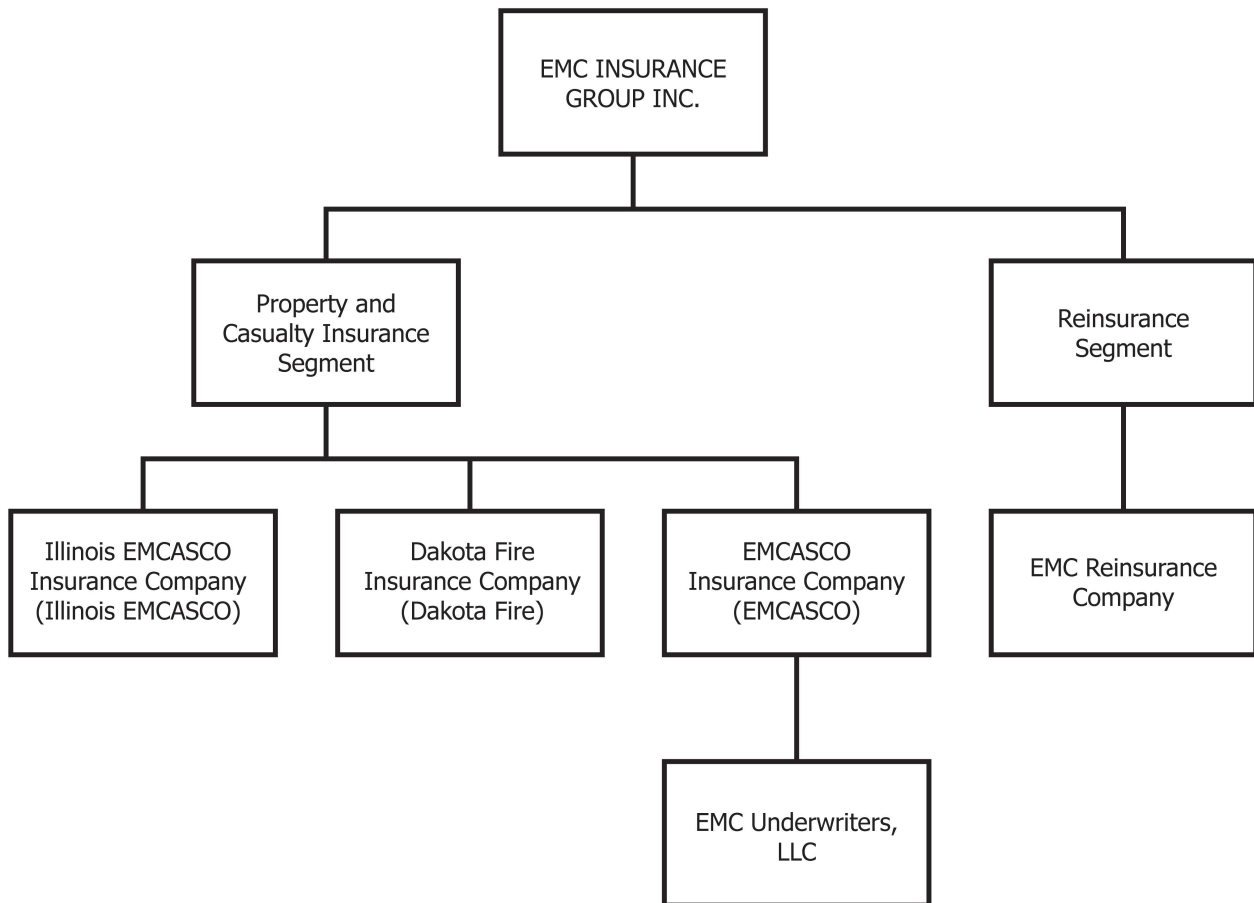
ITEM 1. BUSINESS

GENERAL

EMC Insurance Group Inc. is an insurance holding company that was incorporated in Iowa in 1974 by Employers Mutual Casualty Company (Employers Mutual) and became a public company in 1982 following the initial public offering of its common stock. EMC Insurance Group Inc. is approximately 55 percent owned by Employers Mutual, a multiple-line property and casualty insurance company organized as an Iowa mutual insurance company in 1911 that is licensed in all 50 states and the District of Columbia. The term “Company” is used interchangeably to describe EMC Insurance Group Inc. (Parent Company only) and EMC Insurance Group Inc. and its subsidiaries. Employers Mutual and all of its subsidiaries (including the Company) and an affiliate are referred to as the “EMC Insurance Companies.”

The Company conducts operations in property and casualty insurance and reinsurance through its subsidiaries. The Company primarily focuses on the sale of commercial lines of property and casualty insurance to small and medium-sized businesses. These products are sold through independent insurance agents who are supported by a decentralized network of branch offices. Although the Company actively markets its insurance products in 41 states, a large portion of its business is marketed and generated in the Midwest.

The Company conducts its insurance business through two business segments as follows:



Illinois EMCASCO was formed in Illinois in 1976 (and was re-domesticated to Iowa in 2001), Dakota Fire was formed in North Dakota in 1957 and EMCASCO was formed in Iowa in 1958, all for the purpose of writing property and casualty insurance. EMC Reinsurance Company was formed in 1981 to assume reinsurance business from Employers Mutual. The Company's excess and surplus lines insurance agency, EMC Underwriters, LLC, was formed in Iowa in 1975 and was acquired by the Company in 1985. Effective December 31, 1998, the excess and surplus lines insurance agency was converted to a limited liability company and the ownership was contributed to EMCASCO.

Property and casualty insurance is the most significant segment of the Company's business, totaling 77 percent of consolidated premiums earned in 2016. The property and casualty insurance operations are integrated with the property and casualty insurance operations of Employers Mutual through participation in a reinsurance pooling agreement. Because the Company conducts its property and casualty insurance operations together with Employers Mutual through the reinsurance pooling agreement, the Company shares the same business philosophy, management, employees and facilities as Employers Mutual and offers the same types of insurance products. For a discussion of the reinsurance pooling agreement and its benefits, please see "Organizational Structure – Property and Casualty Insurance" below.

Reinsurance operations are conducted through EMC Reinsurance Company and accounted for 23 percent of consolidated premiums earned in 2016. The principal business activity of EMC Reinsurance Company is to assume, through a quota share reinsurance agreement, 100 percent of Employers Mutual's assumed reinsurance business, subject to certain exceptions. EMC Reinsurance Company also writes a relatively small amount of assumed reinsurance business on a direct basis (outside the quota share reinsurance agreement). For a discussion of the quota share reinsurance agreement and its benefits, please see "Organizational Structure – Reinsurance" below.

The Company's insurance agency, EMC Underwriters, LLC, specializes in marketing excess and surplus lines of insurance. The excess and surplus lines markets provide insurance coverage at negotiated rates for risks that are not acceptable to licensed insurance companies. EMC Underwriters accesses this market by working through independent agents and functions as managing underwriter for excess and surplus lines insurance for the pool participants. The Company derives income from this business based on the fees and commissions earned through placement of the business, as opposed to the underwriting of the risks associated with that business.

Organizational Structure

Property and Casualty Insurance

The Company's three property and casualty insurance subsidiaries and two subsidiaries and an affiliate of Employers Mutual (Union Insurance Company of Providence, EMC Property & Casualty Company and Hamilton Mutual Insurance Company) are parties to reinsurance pooling agreements with Employers Mutual (collectively the "pooling agreement"). Under the terms of the pooling agreement, each company cedes to Employers Mutual all of its insurance business, and assumes from Employers Mutual an amount equal to its participation in the pool. All premiums, losses, settlement expenses, and other underwriting and administrative expenses, excluding the voluntary reinsurance business assumed by Employers Mutual from nonaffiliated insurance companies, are prorated among the parties on the basis of participation in the pool. Employers Mutual negotiates reinsurance agreements that provide protection to the pool and each of its participants, including protection against losses arising from catastrophic events. The aggregate participation of the Company's property and casualty insurance subsidiaries in the pool is 30 percent.

The Inter-Company Committees of the boards of directors of the Company and Employers Mutual approved a new inter-company reinsurance program between the Company's insurance subsidiaries in the property and casualty insurance segment and Employers Mutual for calendar year 2016. This reinsurance program is intended to reduce the volatility of the Company's quarterly results caused by excessive catastrophe and storm losses, and provide protection from both the frequency and severity of such losses. The reinsurance program consists of two semi-annual aggregate catastrophe excess of loss treaties. The first treaty was effective from January 1, 2016 through June 30, 2016, and had a retention of \$20.0 million and a limit of \$24.0 million. The total cost of this treaty was approximately \$6.3 million. The second treaty was effective from July 1, 2016 through December 31, 2016, and had a retention of \$15.0 million and a limit of \$12.0 million. The total cost of this treaty was approximately \$1.5 million. All catastrophe and storm losses assumed by the property and casualty insurance subsidiaries (net of applicable reinsurance recoveries from external reinsurance protections purchased by the pool participants) were subject to the terms of these treaties, and there was no co-participation provision.

All transactions occurring under the pooling agreement and the inter-company reinsurance program with Employers Mutual are based on statutory accounting principles. Certain adjustments are made to these amounts to bring them into compliance with U.S. generally accepted accounting principles (GAAP).

Operations of the pool and the inter-company reinsurance program give rise to inter-company balances with Employers Mutual, which are generally settled during the subsequent month. The investment and income tax activities of the pool participants are not subject to the pooling agreement. The pooling agreement provides that Employers Mutual will make up any shortfall or difference resulting from an error in its systems and/or computation processes that would otherwise result in the required restatement of the pool participants' financial statements.

The purpose of the pooling agreement is to spread the risk of an exposure insured by any of the pool participants among all the companies. The particular benefits that the Company's property and casualty insurance subsidiaries realize from participating in the pooling agreement include the following:

- the ability to produce a more uniform and stable underwriting result from year to year than might be experienced individually, by spreading the risks over a wide range of geographic locations, lines of insurance written, rate filings, commission plans and policy forms;
- the ability to benefit from the capacity of the entire pool (representing \$1.6 billion in direct premiums written¹ in 2016 and \$1.4 billion in statutory surplus as of December 31, 2016) rather than being limited to policy exposures of a size commensurate with each participant's own surplus level;
- the achievement of an "A" (Excellent) rating from A.M. Best Company on a "group" basis;
- the ability to take advantage of a significant distribution network of independent agencies that the participants most likely could not access on an individual basis;
- the ability to negotiate and purchase reinsurance from third-party reinsurers on a combined basis, thereby achieving larger retentions and better pricing; and
- the ability to achieve and benefit from economies of scale in operations.

¹ Premiums written is an industry metric used to quantify the amount of insurance sold during a specified reporting period. Premiums earned is the recognition of the portion of premiums written directly related to the expired portion of an insurance policy for a given reporting period.

The amount of insurance a property and casualty insurance company writes under industry standards is commonly expressed as a multiple of its surplus calculated in accordance with statutory accounting practices. Generally, a ratio of 3 or less is considered satisfactory by state insurance departments. The ratios of the pool participants for the past three years are as follows:

	Year ended December 31,		
	2016	2015	2014
Employers Mutual ¹	0.81	0.74	0.74
EMCASCO ²	1.44	1.54	1.57
Illinois EMCASCO ²	1.44	1.52	1.52
Dakota Fire ²	1.51	1.59	1.61
EMC Property & Casualty Company ¹	(0.27)	0.65	0.64
Union Insurance Company of Providence ¹	(0.27)	0.65	0.65
Hamilton Mutual Insurance Company	0.88	0.89	0.90

¹ The ratios for these companies reflect changes in their pool participation percentages in 2016. Effective January 1, 2016, the pool participation rates for EMC Property & Casualty Company and Union Insurance Company of Providence declined to zero, while Employers Mutual's pool participation rate increased to 68 percent.

² The ratios for these companies reflect the issuance of an aggregate \$25.0 million of surplus notes to Employers Mutual. Surplus notes are considered to be a component of surplus for statutory reporting purposes; however, under GAAP, surplus notes are considered to be debt and are reported as a liability in the Company's financial statements.

Reinsurance

The Company's reinsurance subsidiary is party to a quota share reinsurance retrocessional agreement (the "quota share agreement") with Employers Mutual. Under the terms of the quota share agreement, the reinsurance subsidiary assumes 100 percent of Employers Mutual's assumed reinsurance business, subject to certain exceptions. EMC Reinsurance Company also writes a relatively small amount of assumed reinsurance business on a direct basis (outside the quota share reinsurance agreement).

The Company's reinsurance subsidiary also has an inter-company reinsurance program in place with Employers Mutual, covering both business assumed from Employers Mutual through the quota share agreement, as well as business obtained outside the quota share agreement. The Inter-Company Committees of the boards of directors of the Company and Employers Mutual approved a change in the inter-company reinsurance program between the Company's reinsurance subsidiary and Employers Mutual for calendar year 2016. The 2016 reinsurance program consists of two treaties. The first was a per occurrence catastrophe excess of loss treaty with a retention of \$10.0 million, a limit of \$10.0 million, 20 percent co-participation, and no reinstatement. The total cost of this treaty was approximately \$2.0 million. The second was an annual aggregate catastrophe excess of loss treaty with a retention of \$20.0 million, a limit of \$100.0 million, and 20 percent co-participation. The total cost of this treaty was approximately \$3.1 million. Any losses recovered under the per occurrence treaty inure to the benefit of the aggregate treaty, and only catastrophic events with total losses greater than \$500,000 are subject to the terms of the aggregate treaty. Prior to 2016, the reinsurance program with Employers Mutual consisted of a single excess of loss reinsurance agreement. Under the terms of that agreement, the reinsurance subsidiary retained the first \$4.0 million of losses per event, and also retained 20.0 percent of any losses between \$4.0 million and \$10.0 million and 10.0 percent of any losses between \$10.0 million and \$50.0 million. The cost of the excess of loss reinsurance protection, which included reimbursement for the cost of reinsurance protection purchased by Employers Mutual to protect itself from the assumption of excessive losses in the event of a major catastrophe, was 8.0 percent of the reinsurance subsidiary's total assumed reinsurance premiums written in 2015 and 2014.

In connection with the change in the inter-company reinsurance program in 2016, the reinsurance subsidiary began purchasing additional reinsurance protection in peak exposure territories from external parties in which coverage is triggered when losses experienced by the insurance industry from a catastrophic event exceed a specified threshold. Any reinsurance recoveries received from external parties reduces the amount of losses ceded to Employers Mutual under the inter-company reinsurance program. The net cost of this external reinsurance protection was approximately \$3.5 million in 2016.

All transactions occurring under the quota share agreement and the inter-company reinsurance program are based on statutory accounting principles. Certain adjustments are made to the statutory-basis amounts assumed by the Company's reinsurance subsidiary to bring the amounts into compliance with GAAP.

The reinsurance subsidiary does not directly reinsure any of the insurance business written by Employers Mutual or the other pool participants; however, Employers Mutual assumes reinsurance business from the Mutual Reinsurance Bureau underwriting association (MRB), which provides a small amount of reinsurance protection to the members of the EMC Insurance Companies pooling agreement. As a result, the reinsurance subsidiary's assumed exposures include a small portion of the EMC Insurance Companies' direct business, after ceded reinsurance protections purchased by MRB are applied. In addition, the reinsurance subsidiary does not reinsure any "involuntary" facility or pool business that Employers Mutual assumes pursuant to state law. The reinsurance subsidiary assumes all foreign currency exchange gain/loss associated with contracts incepting on January 1, 2006 and thereafter that are subject to the quota share agreement.

Operations of the quota share agreement and the inter-company reinsurance program give rise to inter-company balances with Employers Mutual, which are generally settled during the month following the end of each quarter. The investment and income tax activities of the reinsurance subsidiary are not subject to the quota share agreement.

Property and Casualty Insurance and Reinsurance

The Company does not have any employees of its own. Employers Mutual performs all operations for all of its subsidiaries and affiliate. Such services include data processing, claims, financial, actuarial, legal, auditing, marketing and underwriting. Employers Mutual allocates a portion of the cost of these services to its subsidiaries that do not participate in the pooling agreement based upon a number of criteria, including usage of the services and the number of transactions. The remaining costs are charged to the pooling agreement and each pool participant shares in the total cost in accordance with its pool participation percentage.

Investment expenses are based on actual expenses incurred by the Company plus an allocation of other investment expenses incurred by Employers Mutual, which is based on a weighted-average of total invested assets and number of investment transactions.

FINANCIAL INFORMATION ABOUT INDUSTRY SEGMENTS

For information concerning the Company's revenues, results of operations and identifiable assets attributable to each of its industry segments over the past three years, see note 7 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K.

NARRATIVE DESCRIPTION OF BUSINESS

Principal Products

Property and Casualty Insurance

The Company's property and casualty insurance subsidiaries and the other parties to the pooling agreement underwrite both commercial and personal lines of property and casualty insurance. Those coverages consist of the following types of insurance:

Commercial Lines

- Automobile - policies purchased by insureds engaged in a commercial activity that provide protection against liability for bodily injury and property damage arising from automobile accidents, and protection against loss from damage to automobiles owned by the insured.
- Property - policies purchased by insureds engaged in a commercial activity that provide protection against damage or loss to property (other than autos) owned by the insured.
- Workers' Compensation - policies purchased by employers to provide benefits to employees for injuries incurred during the course of employment. The extent of coverage is established by the workers' compensation laws of each state.
- Liability - policies purchased by insureds engaged in a commercial activity that provide protection against liability for bodily injury or property damage to others resulting from acts or omissions of the insured or its employees.
- Other - includes a broad range of policies purchased by insureds engaged in a commercial activity that provide protection with respect to burglary and theft loss, aircraft, marine and other types of losses. This category also includes fidelity and surety bonds issued to secure performance.

Personal Lines

- Includes automobile policies purchased by individuals that provide protection against liability for bodily injury and property damage arising from automobile accidents, and protection against loss from damage to automobiles owned by the insured; homeowners policies purchased by individuals that provide protection against damage or loss to property (other than autos) owned by the individual; and umbrella policies purchased by individuals that provide protection against liability for bodily injury or property damage to others resulting from acts or omissions of the insured.

The following table sets forth the aggregate direct premiums written of all parties to the pooling agreement for the three years ended December 31, 2016, by line of business.

(\$ in thousands) Line of business	Year ended December 31,					
	2016		2015		2014	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
Commercial lines:						
Automobile	\$ 383,503	23.4%	\$ 367,559	23.2%	\$ 344,013	22.7%
Property	421,792	25.8	403,567	25.5	387,408	25.5
Workers' compensation	327,663	20.0	309,654	19.6	293,140	19.3
Liability	340,337	20.8	329,045	20.8	311,516	20.5
Other	31,725	1.9	29,704	1.9	28,236	1.9
Total commercial lines	1,505,020	91.9	1,439,529	91.0	1,364,313	89.9
Personal lines						
	132,697	8.1	141,546	9.0	152,964	10.1
Total	\$ 1,637,717	100.0%	\$ 1,581,075	100.0%	\$ 1,517,277	100.0%

Reinsurance

As previously noted, the reinsurance subsidiary primarily assumes the voluntary reinsurance business written directly by Employers Mutual with unaffiliated insurance companies (subject to certain limited exceptions). Employers Mutual writes both pro rata and excess of loss reinsurance for unaffiliated insurance companies. Pro rata reinsurance is a form of reinsurance in which the reinsurer assumes a stated percentage of all premiums, losses and related expenses in a given class of business. In contrast, excess of loss reinsurance provides coverage for a portion of losses incurred by an insurer which exceed predetermined retention limits.

The following table sets forth the net premiums written of the reinsurance subsidiary for the three years ended December 31, 2016. During 2016, \$5.1 million of premiums written were ceded to Employers Mutual in accordance with the terms of the revised inter-company reinsurance program and \$5.1 million of premiums written were ceded to external parties. In contrast, during 2015 and 2014, \$10.8 million and \$10.3 million, respectively, of premiums written (representing 8.0 percent of the reinsurance subsidiary's total assumed reinsurance premiums written for those years) were ceded to Employers Mutual in accordance with the terms of the prior inter-company reinsurance program. The premium associated with the 2016 inter-company reinsurance program was allocated entirely to the excess of loss line of business, while the premium associated with the 2015 and 2014 inter-company reinsurance programs was allocated to all lines of business.

(\$ in thousands) Line of business	Year ended December 31,					
	2016		2015		2014	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
Pro rata reinsurance	\$ 52,996	40.4%	\$ 48,652	39.1%	\$ 42,577	35.8%
Excess of loss reinsurance	78,034	59.6	75,852	60.9	76,326	64.2
Total	\$ 131,030	100.0%	\$ 124,504	100.0%	\$ 118,903	100.0%

Marketing and Distribution

Property and Casualty Insurance

The pool participants market a wide variety of commercial and personal lines insurance products through 16 branch offices, which actively write business through independent agents in 41 states. Beginning in 2016, the accountability and responsibility for personal lines business was taken out of the branch offices and assigned to a new personal lines operation in the home office. The pool participants' products are marketed exclusively through a network of 2,121 local independent agency relationships through 4,114 offices. The pool participants primarily focus on the sale of commercial lines of property and casualty insurance to small and medium-sized businesses, which are considered to be policyholders that pay less than \$100,000 in annual premiums. The pool participants also seek to provide more than one policy to a given customer, because this "account selling" strategy diversifies risks and generally improves underwriting results.

The pool participants wrote approximately \$1.6 billion in direct premiums in 2016, with 92 percent of this business coming from commercial lines products and 8 percent coming from personal lines products. Although a large portion of the pool participants' business is generated by sales in the Midwest, Employers Mutual's branch offices are located across the country to take advantage of local market conditions and opportunities, as well as to spread risk geographically. Each branch office performs its own underwriting, claims, marketing and risk management functions according to policies and procedures established and monitored by the home office. This decentralized network of branch offices allows the pool participants to develop marketing strategies, products and pricing that target the needs of individual marketing territories and take advantage of different opportunities for profit in each market. This operating structure also enables the pool participants to develop close relationships with their agents and customers.

Although each branch office offers a slightly different combination of products, the branches generally target three customer segments:

- a wide variety of small to medium-sized businesses, through a comprehensive package of property and liability coverages;
- businesses and institutions eligible for the pool participants' target market, safety dividend group and EMC Choice programs (described below), which offer specialized products geared to their members' unique protection needs; and
- individual consumers, through a number of personal lines products such as homeowners, automobile and umbrella coverages.

The pool participants write a number of target market, safety dividend group and EMC Choice programs throughout the country, and have developed a strong reputation for these programs within the marketplace. These programs provide enhanced insurance protection to businesses or institutions that have similar hazards and exposures, and are willing to implement loss prevention programs. These groups include public schools, small municipalities, petroleum marketers, and contractors. As an example, the pool participants write coverage for approximately 1,500 school districts throughout the Midwest. These programs have been successful because they offer loss control products and services that are targeted to the needs of the group members through a local independent agent.

The following table sets forth the geographic distribution of the aggregate direct premiums written by all parties to the pooling agreement for the three years ended December 31, 2016.

	Year ended December 31,		
	2016	2015	2014
Illinois	4.2%	4.2%	4.3%
Iowa	12.5	13.0	13.3
Kansas	8.0	8.5	9.2
Michigan	4.9	4.6	4.3
Minnesota	5.1	4.7	4.6
Nebraska	5.4	5.3	5.2
North Carolina	3.5	3.1	2.8
Texas	4.3	4.1	3.9
Wisconsin	5.9	5.6	5.4
Other *	46.2	46.9	47.0
	100.0%	100.0%	100.0%

* Includes all other jurisdictions, none of which accounted for more than 3 percent.

Reinsurance

The reinsurance subsidiary currently obtains 95 percent of its business from Employers Mutual through the quota share agreement, and writes 5 percent directly. The reinsurance subsidiary relies on the financial strength of Employers Mutual to write reinsurance business, as well as the competitive advantage that Employers Mutual has by virtue of being licensed in all 50 states and the District of Columbia. Reinsurance marketing is undertaken by Employers Mutual in its role as the direct writer of the reinsurance business; however, the reinsurance subsidiary is utilized in the marketing efforts to help differentiate the reinsurance business from the direct insurance business that is written by Employers Mutual and the other pool participants.

The reinsurance business is derived from two sources. Approximately 84 percent of the reinsurance subsidiary's assumed reinsurance premiums written in 2016 were generated through the activities of Employers Mutual's Home Office Reinsurance Assumed Department (also known as "HORAD"). The reinsurance business written by HORAD is primarily generated through independent intermediaries. The risks assumed through HORAD are directly underwritten by Employers Mutual. As such, Employers Mutual has discretion with respect to the type and size of risks which it assumes and services through these activities. Since the reinsurance subsidiary utilizes Employers Mutual's underwriting personnel and systems to process its direct business, HORAD also includes the business written directly by the reinsurance subsidiary.

The remaining 16 percent of the reinsurance subsidiary's assumed reinsurance premiums written in 2016 were generated through Employers Mutual's participation in MRB, an unincorporated association through which Employers Mutual and four other unaffiliated insurance companies participate in a voluntary reinsurance pool to meet the reinsurance needs of small and medium-sized, unaffiliated mutual insurance companies. Employers Mutual has participated in MRB since 1957. MRB is controlled by a board of directors composed of the five member companies, including one representative designated by Employers Mutual. As a member of this organization, Employers Mutual assumes its proportionate share of the risks assumed by MRB from unaffiliated insurers. Since MRB is structured on a joint liability basis, Employers Mutual, and therefore the Company's reinsurance subsidiary, would be obligated with respect to the proportionate share of risks assumed by the other participants in the event they were unable to perform. MRB, which is operated by an independent management team, manages assumed risks through typical underwriting practices, including loss exposure controls provided through reinsurance coverage obtained for the benefit of MRB. The reinsurance risks for MRB arise primarily from the Northeast and Midwest markets. Underwriting of risks and pricing of coverage is performed by MRB management under general guidelines established by Employers Mutual and the other participating insurers. Except for this general oversight, Employers Mutual has only limited control over the risks assumed by, and the operating results of, MRB. Because of the joint liability structure, MRB participating companies must generally maintain a rating of "A-" (Excellent) or above from A.M. Best Company, Inc. and meet certain other standards. During 2012, the rating of one of the members was reduced to "B++". The other four participating companies continue to monitor the financial strength of this member, and have determined that removal of this member is not warranted at this time.

The following table sets forth the geographic distribution of the assumed premiums written of the reinsurance subsidiary (gross of the amounts ceded to Employers Mutual in connection with the inter-company reinsurance program and, beginning in 2016, the cost of additional reinsurance protection from external parties) for the three years ended December 31, 2016.

(\$ in thousands) Domiciliary jurisdiction	Year ended December 31,					
	2016		2015		2014	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
Germany	\$ 6,724	4.8%	\$ 3,672	2.7%	\$ 6,444	5.0%
Other foreign jurisdictions ¹	13,749	9.7	14,018	10.4	14,261	11.0
Domestic	120,690	85.5	117,641	86.9	108,537	84.0
Total	\$ 141,163	100.0%	\$ 135,331	100.0%	\$ 129,242	100.0%

¹ Includes all other foreign jurisdictions, none of which accounted for more than 3 percent during any of the three years presented.

Employers Mutual emphasizes writing excess of loss reinsurance business in its HORAD operation and works to increase its participation on existing contracts that have had favorable terms and/or results. Employers Mutual strives to be flexible in the types of reinsurance products it offers, but generally limits its writings to direct reinsurance business, rather than providing retrocessional covers. The reinsurance marketplace tends to favor “across the board” participation on excess of loss reinsurance contracts. As a result, reinsurance companies must be willing to participate on all layers offered under a specific contract in order to be considered viable reinsurers.

It is customary in the reinsurance business for the assuming company to compensate the ceding company for the acquisition expenses incurred in the generation of the business. Commissions incurred by the reinsurance subsidiary under the quota share agreement with Employers Mutual amounted to \$27.4 million in 2016. During 2016, the reinsurance subsidiary ceded to Employers Mutual \$5.1 million of premiums under the inter-company reinsurance program. The reinsurance subsidiary also assumes all foreign currency exchange gain/loss associated with contracts incepting on January 1, 2006 and thereafter that are subject to the quota share agreement. The net foreign currency exchange gain assumed by the reinsurance subsidiary through the quota share agreement in 2016 was \$367,000.

Competition

Property and Casualty Insurance

The property and casualty insurance marketplace is very competitive. The pool participants compete in the United States insurance market with numerous insurers, many of which have substantially greater financial resources. Competition in the types of insurance in which the pool participants are engaged is based on many factors, including the perceived overall financial strength of the insurer, industry ratings, premiums charged, contract terms and conditions, services offered, speed of claim payments, reputation and experience. Because the pool participants’ insurance products are marketed exclusively through independent agencies, they face competition to retain qualified agencies, as well as competition within the agencies. The pool participants also compete with direct writers, who utilize salaried employees and generally offer their products at a lower cost; exclusive agencies, who write insurance business for only one company; and to a lesser extent, internet-based enterprises. Employers Mutual’s decentralized network of 16 branch offices allows the pool participants to enhance business relationships with agents and customers and develop products, marketing strategies and pricing parameters targeted to individual territories. The pool participants also utilize a company-paid trip for qualified agents and a profit-sharing plan as incentives for the independent agencies to place high-quality insurance business with them.

Reinsurance

Employers Mutual, in writing reinsurance business through its HORAD operation, competes in the global reinsurance market with numerous reinsurance companies, many of which have substantially greater financial resources. Competition for reinsurance business is based on many factors, including the perceived financial strength of the reinsurer, industry ratings, stability in products offered and licensing status. There is a segment of the market that favors large, highly-capitalized reinsurance companies who are able to provide “mega” line capacity for multiple lines of business.

While reinsurer competition for national and regional company business is growing, management believes that MRB has a competitive advantage in the smaller mutual company market that it serves due to its low operating costs. MRB understands the needs of the smaller company market and operates at a very low expense ratio, enabling it to offer reinsurance coverage (on business that generally presents less risk) to an under-served market at lower margins. However, due to growth in the reinsurance intermediary marketplace, the size of this under-served market has declined.

A.M. Best Company, Inc. Ratings

Property and Casualty Insurance

A.M. Best Company, Inc. (A.M. Best) rates insurance companies based on their relative financial strength and ability to meet their contractual obligations. During 2013, the Company's property and casualty insurance subsidiaries' financial strength rating was raised from "A-" to "A" (Excellent) in their capacity as participants in the pooling agreement. A.M. Best re-evaluates its ratings from time to time (normally on an annual basis) and there can be no assurance that the Company's property and casualty insurance subsidiaries and the other pool participants will maintain their current rating in the future. Management believes that an A.M. Best rating of "A-" (Excellent) or better is important to the Company's business since many insureds require that companies with which they insure be so rated. A.M. Best's publications indicate that the "A" (Excellent) rating is assigned to companies that have achieved excellent overall performance and have a strong ability to meet their obligations over a long period of time. A downgrade of the Company's property and casualty insurance subsidiaries' rating (particularly below "A-") would adversely affect the Company's competitive position and make it more difficult for it to market its products, and retain its existing agents and policyholders. A.M. Best's ratings are based upon factors of concern to policyholders and insurance agents, and are not directed toward the protection of investors.

Reinsurance

The most recent A.M. Best Property Casualty Key Rating Guide gives the Company's reinsurance subsidiary a financial strength rating of "A" (Excellent). However, because the majority of the reinsurance business assumed by the reinsurance subsidiary is produced by Employers Mutual, the rating of the reinsurance subsidiary is not critical to the Company's reinsurance operations. The rating of Employers Mutual is, however, critical to the Company's reinsurance operations, as the unaffiliated insurance companies that cede business to Employers Mutual view the rating as an indication of Employers Mutual's ability to meet its obligations to those insurance companies. Employers Mutual's rating was increased from "A-" to "A" (Excellent) during 2013. This rating increase aids in marketing efforts because some insurance companies require a rating of "A" (Excellent) or higher. A downgrade of Employers Mutual's rating (particularly below "A-") would have a material adverse impact on the Company's reinsurance subsidiary, as a downgrade would negatively impact Employers Mutual's ability to write reinsurance business and, consequently, to cede that business to the Company's reinsurance subsidiary.

Statutory Combined Trade Ratios

The following table sets forth the statutory combined trade ratios of the Company's insurance subsidiaries, and the property and casualty insurance industry averages, for the five years ended December 31, 2016. The combined trade ratios below are the sum of the following: the loss and settlement expense ratio, calculated by dividing losses and settlement expenses incurred by net premiums earned, and the expense ratio, calculated by dividing underwriting expenses incurred by net premiums written and policyholder dividends by net premiums earned. Generally, if the combined trade ratio is below 100 percent, a company has an underwriting profit; if it is above 100 percent, a company has an underwriting loss.

	Year ended December 31,				
	2016	2015	2014	2013	2012
Property and casualty insurance¹					
Loss and settlement expense ratio	64.6%	65.5%	70.5%	67.2%	66.2%
Expense ratio	33.9%	33.4%	32.0%	35.0%	35.3%
Combined trade ratio	98.5%	98.9%	102.5%	102.2%	101.5%
Reinsurance¹					
Loss and settlement expense ratio	68.0%	64.1%	73.9%	59.0%	68.4%
Expense ratio	24.4%	24.9%	24.5%	23.7%	21.8%
Combined trade ratio	92.4%	89.0%	98.4%	82.7%	90.2%
Total insurance operations¹					
Loss and settlement expense ratio	65.5%	65.2%	71.2%	65.2%	66.7%
Expense ratio	31.8%	31.6%	30.4%	32.3%	32.3%
Combined trade ratio	97.3%	96.8%	101.6%	97.5%	99.0%
Property and casualty insurance industry averages²					
Loss and settlement expense ratio	73.0%	69.8%	69.3%	67.7%	73.4%
Expense ratio	27.7%	28.5%	28.1%	28.7%	28.8%
Combined trade ratio	100.7%	98.3%	97.4%	96.4%	102.2%

¹ Beginning in 2014, the expense ratios for the Company's property and casualty insurance subsidiaries reflect net periodic postretirement benefit income allocated to them as a result of a plan amendment to Employers Mutual's postretirement medical plan, which created a large prior service credit that is being amortized into benefit expense over a period of 10 years. In addition, the service cost and interest cost components of the revised plan's net periodic benefit cost are significantly lower than those of the prior plan. The 2013 expense ratio and combined trade ratio for "reinsurance" and "total insurance operations" reflect \$532,000 of negative premiums written (net of \$53,000 reduction in the amount ceded to Employers Mutual under the inter-company reinsurance program) and \$223,000 of negative commission expense that were recorded in connection with the change in Employers Mutual's participation in MRB. Excluding these adjustments, the expense ratio and combined trade ratio for "reinsurance" would have been 23.8 percent and 82.8 percent, respectively, and for "total insurance operations" would have been unchanged at 32.3 percent and 97.5 percent, respectively. The 2012 expense ratio and combined trade ratio for "reinsurance" and "total insurance operations" reflect \$3.1 million of negative premiums written (net of \$341,000 reduction in the amount ceded to Employers Mutual under the inter-company reinsurance program) and \$1.4 million of negative commission expense that were recorded in connection with the cancellation of a large pro rata account written by MRB. Excluding these adjustments, the expense ratio and combined trade ratio for "reinsurance" would have been 22.4 percent and 90.8 percent, respectively, and for "total insurance operations" would have been 32.4 percent and 99.1 percent, respectively.

² As reported by A.M. Best. The ratio for 2016 is an estimate; the actual combined trade ratio is not currently available.

Claims Management

Effective claims management is critical to the success of the pool participants. To this end, the pool participants have adopted a customer-focused claims management process that is cost efficient, and delivers a high level of claims service that produces superior results. The claims management process is focused on handling claims from their inception, accelerating communication to insureds and claimants, and compressing the cycle time of claims to control both loss costs and claims-handling costs. This process provides quality service and results in the appropriate handling of claims, allowing the pool participants to cost-effectively pay valid claims and contest fraudulent claims.

The claims management operation includes adjusters, appraisers, special investigators, attorneys and claims administrative personnel. The pool participants conduct their claims management operations out of 16 branch offices and four service offices located throughout the United States. The home office claims group provides advice and counsel for branch claims staff in investigating, reserving and settling claims. The home office claims staff also evaluates branch claims operations and makes recommendations for improvements in performance. Additional home office services provided include: complex claim handling, physical damage and property review, medical case management, medical bill review, legal coverage analysis, a special investigative unit, litigation management and subrogation. Management believes these home office services assist the branch claims personnel in producing greater efficiencies than can be achieved at the local level.

Each branch office is responsible for evaluating and settling claims within the authority provided by home office claims. Authority levels within the branch offices are granted based upon an adjuster's experience and expertise. A branch office must request input from home office claims once a case exceeds its authority level. The Senior Vice President of Claims participates in a claims committee that exists within the home office. This committee meets on a weekly basis to assist the branches in evaluating and settling claims beyond their authority level.

The pool participants manage litigated claims arising from value disputes and questionable liability, and will defend appropriate denials of coverage. The pool participants retain outside defense counsel to defend such matters; however, internal claims professionals manage the litigation process. The pool participants have implemented an internally developed litigation management system that allows the claims staff to evaluate the quality and cost effectiveness of outside legal services. Cases are constantly reviewed to adjust the litigation plan as necessary, and all cases going to trial are carefully reviewed to assess the value of a trial versus a settlement.

Loss and Settlement Expense Reserves

The Company's liabilities for losses and settlement expenses represent management's best estimate at a given point in time of ultimate unpaid losses and settlement expenses for both reported and unreported claims. The estimates of the liabilities for losses and settlement expenses include assumptions of future trends and claims severity, judicial theories of liability, historic loss emergence and other factors. Because of the inherent uncertainties involved in the establishment of reserves for less mature accident years, management's reserving methodology for the current and more recent accident years utilizes prudently conservative assumptions. During the loss settlement period, which may cover many years in some cases, the inherent uncertainty associated with these accident years declines as the Company learns additional facts regarding individual claims and potential future claims, and consequently it often becomes necessary to refine and adjust its estimates of liability. The Company reflects any adjustments to its liabilities for losses and settlement expenses in its operating results in the period in which the changes in estimates are made.

The amount of reserves for reported claims, known as "case loss reserves", is primarily based upon a case-by-case evaluation of the specific type of claim, knowledge of the circumstances surrounding each claim and the policy provisions relating to the type of loss. Case loss reserves on assumed reinsurance business are the amounts reported by the ceding companies.

Beginning in 2016, the amount of reserves for unreported claims, known as "Incurred But Not Reported (IBNR) loss reserves", is generally determined by subtracting paid loss amounts and the case loss reserves carried on reported claims from the estimated ultimate loss amounts established by line of business and accident year. Prior to 2016, IBNR loss reserves were determined on the basis of statistical information for each line of insurance with respect to expected loss emergence arising from occurrences that had not yet been reported. Established reserves (for both reported and unreported claims) are closely monitored and are frequently examined using a variety of formulas and statistical techniques for analyzing loss development, as well as other economic and social factors.

Settlement expense reserves are intended to cover the ultimate cost of investigating claims and defending lawsuits arising from claims. Reserves are established separately for expenses specifically associated with a claim (allocated) and expenses not specifically associated with a claim (unallocated). To the extent that adjustments are required to be made in the amount of loss reserves each year, settlement expense reserves are correspondingly revised, if necessary.

The Company does not discount reserves. Inflation is implicitly provided for in the reserving function through analysis of cost trends, reviews of historical reserving results and projections of future economic conditions. Estimates of individual case loss reserves are monitored and reviewed on a regular basis by claim staff members. Special attention is given to claims of \$100,000 or greater, and long-term and lifetime medical claims. Based on currently available information, individual case loss reserves are revised to reflect changes in estimated ultimate settlement values.

Despite the inherent uncertainties of estimating loss and settlement expense reserves, management believes that the Company's reserves are being calculated in accordance with sound actuarial practices and, based upon current information, that the reserve for losses and settlement expenses at December 31, 2016 represents management's best estimate of the Company's overall liability.

Reserving Methodology and Determination of Management's Best Estimate of Overall Liability

Property and casualty insurance

The property and casualty insurance segment establishes case loss, IBNR loss and settlement expense reserves separately for three categories of losses, which are (1) all claims other than those stemming from storms, catastrophic events, asbestos and environmental exposures (general claims), (2) storms and catastrophic events, and (3) asbestos and environmental claims. Case loss reserves are established on a common basis for all three categories based on the specific facts for each reported claim. Individual case loss reserves are based on the probable, or most likely, outcome for each claim, with probable outcome defined as what is most likely to be awarded if the case were to be decided by a civil court in the applicable venue or, in the case of a workers' compensation case, by that state's Workers' Compensation Commission. IBNR loss and settlement expense reserves are established differently for the three categories of losses as discussed below.

Reserves for General Claims

Effective September 30, 2016, IBNR loss reserves for general claims are calculated by subtracting paid loss amounts and the case loss reserves carried on reported claims from the estimated ultimate loss amounts established by line of business and accident year. Allocated settlement expense reserves are established in a similar manner, except that only paid expenses to date are subtracted from the estimated ultimates, as adjusters do not establish case-basis settlement expense reserves. Unallocated settlement expenses reserves are determined through a study of historical paid expenses compared to paid losses. The unallocated settlement expense reserve established through this process is for all accident years combined, and the total is allocated to the various accident years proportional to the loss reserves.

Lines of Business and Process Overview

Reserves are evaluated for adequacy on a quarterly basis, and are the end-product of a broader process by which management establishes estimated ultimate loss (net of salvage, subrogation and reimbursement recoveries) and allocated settlement expense amounts by line of business and accident year. At quarter-end, carried bulk reserves are established as the difference between management's estimated ultimate amounts, and the reported amounts incurred to date. At the highest level, the actuarial department establishes estimated ultimate loss and allocated settlement expense amounts by accident year for claims aggregated into eight reserving lines of business: personal auto liability, commercial auto liability, auto physical damage, workers' compensation, other liability, commercial property, homeowners, and an "all other" category, which consists mostly of fidelity and surety bonds.

For each line of business, the establishment of IBNR loss and allocated settlement expense reserves begins with a review of historical experience as of the end of the previous quarter. The actuarial department utilizes standard actuarial incurred and paid chain ladder (triangle) development methods, expected loss and settlement expense ratio methods, and various methodologies which blend the development and expected ratio methods, such as the Bornhuetter-Ferguson method. The actuarial department employs these methods using incurred and paid losses and paid allocated settlement expenses aggregated on both a calendar/accident year basis and an accident quarter basis. The calendar/accident year development triangles generated in this process contain thirty-five years of historic data, and provide the tail development factors used in the accident quarter development triangles, which only utilize ten years of historic data. The end result of the process is a separate set of estimated ultimate ratios to earned premiums for losses and allocated settlement expenses by reserving line of business and accident year/quarter. At the end of each quarter, the selected estimated ultimate ratios are applied to the corresponding calendar year/quarter earned premiums to produce the estimated ultimate dollar amounts, from which the amounts reported to date are subtracted to produce the IBNR loss reserves and allocated settlement expense reserves to be recorded.

Fifteen different averaging periods/methods are used in the incurred and paid chain ladder methods to produce development factors to ultimate, from which the five medial estimates are generally selected to produce the chain ladder ultimate estimates. Thus, using both the incurred and paid chain ladder methods, ten ultimate loss estimates are produced for each accident year and accident quarter. Since the pool participants do not establish settlement expense reserves on an individual claim basis, there is no corresponding incurred allocated settlement expense data upon which to apply the chain ladder method. Therefore, only five ultimate allocated settlement expense estimates are produced for each accident year and accident quarter as only the paid chain ladder method can be applied.

In addition to the accident year and accident quarter ultimate loss and allocated settlement expense estimates produced from the chain ladder methods, the actuarial department employs the following methodologies on an incurred and paid basis: Bornhuetter-Ferguson, Benktander (iterative Bornhuetter-Ferguson), Ultimate Frequency-Severity and Generalized Cape Cod. The actuarial department will also sometimes apply the Expected Loss Ratio Method for extremely immature accident years/quarters. For allocated settlement expenses, the actuarial department also produces ultimate estimates by applying the chain ladder approach to the ratio of paid allocated settlement expenses to paid losses. The ultimate factors from these paid-to-paid ratios are applied to the ultimate losses determined by the paid chain ladder method to produce ultimate allocated settlement expense dollar amounts.

Range of Reasonable Ultimates and Management's Best Estimate: Except for the Expected Loss Ratio Method, each of the above listed methods are employed, where applicable, using each of the five factors to ultimate from the incurred and paid chain ladder methods. This results in forty-five ultimate loss estimates and thirty-five ultimate allocated settlement expense estimates, exclusive of the special situations where the Expected Loss Ratio Method is also applied. The actuarial department examines the indicated ultimate amounts for each category (losses and allocated settlement expenses) and each accident year/quarter, and applies judgment and knowledge of each method's biases (if any) to exclude unreasonable estimates. The maximum and minimum of the remaining estimates define the range of reasonable ultimates. The point estimates within the range are further scrutinized for evenness of spread or for evidence of clustering around specific estimates. A comparison is also made to previous estimates. For the latest accident years, management generally selects an estimate in the third, or possibly fourth, quartile of the reasonable range as the best estimate. For more mature years, the mean is generally selected to be management's best estimate.

The selected point estimate for each accident year/quarter is divided by its corresponding earned premiums to produce the expected ultimate loss and allocated settlement expense ratios. At quarter end, the ratios are applied to the corresponding calendar year/quarter earned premiums to produce the ultimate estimated dollar amounts, from which the amounts incurred to date are subtracted to produce the IBNR loss and allocated settlement expense reserves to be recorded.

Reserves for Storms and Catastrophic Events

IBNR loss reserves for storms and catastrophic events are established by the branch offices in conjunction with the home office claims department. IBNR loss reserves associated with storms and catastrophic events are event-specific. The pool participants define a storm or catastrophic event as any event for which the Property Liability Research Bureau (PLRB) assigns an occurrence number. When a storm or catastrophic event occurs, the location of the event is overlaid with a map of the pool participants' exposures. Using this information and other factors (such as wind speed and the size of any hail), the affected branch office(s) are contacted and requested to develop a loss estimate based on projections of loss frequency and severity in their location. To develop this loss estimate, large accounts located in the affected areas are contacted. Based on this information and discussions with local agents, both the number and severity of estimated losses are projected by location. Management then compiles and analyzes this information and calculates a total loss estimate. The total loss estimate is generally established within two weeks of an event and is adjusted, if necessary, as the actual claims are inspected. At each reporting date, the total amount of reported losses associated with each storm/catastrophic event is compared to the most recent total loss estimate for that event, and the difference is recorded as the storm/catastrophe IBNR loss reserve. Since the pool participants do not establish separate settlement expense reserves for individual storm and catastrophe claims, the reserving methodology for settlement expenses on these claims is included in the settlement expense reserving process for general claims.

Reserves for Asbestos and Environmental Claims

The IBNR loss and settlement expense reserves are established jointly for asbestos and environmental liabilities as the available estimation methodologies require the consideration of both loss and settlement expense payments together. Management's internal ultimate loss and settlement expense evaluations consist of runoff scenarios based on recent payment activity and various future payout decay assumptions. The assumptions include published research on industry payout curves as well as reasonable alternative assumptions selected by the actuarial department. Internal and industry survival ratios are also monitored to assist in validating assumptions underlying the payout scenarios.

Reinsurance

The IBNR loss reserves for the HORAD book of business are determined and booked each quarter along with the ceding companies' reported reserves. The methodologies used to establish the IBNR loss reserves produce a range of indicated reserves for each contract type and contract year. Employers Mutual's actuaries examine the reasonableness of each range, and then select a point estimate within those ranges. For the more recent contract years, the selected IBNR loss reserve estimate tends to be higher in the range, typically in the fourth quartile, due to the considerable uncertainty associated with these immature contract years. The IBNR loss reserve selected for the more mature contract years tends to be at, or slightly above, the midpoint of the range of reasonable reserves. In addition to the actuarially determined reserves, an additional IBNR loss reserve is established when large catastrophic events occur, based on an examination of impacted contracts/exposures and reported industry-wide loss estimates. In aggregate, the IBNR loss reserve selected using these methods and procedures, combined with reserves reported by the ceding companies, becomes management's best estimate of the reinsurance segment's overall liability. The next several paragraphs provide additional detail on the HORAD reserving process.

Reserves for the HORAD book of business are reviewed quarterly. Contract years 1988 and subsequent are reviewed every quarter, while accident years 1981-1987, for which detailed contract year information is not available, are reviewed separately during the fourth quarter. Management segregates claims data associated with specified catastrophe occurrences expected to exceed \$2.0 million in losses, and establishes a catastrophe specific IBNR loss reserve based upon an evaluation of the exposed reinsurance contracts. Once established, catastrophe specific IBNR reserves are taken down as claims are reported, unless the ultimate expected loss is adjusted by management.

Premium, loss and settlement expense data is generally reported by ceding companies on a contract year basis; however, some loss and settlement expense data is reported on an accident year basis. Some ceding companies also report IBNR loss reserves. The reinsurance segment books these IBNR loss reserve amounts, and then deducts them from the indicated IBNR loss reserves calculated by Employers Mutual's actuaries. The reinsurance segment may also book "additional case loss reserves" for ceding companies whose reported case loss reserves related to certain claims are believed to be less than adequate.

Using the reported data, excluding the reported IBNR loss reserves, Employers Mutual's actuaries develop an indicated ultimate loss, and corresponding IBNR loss reserve, by type of contract (property/casualty/excess/pro rata/multi-line) and by contract year. The actuaries employ the standard paid and incurred chain ladder (triangle) development methods and the Bornheutter-Ferguson method to produce the indicated ultimate loss, and corresponding IBNR loss reserves. In addition, a loss ratio approach and judgment are applied to a few minor contract types which represent an insignificant portion of the totals.

For the major contract types, the reinsurance subsidiary uses its own paid and incurred development data aggregated on a contract year basis. The reason for aggregating by contract year, rather than accident year, is to ensure an accurate aggregation, as ceding companies have not always provided sufficient detail to determine the proper accident year assignment. In addition, the reinsurance subsidiary uses Reinsurance Association of America (RAA) development triangles to assist in estimating reserves for casualty excess contracts.

The expected loss ratios used in the Bornheutter-Ferguson method for the current contract year are calculated by contract type during the first quarter. Once established, the expected loss ratios for the various contract years are generally not revised. The expected loss ratios are calculated by dividing the projected ultimate losses for contract years having at least five years of maturity by the contract-year earned premiums brought to the current rate-level. The current rate-level loss ratios are then trended to the current contract period. In addition, when large accounts are first written, there is generally some underwriting or reserving data available from which an expected loss ratio may be determined.

After establishing the ultimate loss, and corresponding IBNR loss reserve, by treaty type and contract year, an allocation must be made in order to book the IBNR loss reserves by accident year and line-of-business. This is accomplished by a historical study of the ultimate accident year distribution of reported losses and reported loss types (for those treaty types which may cover multiple lines of business). For the latest contract years, consideration is also given to the distribution of the contract effective dates and the expected earnings patterns of the contract types (occurrence vs. risks attaching contracts).

The reinsurance subsidiary also books earned but not reported (EBNR) premiums on pro rata contracts, and accrued reinstatement premiums on catastrophe excess contracts. EBNR premium is estimated by applying selected earnings patterns to the expected ultimate contract year premium associated with each individual pro rata account, and netting the reported-to-date amount from the estimated earned-to-date amount. The account level earnings patterns are selected from an examination of all available information regarding distribution of risk attachment dates during the contract period and a review of each ceding company's historical reporting patterns. It is important to note that whenever EBNR premium is booked, there is an associated IBNR loss reserve established as well. Accrued reinstatement premiums are estimated by applying a historically selected ratio of ultimate reinstatement premiums to incurred losses to the expected ultimate incurred catastrophe loss by contract year. Netting the reported reinstatement premiums-to-date from this ultimate produces the recorded amount.

Reported case and IBNR loss reserves associated with the MRB book of business are established by that entity's management, and booked by the reinsurance subsidiary on a monthly basis. MRB claims files are audited annually by the member companies' reinsurance claim departments, and the member companies' actuarial departments perform an annual reserve adequacy review. The reinsurance subsidiary estimates and books a relatively small IBNR loss reserve and EBNR premium amount to account for a one month lag in reporting. The booking of the lag IBNR loss reserve may be suspended, and a negative bulk IBNR loss reserve may be booked, during periods when the Company's actuarial reviews indicate MRB's carried reserves are more than adequate to cover its liabilities.

Reserve Development

Property and casualty insurance

There is an inherent amount of uncertainty involved in the establishment of insurance liabilities. This uncertainty is greatest in the current and more recent accident years because a smaller percentage of the expected ultimate claims have been reported, adjusted and settled compared to more mature accident years. For this reason, carried reserves for these accident years reflect prudently conservative assumptions. As the carried reserves for these accident years run off, the overall expectation is that, more often than not, favorable development will occur. However, there is also the possibility that the ultimate settlement of liabilities associated with these accident years will show adverse development, and such adverse development could be substantial and have a negative impact on the Company's financial condition and results of operations.

Reinsurance

There are inherent uncertainties involved in establishing reserves for assumed reinsurance business. Such uncertainties include the fact that a reinsurance company generally has less knowledge than the ceding companies about the underlying book of business and the ceding companies' reserving practices. For this reason, the carried reserves for the reinsurance segment are generally in the upper quartile of the range of actuarial reserve indications. As the carried reserves run off, the overall expectation is that, more often than not, favorable development will occur. However, there is also the possibility that the ultimate settlement of liabilities will show adverse development, and such adverse development could be substantial and have a negative impact on the Company's financial condition and results of operations.

See note 4 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K for a reconciliation of beginning and ending reserves for losses and settlement expenses for the three years ended December 31, 2016, as well as ten years of incurred and paid development information for each major line of business. Following is a detailed analysis of the development the Company has experienced on its prior accident years' reserves during the past three years. Care should be exercised when attempting to analyze the financial impact of the reported development amounts because, as previously noted, 1) the overall expectation is that, more often than not, favorable development will occur as the prior accident years' reserves run off, and 2) development on prior years' reserves resulting solely from changes in the allocation of bulk reserves between the current and prior accident years does not have any impact on earnings.

Year ended December 31, 2016

Property and casualty insurance segment

For the property and casualty insurance segment, the December 31, 2016 estimate of loss and settlement expense reserves for accident years 2015 and prior decreased \$30.0 million from the estimate at December 31, 2015. This decrease represents 6.2 percent of the December 31, 2015 carried reserves. During the third quarter of 2016, management implemented a new reserving methodology for the determination of direct bulk reserves in the property and casualty insurance segment. The new methodology produces specific line of business and accident year estimated ultimate loss and allocated settlement expense amounts based on explicit loss frequency and severity assumptions. The previous methodology used one process to determine the aggregate amount of IBNR loss and settlement expense reserves, and a separate process to allocate those reserves to the various accident years. The implementation of the new reserving methodology did not have a material impact on total carried reserves for the property and casualty insurance segment; however, there was some movement of allocated settlement expense reserves to IBNR loss reserves, and a reallocation of loss and allocated settlement expense reserves by accident year to align those reserves with the estimated ultimate loss and allocated settlement expense ratios. In connection with this reallocation of reserves by accident year, approximately \$5.6 million of IBNR loss and allocated settlement expense reserves were moved from prior accident years to the current accident year in multiple lines of business. This reduction in prior accident years' reserves is reported as favorable development; however, this development is "mechanical in nature", and did not have any impact on earnings because the total amount of carried reserves did not change. The following table displays development on prior years' reserves by line of business and type of reserve.

(\$ in thousands) Line of business	Reported and unreported loss reserves	Allocated settlement expense reserves	Unallocated settlement expense reserves	Total
Personal lines	\$ (1,242)	\$ (302)	\$ (33)	\$ (1,577)
Commercial auto liability	6,807	(3,236)	(1,222)	2,349
Auto physical damage	(1,850)	(34)	205	(1,679)
Workers' compensation	(11,271)	(4,205)	(844)	(16,320)
Other liability	(2,709)	(9,936)	(523)	(13,168)
Commercial property	1,296	982	174	2,452
Other	(1,426)	(163)	(481)	(2,070)
Total	\$ (10,395)	\$ (16,894)	\$ (2,724)	\$ (30,013)

The favorable development reported for 2016 is generally attributed to lower explicit loss frequency and severity assumptions underlying the loss and allocated settlement expense reserves carried at year-end 2016 than the implicit assumptions underlying the reserves carried at year-end 2015. The favorable development associated with the loss and allocated settlement expense reserves total \$27.3 million, with \$10.4 million coming from favorable loss reserve development and \$16.9 million coming from favorable allocated settlement expense reserve development.

Favorable development on loss and allocated settlement expense reserves represents 91 percent of the property and casualty insurance segment's total reported favorable development of \$30.0 million. The following table displays the development experienced in 2016 on reported and unreported loss reserves and allocated settlement expense reserves for the five most recent accident years, by line of business.

(\$ in thousands)

Calendar accident year	Personal lines	Commercial auto liability	Auto physical damage	Workers' compensation	Other liability	Commercial property	Other	Total
Prior	\$ (96)	\$ (490)	\$ (145)	\$ 218	\$ 2,681	\$ (158)	\$ (361)	\$ 1,649
2011	(182)	(277)	(37)	(770)	(1,654)	672	(83)	(2,331)
2012	(243)	(67)	(72)	(1,910)	(3,435)	296	(200)	(5,631)
2013	(199)	126	(116)	(2,940)	(495)	557	(142)	(3,209)
2014	(211)	1,129	(204)	(3,643)	(2,231)	(332)	(163)	(5,655)
2015	(613)	3,150	(1,310)	(6,431)	(7,511)	1,243	(640)	(12,112)
Total	<u>\$ (1,544)</u>	<u>\$ 3,571</u>	<u>\$ (1,884)</u>	<u>\$ (15,476)</u>	<u>\$ (12,645)</u>	<u>\$ 2,278</u>	<u>\$ (1,589)</u>	<u>\$ (27,289)</u>

The property and casualty insurance segment's new bulk reserving methodology is based on explicit assumptions concerning the ultimate number (frequency) and average size (severity) of claims expected to be incurred. The prior methodology separated the calculation of the aggregate reserves from the allocation of those reserves to the various accident years, and thus did not utilize explicit claim frequency and severity assumptions. Under the new reserving methodology, management seeks to better align expected and actual development by line of business and accident year. As this is a transitional year, there are some discontinuities in the development amounts reported for 2016. The following comments are based on a comparison of the explicit assumptions underlying the December 31, 2016 carried reserves to the implicit assumptions underlying the December 31, 2015 carried reserves.

In the table above, five of the seven lines of business exhibited favorable development on a fairly consistent basis over the prior five accident years, those being personal lines, auto physical damage, workers' compensation, other liability and other. For these lines of business, favorable development for most accident years was driven by decreases in the frequency and/or severity assumptions underlying the estimated ultimate accident year loss and allocated settlement expense ratios. The workers' compensation line of business experienced adverse development on accident years prior to 2011, as management strengthened those reserves in response to increases in the severity assumptions for those years due to the expansion of the experience review period to thirty-five accident years.

The commercial auto liability line of business experienced adverse development in each of the latest three accident years. Comparing the explicit assumptions utilized at December 31, 2016 to the implicit assumptions underlying the December 31, 2015 reserves, the ultimate claim frequency and severity assumptions for accident year 2015 were underestimated by 1.8 percent and 9.7 percent, respectively. Using the same comparison, claims severity for accident year 2014 was underestimated by 3.4 percent, and for accident year 2013, claim frequency was slightly underestimated.

The commercial property line of business experienced the greatest number of development discontinuities by accident year in connection with the change in reserving methodology. Under the previous methodology, negative bulk case loss reserves were often carried in the commercial property line of business due to the perceived strength of the case loss reserves relative to the other lines of business. With the elimination of the bulk case loss reserves under the new methodology, the reserves for the commercial property line of business were reallocated in total and by accident year in accordance with the explicit claim frequency and severity assumptions developed during 2016. The implicit assumptions utilized at year-end 2015 underestimated claim frequency for each of the five most recent accident years, and underestimated loss severity for all of those years except 2014.

The Company increased asbestos and environmental IBNR loss and settlement expense reserves by \$3.5 million during 2016, which is primarily reflected in the other liability line of business. The increase was in response to an indicated increase in the ultimate asbestos liability produced by internal payout decay models. Management also notes that A.M. Best increased the industry's estimated ultimate liability by \$15 billion during 2016. Newly reported asbestos claims have decreased slightly for the last two calendar years. Asbestos and environmental reserves constitute less than 3 percent of the property and casualty insurance segment's total direct reserves.

Reinsurance segment

For the reinsurance segment, the December 31, 2016 estimate of loss and settlement expense reserves for accident years 2015 and prior decreased \$10.9 million from the estimate at December 31, 2015. This decrease represents 5.5 percent of the December 31, 2015 carried reserves. Approximately \$7.1 million of favorable development is attributable to the HORAD book of business, with the remaining \$3.8 million of favorable development associated with MRB.

In the HORAD book of business, \$7.4 million of favorable development occurred in the pro rata line of business and \$0.3 million of adverse development occurred in the excess of loss line of business. The favorable development in the pro rata line of business primarily occurred in the 2015 accident year, with accident years 2012 - 2014 generating \$1.4 million of adverse development and the remaining prior accident years experiencing little development in the aggregate. In the excess of loss line of business, the 2015 accident year experienced over \$3.0 million of favorable development; however, this favorable development was more than offset by adverse development in many of the prior 21 accident years, with the greatest amount of adverse development concentrated in accident years 2005 - 2014.

The favorable development experienced on the MRB business is mostly attributed to an increase in the amount of negative bulk IBNR loss reserve carried on prior years' reserves. Recent actuarial reviews of MRB's reported reserves have consistently indicated that those reserves challenged the upper level of the range of reasonable reserves. To address this issue, a \$2.0 million negative bulk IBNR loss reserve was established in 2015 for this business. During 2016, the negative bulk IBNR loss reserve was increased to \$4.0 million, with \$5.3 million of negative IBNR loss reserve carried on prior accident years and \$1.3 million of positive lag IBNR loss reserve carried on the 2016 accident year. The recognition of the additional negative IBNR loss reserve accounts for \$3.3 million of the \$3.8 million of favorable development experienced during 2016.

During 2016, the expected loss ratios utilized for prior contract years remained unchanged, except for ocean marine pro rata business. The expected loss ratios associated with this contract type were decreased by approximately 2.5, 4.0 and 5.0 percentage points for contract years 2012, 2014 and 2015, respectively, from the ratios utilized during 2015. Additionally, the expected loss ratio for contract year 2013 was increased by approximately 2.0 percentage points relative to the 2015 value. These changes were made in response to reserving information supplied by the ceding company, a large writer of ocean marine pro rata business.

The expected loss ratios utilized for the 2016 contract year were based on an extensive actuarial analysis of trended historic ultimate loss ratios based on current-level earned premiums. Where applicable, new contract loss information or loss histories were also incorporated into the reserving process. Compared to the 2015 contract year selections, the 2016 contract year expected loss ratios for per risk excess and casualty excess business increased by 2.5 percentage points, while the expected loss ratio for aggregate excess business decreased by 5.0 percentage points. The 2016 contract year expected loss ratio for ocean marine pro rata business increased approximately 2.5 percentage points above the initial 2015 contract year selection, but is now approximately 7.5 percentage points above the revised ratio.

Year ended December 31, 2015

Property and casualty insurance segment

For the property and casualty insurance segment, the December 31, 2015 estimate of loss and settlement expense reserves for accident years 2014 and prior decreased \$13.8 million from the estimate at December 31, 2014. This decrease represented 3.0 percent of the December 31, 2014 carried reserves. No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2015; however, the accident year allocation factors applied to IBNR loss reserves, bulk case loss reserves, and the defense and cost containment portion of settlement expense reserves were revised at December 31, 2015 as part of the annual review. This change resulted in the movement of \$423,000 of reserves from prior accident years to the current accident year, and hence, was reported as favorable development on prior years' reserves.

Reserves on previously reported claims developed favorably in 2015 by approximately \$8.5 million. This includes \$514,000 of adverse development attributable to revised accident year allocation factors for bulk case loss reserves, which was offset by \$7.5 million of favorable development experienced on prior years' reported claims (exclusive of the bulk case loss reserve) and \$1.5 million of favorable development from changes in the line of business distribution of the bulk case loss reserves. Of the \$8.5 million of favorable development, accident years 2012-2014 experienced favorable development of \$7.0 million. While all lines of business continued to experience very favorable development on claims which "closed" during 2015, adverse development on claims remaining "open" in the commercial auto liability line outpaced the favorable development experienced on "closed" claims by \$6.5 million. Favorable development on the combined "case plus bulk case loss reserves" occurred in all lines of business except commercial auto liability, which experienced adverse development of \$2.5 million, and homeowners, which experienced adverse development of \$28,000 mostly attributable to a reallocation of the bulk case reserve. The following table displays the development experienced on previously reported claims, as well as the development amounts generated by the change in accident year allocation factors, by line of business:

(\$ in thousands) Line of business	Development experienced on previously reported claims which closed during the year	Development experienced on previously reported claims remaining open at year end	Development associated with changes in bulk case loss reserve line of business distribution	Development associated with the change in bulk case loss reserve accident year allocation factors	Total development on previously reported claims
Personal auto liability	\$ (1,303)	\$ 1,110	\$ (1,389)	\$ 13	\$ (1,569)
Commercial auto liability	(4,773)	11,279	(4,418)	384	2,472
Auto physical damage	(1,376)	(266)	35	11	(1,596)
Workers' compensation	(16,106)	11,668	1,253	166	(3,019)
Other liability	(12,938)	12,432	(1,861)	(60)	(2,427)
Commercial property	(6,743)	1,168	3,946	—	(1,629)
Homeowners	(987)	80	935	—	28
Bonds	7	(761)	16	—	(738)
Total	\$ (44,219)	\$ 36,710	\$ (1,483)	\$ 514	\$ (8,478)

The favorable development of \$8.5 million on previously reported claims during 2015 was an increase of \$2.6 million over the \$5.9 million of favorable development reported in 2014. Five of the eight lines of business contributed to the aggregate increase in favorable development. Commercial auto liability was the largest contributor, having \$3.4 million less adverse development during 2015 compared to 2014. The four remaining contributing lines, and the increase in favorable development attributed to them, were; other liability (\$1.8 million), commercial property (\$954,000), all other lines (mostly surety bonds) (\$472,000), and auto physical damage (\$316,000). Personal auto liability experienced \$3.0 million less favorable development during 2015 as the 2014 development was impacted by reserve decreases on two very large unlimited personal injury protection claims reinsured through the Michigan Catastrophic Claims Association. Workers' compensation continued to experience favorable development; however, the development was \$1.0 million less than in 2014. The \$28,000 of adverse development experienced on the homeowners' line of business represented a \$265,000 increase over the amount experienced during 2014. As previously stated, this was primarily caused by a line of business redistribution of the bulk case reserve.

While the adverse development experienced in commercial auto liability remained significant, the decline from the amount reported in 2014 was also significant. Similar to 2014, the adverse development was driven by large claim amounts associated with a very small percentage (1.8 percent) of the total claims experiencing development of any type. The development associated with this group of claims increased 13.0 percent, which partially offset a 293.0 percent increase in favorable development on all other commercial auto claims experiencing development of any type in 2015. Internally monitored claims diagnostics, such as accident year ratios of average opened to average closed claims, appeared to indicate continued strengthening of case loss reserves for claims reported during 2015 relative to 2014. Management continued to allocate a significant amount of time and resources on the commercial auto liability book of business, focusing on claims, underwriting and pricing processes.

IBNR loss reserves experienced \$4.3 million of adverse development, which was attributed to higher than expected loss emergence (\$5.5 million) and exposure growth (\$1.9 million). These adverse development amounts were partially offset by favorable development from changes in the IBNR accident year allocation factors (\$698,000), and reserve decreases taken as the result of scheduled reserve reviews (\$2.0 million). Approximately \$2.6 million of the \$5.5 million of higher than expected loss emergence was due to IBNR loss reserve strengthening in the other liability line of business necessitated by the continuing emergence of asbestos claims at a rate not previously anticipated. Six of the eight reserving lines experienced adverse IBNR loss reserve development, with higher than expected loss emergence being the main driver for each. The lines experiencing adverse development included commercial property (\$5.3 million), auto physical damage (\$844,000), commercial auto liability (\$443,000), workers' compensation (\$420,000), homeowners (\$381,000), and personal auto liability (\$264,000). Adverse development on the property lines of business was not totally unexpected. Favorable development was consistently observed on reported property claims, therefore, lower levels of IBNR loss reserves were generally carried to offset perceived redundancies. Favorable development, generally driven by lower than expected emergence and decreases in carried reserves from scheduled reviews, was experienced in other liability (\$2.8 million) and surety bonds (\$596,000). The following table displays the development experienced on IBNR loss reserves from each of these factors, by line of business:

Development on IBNR loss reserves resulting from:

(\$ in thousands) Line of business	Loss emergence different than expected	Actions taken as a result of scheduled reserve reviews	Change in underlying exposures	Change in accident year allocation factors	Change in line-of- business distribution	Total
Personal auto liability	\$ 359	\$ (35)	\$ (49)	\$ —	\$ (11)	\$ 264
Commercial auto liability	890	(263)	172	(336)	(20)	443
Auto physical damage	838	8	2	1	(5)	844
Workers' compensation	769	(368)	414	(414)	19	420
Other liability	(2,102)	(1,713)	1,323	42	(302)	(2,752)
Commercial property	5,014	253	35	46	(59)	5,289
Homeowners	363	29	(14)	14	(11)	381
Bonds	(593)	62	21	(51)	(35)	(596)
Total	\$ 5,538	\$ (2,027)	\$ 1,904	\$ (698)	\$ (424)	\$ 4,293

Total settlement expense reserves developed favorably in 2015 by \$7.9 million. Approximately 73.0 percent of the favorable development is attributed to defense and cost containment expenses. The reserves associated with these expenses were established in bulk, and were allocated to the various accident years in proportion to the accident year distribution of the underlying loss reserves. During 2015, the underlying loss reserves experienced favorable development, which generated favorable development in the settlement expense reserves. However, the portion of this reserve associated with asbestos and environmental claims experienced adverse development of \$1.6 million due to additional reserve strengthening necessitated by the continuing emergence of asbestos claims at a rate not previously anticipated. Changes in the IBNR loss reserve and bulk case loss reserve accident year allocation factors accounted for \$239,000 of the favorable development in the defense and cost containment expense reserves. The remaining 27.0 percent of favorable development was attributed to adjusting and other expenses (i.e., internal claims department, independent adjuster and miscellaneous settlement expenses). Differences in the allocation factors used to distribute the reserves for these expenses at year-end 2015 compared to year-end 2014 generated \$234,000 of adverse development. The majority of the remaining favorable development resulted from settlement expense payments that were lower than anticipated in the payment patterns used in the December 31, 2014 accident year allocations.

Prior accident years' reserves for non-voluntary assumed business developed favorably by \$464,000, attributed primarily to assigned risk pools.

The above results reflect prior accident year reserve development on a direct and assumed basis. During 2015, ceded losses and settlement expenses for prior accident years increased \$1.6 million. This increase in reinsurance recoveries is reported as favorable development.

Reinsurance segment

For the reinsurance segment, the December 31, 2015 estimate of loss and settlement expense reserves for accident years 2014 and prior decreased \$21.3 million from the estimate at December 31, 2014. This decrease represented 10.8 percent of the December 31, 2014 carried reserves. No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2015; however, the accident year allocation factors applied to IBNR loss reserves were revised during 2015. This change resulted in the movement of \$1.0 million of reserves from the current accident year to prior accident years, and hence, was reported as adverse development on prior years' reserves. The HORAD portion of the book experienced favorable development of approximately \$18.1 million, while MRB experienced favorable development of approximately \$3.2 million.

The vast majority of HORAD's favorable development occurred in four contract types; ocean marine pro rata (\$8.5 million), casualty excess (\$5.1 million), per risk excess (\$3.3 million), and property pro rata with wind (\$2.0 million). Approximately 15.0 percent of the favorable development experienced in ocean marine pro rata is attributable to a large negative premium adjustment (for contracts effective during the three previous years) reported by the ceding company for the offshore energy and liability proportional account, which reduced the amount of IBNR loss reserves carried for those years. In addition, as this particular set of contracts has matured, carried IBNR loss reserves have declined because emerged loss experience has been better than expected. The development in the remaining contract types experiencing favorable development is attributable to the reinsurance segment's prudently conservative reserving approach, and reflects a reduction in carried IBNR loss reserves that could no longer be justified. Three contract types experienced adverse development; property/casualty global pro rata (\$3.0 million), property/casualty global excess (\$389,000), and crop/hail pro rata (\$86,000). For the property/casualty global contracts, increases in cedants' reported losses exceeded the decrease in IBNR loss reserves. Significant IBNR loss reserves remain for these contract types, so the possibility for improved profitability on prior accident years still exists.

Historically, the MRB book of business has experienced very little development on prior years' loss and settlement expense reserves. The Company's actuarial reviews of MRB's reported reserves have consistently indicated that those reserves challenge the upper level of the range of reasonable reserves. To address this issue, a negative bulk IBNR loss reserve was established in 2015 for this business. This negative IBNR loss reserve is responsible for approximately \$3.0 million of the \$3.2 million of favorable development reported on prior years' reserves.

No changes were made in the "expected loss ratios" utilized for prior contract years. The "expected loss ratios" utilized for the 2015 contract year were based on an extensive actuarial analysis of trended historic ultimate loss ratios based on current-level earned premiums. Where applicable, new contract loss information or loss histories were also incorporated into the "expected loss ratio" selection process. Compared to the 2014 contract year selections, the 2015 contract year expected loss ratios for the per risk excess and casualty excess lines of business increased by 7.5 percentage points and 2.5 percentage points, respectively. The 2015 contract year expected loss ratio for the ocean marine pro rata line of business decreased 5.5 percentage points due to the favorable experience that has occurred during the previous three contract years.

Year ended December 31, 2014

Property and casualty insurance segment

For the property and casualty insurance segment, the December 31, 2014 estimate of loss and settlement expense reserves for accident years 2013 and prior decreased \$8.1 million from the estimate at December 31, 2013. This decrease represented 1.9 percent of the December 31, 2013 carried reserves. No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2014; however, the accident year allocation factors applied to IBNR loss reserves, bulk case loss reserves, and the defense and cost containment portion of settlement expense reserves were revised at December 31, 2014 as part of the annual review. This change resulted in the movement of \$2.2 million of reserves from prior accident years to the current accident year, and hence, was reported as favorable development on prior years' reserves.

Reserves on previously reported claims developed favorably in 2014 by approximately \$5.9 million. This included \$432,000 of adverse development attributable to revised accident year allocation factors for bulk case loss reserves, which was offset by \$5.0 million of favorable development experienced on prior years' reported claims (exclusive of the bulk case loss reserve) and \$1.3 million of favorable development from changes in the line of business distribution of the bulk case loss reserves. Of the \$5.9 million of favorable development, accident years 2011-2013 experienced adverse development of \$3.6 million, while all remaining accident years experienced aggregate favorable development of \$9.5 million. While all lines of business continued to experience very favorable development on claims which "closed" during 2014, adverse development on claims remaining "open" in the commercial auto liability line outpaced the favorable development experienced on "closed" claims by \$9.4 million. Favorable development on the combined "case plus bulk case loss reserves" occurred in all lines of business except commercial auto liability, which experienced adverse development of \$5.8 million. The following table displays the development experienced on previously reported claims, as well as the development amounts generated by the change in accident year allocation factors, by line of business:

(\$ in thousands) Line of business	Development experienced on previously reported claims which closed during the year	Development experienced on previously reported claims remaining open at year end	Development associated with changes in bulk case loss reserve line of business distribution	Development associated with the change in bulk case loss reserve accident year allocation factors	Total development on previously reported claims
Personal auto liability	\$ (1,184)	\$ (3,648)	\$ 234	\$ 29	\$ (4,569)
Commercial auto liability	(2,000)	11,415	(3,583)	—	5,832
Auto physical damage	(1,145)	(91)	(45)	1	(1,280)
Workers' compensation	(15,116)	12,051	(997)	—	(4,062)
Other liability	(8,462)	8,029	(210)	—	(643)
Commercial property	(5,096)	1,422	2,669	330	(675)
Homeowners	(1,105)	192	604	72	(237)
Bonds	(40)	(221)	(5)	—	(266)
Total	\$ (34,148)	\$ 29,149	\$ (1,333)	\$ 432	\$ (5,900)

Approximately 98 percent of the favorable development experience for personal auto liability stemmed from reserve take-downs on two large Michigan Catastrophic Claims Association unlimited personal injury protection claims which were reported in 2002 and 2003. Similar to 2013, commercial auto liability's adverse development is associated with a small number of previously reported claims which experienced very significant upwards revisions in carried reserves and payments. Of the total number of reported claims for this line, 1.8 percent developed adversely by more than \$100,000, representing \$11.2 million of adverse development. The development on the remaining 98.2 percent of commercial auto liability claims was a favorable \$1.7 million. Management believes prior accident years underwent significant strengthening during 2014, and that the 2014 accident year is more adequately reserved than the 2013 accident year was at year-end 2013. Both workers' compensation and other liability, which experienced adverse development on combined open and closed previously reported claims at year-end 2013, exhibited favorable development as of year-end 2014, similar to year-end 2012. The remaining lines of business experienced favorable development, though somewhat less than in 2013 which had a larger favorable impact from the revision of the bulk case loss reserve accident year allocation factors.

IBNR loss reserves experienced \$201,000 of adverse development, which was attributed to higher than expected emergence (\$1.4 million) and exposure growth (\$1.9 million). These items were almost completely offset by favorable development from changes in the IBNR accident year allocation factors (\$1.8 million), and reserve decreases taken as the result of scheduled reserve reviews (\$1.2 million). Four of the eight reserving lines experienced adverse IBNR loss reserve development, with higher than expected emergence being the main driver for each. The lines experiencing adverse development included commercial property (\$3.4 million), auto physical damage (\$970,000), homeowners (\$886,000) and commercial auto liability (\$291,000). Adverse development on the property lines of business is not totally unexpected. Favorable development is consistently observed on reported property claims, therefore, lower levels of IBNR loss reserves are generally carried to offset perceived redundancies. Favorable development, generally driven by lower than expected emergence and/or decreases in carried reserves from scheduled reviews, was experienced in other liability (\$4.3 million), workers' compensation (\$846,000), surety bonds (\$250,000) and personal auto liability (\$3,000). The following table displays the development experienced on IBNR loss reserves from each of these factors, by line of business:

Development on IBNR loss reserves resulting from:

(\$ in thousands) Line of business	Loss emergence different than expected	Actions taken as a result of scheduled reserve reviews	Change in underlying exposures	Change in accident year allocation factors	Change in line-of- business distribution	Total
Personal auto liability	\$ 80	\$ (23)	\$ (70)	\$ 21	\$ (11)	\$ (3)
Commercial auto liability	658	(148)	190	(434)	25	291
Auto physical damage	950	(1)	1	19	1	970
Workers' compensation	(531)	(576)	254	—	7	(846)
Other liability	(4,028)	(525)	1,540	(1,226)	(34)	(4,273)
Commercial property	3,354	69	32	—	(29)	3,426
Homeowners	933	(15)	(25)	(10)	3	886
Bonds	(43)	(1)	(2)	(204)	—	(250)
Total	\$ 1,373	\$ (1,220)	\$ 1,920	\$ (1,834)	\$ (38)	\$ 201

Total settlement expense reserves developed favorably in 2014 by \$6.5 million. Approximately 87 percent of the favorable development was attributed to defense and cost containment expenses. The reserves associated with these expenses were established in bulk, and were allocated to the various accident years in proportion to the accident year distribution of the underlying loss reserves. During 2013, the underlying loss reserves experienced favorable development, which generated favorable development in the settlement expense reserves. However, the portion of this reserve associated with asbestos claims experienced adverse development of \$1.2 million due to additional strengthening. Changes in the IBNR loss reserve and bulk case loss reserve accident year allocation factors accounted for \$749,000 of the favorable development in the defense and cost containment expense reserves. The remaining 13 percent of favorable development was attributed to adjusting and other expenses (i.e., internal claims department, independent adjuster and miscellaneous settlement expenses). Differences in the allocation factors used to distribute the reserves for these expenses at year-end 2014 compared to year-end 2013 generated \$716,000 of favorable development. The majority of the remaining favorable development resulted from settlement expense payments that were lower than anticipated in the payment patterns used in the December 31, 2013 accident year allocations.

Prior accident years' reserves for non-voluntary assumed business developed favorably by \$346,000, attributed primarily to assigned risk pools.

The above results reflect prior accident year reserve development on a direct and assumed basis. During 2013, ceded losses and settlement expenses for prior accident years decreased \$4.2 million. This decrease in reinsurance recoveries was reported as adverse development.

Reinsurance segment

For the reinsurance segment, the December 31, 2014 estimate of loss and settlement expense reserves for accident years 2013 and prior decreased \$12.7 million from the estimate at December 31, 2013. This decrease represented 6.9 percent of the December 31, 2013 carried reserves. The HORAD portion of the book experienced favorable development of approximately \$11.8 million, while MRB experienced favorable development of approximately \$833,000. MRB accident year 2013 experienced adverse development of \$277,000. This adverse development was more than offset by favorable development on accident years 2011 (\$237,000) and 2009 (\$638,000), plus favorable development on most of the remaining prior accident years. For the HORAD book of business, accident years 2010 and prior accounted for approximately 80 percent of the favorable development, with less significant amounts of favorable development occurring in most of the remaining prior accident years. Development for accident year 2013 was an adverse \$1.8 million due to reserve strengthening. The increase in favorable development in the HORAD book of business in 2014 compared to 2013 was greater than expected, and was driven mostly by a reduction of IBNR loss reserves for accident years 2010 and prior because the amount previously carried was no longer indicated in the actuarial analysis.

No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2014, including the "expected loss ratios" utilized for prior contract years. The "expected loss ratios" utilized for the 2014 contract year were based on an extensive actuarial analysis of trended historic ultimate loss ratios based on current-level earned premiums. Where applicable, new contract loss information or loss histories were also incorporated into the selection process. Compared to the 2013 contract year selections, the property per risk "expected loss ratios" increased moderately. The casualty excess and property/casualty global pro rata "expected loss ratios" decreased slightly from the 2013 selections.

Asbestos and Environmental Claims

The Company has exposure to asbestos and environmental-related claims associated with the insurance business written by the parties to the pooling agreement and the reinsurance business assumed from Employers Mutual by the reinsurance subsidiary. With regard to the assumed reinsurance business, however, all asbestos and environmental exposures related to 1980 and prior accident years are retained by Employers Mutual.

Estimating loss and settlement expense reserves for asbestos and environmental claims is very difficult due to the many uncertainties surrounding these types of claims. These uncertainties exist because the assignment of responsibility varies widely by state and claims often emerge long after a policy has expired, which makes assignment of damages to the appropriate party and to the time period covered by a particular policy difficult. In establishing reserves for these types of claims, management monitors the relevant facts concerning each claim, the current status of the legal environment, social and political conditions, and the claim history and trends within the Company and the industry.

The following table presents asbestos and environmental-related losses and settlement expenses incurred and reserves outstanding, net of reinsurance, for the Company:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Losses and settlement expenses incurred:			
Asbestos:			
Property and casualty insurance	\$ 3,475	\$ 3,584	\$ 1,614
Reinsurance	—	—	—
	<u>3,475</u>	<u>3,584</u>	<u>1,614</u>
Environmental:			
Property and casualty insurance	652	304	(42)
Reinsurance	—	—	—
	<u>652</u>	<u>304</u>	<u>(42)</u>
Total losses and settlement expenses incurred	<u>\$ 4,127</u>	<u>\$ 3,888</u>	<u>\$ 1,572</u>

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Loss and settlement expense reserves:			
Asbestos:			
Property and casualty insurance	\$ 11,134	\$ 9,248	\$ 7,587
Reinsurance	359	385	412
	<u>11,493</u>	<u>9,633</u>	<u>7,999</u>
Environmental:			
Property and casualty insurance	846	858	559
Reinsurance	666	686	738
	<u>1,512</u>	<u>1,544</u>	<u>1,297</u>
Total loss and settlement expense reserves	<u>\$ 13,005</u>	<u>\$ 11,177</u>	<u>\$ 9,296</u>

The property and casualty insurance subsidiaries have exposure to asbestos and environmental claims arising primarily from the other liability line of business. These exposures are closely monitored by management, and IBNR loss reserves have been established to cover estimated ultimate losses. The loss and settlement expense reserves associated with asbestos claims have been increased each year for the last several years due to continued reporting of new claims at a rate not previously anticipated, as well as updated internal ultimate loss and settlement expense evaluations. In 2016, the loss and settlement expense reserves for asbestos claims were strengthened approximately \$3.5 million.

Reserves for environmental claims are established in consideration of the implied three-year survival ratio. Estimation of ultimate liabilities for these exposures is unusually difficult due to unresolved issues such as whether coverage exists, the definition of an occurrence, the determination of ultimate damages and the allocation of such damages to financially responsible parties. Therefore, any estimation of these liabilities is subject to greater than normal variation and uncertainty, and ultimate payments for losses and settlement expenses for these exposures may differ significantly from the carried reserves.

Based upon current facts, management believes the reserves carried for asbestos and environmental-related claims at December 31, 2016 are adequate. Although future changes in the legal and political environment may result in adjustment to these reserves, management believes any adjustment will not have a material impact on the Company's financial condition or results of operations.

Reinsurance Ceded

Property and Casualty Insurance

The pool participants cede insurance in the ordinary course of business for the primary purpose of limiting their maximum loss exposure. The pool participants also purchase catastrophe reinsurance to cover multiple losses arising from a single event.

All major reinsurance treaties, with the exception of the pooling agreement, the personal and commercial boiler treaties, the employment practices liability contract, and the data compromise, cyber liability and identity recovery contracts, are on an "excess of loss" basis whereby the reinsurer agrees to reimburse the pool participants for covered losses in excess of a predetermined amount, up to a stated limit. The boiler treaties, data compromise, cyber liability and identity recovery contracts, and the employment practices liability contract provide for 100 percent reinsurance of the pool's applicable direct exposures. Facultative reinsurance from approved markets, which provides reinsurance on an individual risk basis and requires specific agreement of the reinsurer as to the limits of coverage provided, is purchased when coverage by an insured is required in excess of treaty capacity, where a high-risk type policy could expose the treaty reinsurance programs, or other reasons where the pool participants wish to reduce their net loss exposure from a particular risk.

Each type of reinsurance coverage is purchased in layers, and each layer may have a separate retention level. Retention levels are determined according to reinsurance market conditions and the surplus position of the EMC Insurance Companies. The pooling agreement aids efficient buying of reinsurance since it allows for higher retention levels and correspondingly decreased dependence on the reinsurance marketplace.

A summary of the reinsurance treaties benefiting the pool participants during 2016 is presented below. Retention amounts reflect the accumulated retentions, co-participation and non-placed portions of all layers within a treaty. The retention amount for property catastrophe losses excludes a \$10.0 million annual aggregate deductible that applies to losses after the initial \$10.0 million retention in the first layer of coverage.

(\$ in thousands)

Type of reinsurance treaty	Retention	Limits
Property catastrophe	\$ 15,000	98 percent of \$205,000
Property per risk	\$ 4,000	100 percent of \$76,000
Casualty	\$ 4,000	100 percent of \$36,000
Workers' compensation excess	\$ —	\$40,000 excess of \$40,000
Fidelity	\$ 2,250	95 percent of \$5,000
Surety	\$ 3,050	97 percent of \$38,000
Boiler - commercial lines	\$ —	100 percent of \$100,000
Boiler - personal lines	\$ —	100 percent of \$50 (\$100 starting 10/1)
Employment practices liability	\$ —	100 percent of \$1,000
Data compromise	\$ —	100 percent of \$1,000
Identity recovery	\$ —	100 percent of \$25
Cyber liability	\$ —	100 percent of \$250

Although reinsurance does not discharge the original insurer from its primary liability to its policyholders, it is the practice of insurers for accounting purposes to treat reinsured risks as risks of the reinsurer since the primary insurer would only re-assume liability in those situations where the reinsurer is unable to meet the obligations it assumes under the reinsurance agreements. The ability to collect reinsurance is subject to the solvency of the reinsurers.

The major reinsurers in the pool participants' reinsurance programs during 2016 are presented below. The percentages represent the reinsurers' share of the total reinsurance protection under all coverages. Each type of coverage is purchased in layers, and an individual reinsurer may participate in more than one type of coverage and at various layers within these coverages. All programs (except the boiler, data compromise, cyber liability, identity recovery, and employment practice liability programs, as well as the top layer of the property catastrophe program) are handled by reinsurance brokers. The reinsurance of those programs is syndicated to 53 domestic and foreign reinsurers.

In formulating reinsurance programs, Employers Mutual is selective in its choice of reinsurers. Employers Mutual selects reinsurers on the basis of financial stability and long-term relationships, as well as the price and coverage terms. Reinsurers are generally required to have an A.M. Best rating of "A" (Excellent) or higher and a minimum policyholders' surplus of \$500.0 million.

(\$ in thousands)	Percent of total reinsurance protection	A.M. Best rating
Property catastrophe, property per risk and casualty coverages		
Underwriters at Lloyd's of London	26.4%	A
Mutual Reinsurance Bureau	13.3%	(1)
Hannover Ruckversicherung AG	9.0%	A+
Swiss Reinsurance America Corporation	5.5%	A+
R + V Versicherung AG	5.5%	(2)
Renaissance Reinsurance US Inc.	4.8%	A
Tokio Millennium Re Ltd.	4.0%	A++
QBE Reinsurance Corporation	3.9%	A
MAPFRE Re Compania De Reaseguros, SA	3.9%	A
Fidelity and surety coverages		
Transatlantic Reinsurance Company	31.6%	A+
Hannover Ruckversicherung AG	20.7%	A+
Axis Reinsurance Company	14.1%	A+
Odyssey America Reinsurance Corp.	12.1%	A
Everest Reinsurance Company	12.1%	A+
Endurance Reinsurance Corporation of America	9.4%	A
Boiler - commercial lines coverage		
Hartford Steam Boiler Inspection and Insurance Company	100.0%	A++
Boiler - personal lines coverage		
Factory Mutual Insurance Company	100.0%	A+
Employment practices liability coverage		
Hartford Steam Boiler Inspection and Insurance Company	100.0%	A++
Data compromise, cyber liability and identity recovery		
Hartford Steam Boiler Inspection and Insurance Company	100.0%	A++

- (1) MRB is composed of Employers Mutual and four other unaffiliated mutual insurance companies. MRB is backed by the financial strength of the five member companies. Three of the other member companies have an "A" (Excellent) rating and the fourth has a "B++" (Good) rating from A.M. Best.
- (2) R + V Versicherung AG is not rated by A.M. Best, but maintains an AA- rating from Standard & Poor's.

The Terrorism Risk Insurance Program Reauthorization Act of 2015 (effective through December 31, 2020, referred to herein as the "TRIA Reauthorization Act") continues the Federal backstop on losses from certified terrorism events from foreign sources, and includes coverage for domestic terrorism as well. The TRIA Reauthorization Act covers most direct commercial lines of business, including coverage for losses from nuclear, biological and chemical exposures if coverage was afforded by an insurer, but with exclusions for commercial automobile insurance, burglary and theft insurance, surety insurance, professional liability insurance, and farm owners multiple peril insurance.

The program trigger threshold for federal participation in losses was \$120.0 million in 2016, and increases \$20.0 million per year until reaching \$200.0 million on January 1, 2020. A loss must be \$5.0 million or more to count towards the program trigger threshold. Each insurer has a deductible amount (20 percent of the prior year's direct commercial lines premiums earned for the applicable lines of business) and a retention above the deductible (16 percent in 2016, increasing by one percentage point each year until reaching 20 percent on January 1, 2020). The TRIA Reauthorization Act caps losses at \$100.0 billion annually; no insurer that has met its deductible will be liable for payment of any portion of losses above that amount. For the Company, the TRIA Reauthorization Act deductible is approximately \$60.9 million.

Coverage for terrorism losses is included in the pool participants' reinsurance programs for property and casualty risks (including coverage for the aggregation of property claims from catastrophic losses). In summary, coverage under the property contracts includes both domestic and foreign terrorism, though it is restricted to exclude from coverage nuclear, biological, chemical and radiation (NBCR) losses. Coverage under the casualty contracts also includes both domestic and foreign terrorism, though NBCR terrorism is covered for one limit per layer.

Reinsurance

In connection with the change in the inter-company reinsurance program in 2016, the reinsurance subsidiary began purchasing additional reinsurance protection in peak exposure territories from external parties in which coverage is triggered when losses experienced by the insurance industry from a catastrophic event exceed a specified threshold. Any reinsurance recoveries received from external parties reduces the amount of losses ceded to Employers Mutual under the inter-company reinsurance program. The net cost of this external reinsurance protection was approximately \$3.5 million in 2016.

The reinsurance subsidiary also assumes and cedes some selected reinsurance business through the quota share agreement in connection with "fronting" activities initiated by Employers Mutual whereby an agreed upon percentage of the selected assumed business is ceded to other reinsurer(s) on a pro rata basis. Ceded earned premiums associated with this fronting activity amounted to \$3.7 million during 2016. The ceding of this reinsurance business through these fronting activities does not discharge the reinsurance subsidiary from its assumed liability to the original cedants, and the ability to collect reinsurance is subject to the solvency of the reinsurers.

Property and Casualty Insurance and Reinsurance

The Company's portion of premiums written ceded (unaffiliated and excluding premiums ceded to mandatory pools) by the property and casualty insurance segment and the reinsurance segment for the year ended December 31, 2016 is presented below. Reinsurance coverage for the property and casualty insurance segment is often purchased in layers, and an individual reinsurer may participate in more than one type of coverage and at various layers within the coverages. Since each layer of coverage is priced separately, with the lower layers being more expensive than the upper layers, a reinsurer's overall participation in a reinsurance program does not necessarily correspond to the amount of premiums it receives. The premium amounts ceded by the reinsurance subsidiary reflect the purchase of additional reinsurance protection from external parties and fronting transactions handled through the quota share agreement, and excludes premiums written ceded to Employers Mutual under the inter-company reinsurance program.

(\$ in thousands) Reinsurer	Premiums written ceded		
	Property and casualty insurance segment	Reinsurance segment	Total
Hartford Steam Boiler Inspection and Insurance Company	\$ 11,298	\$ —	\$ 11,298
Underwriters at Lloyd's of London	1,358	2,887	4,245
Transatlantic Reinsurance Company	1,503	1,750	3,253
Country Mutual Insurance Company	—	2,995	2,995
Hannover Ruckversicherung AG	1,717	—	1,717
Tokio Millenium Re Ltd.	170	1,100	1,270
QBE Reinsurance Corporation	921	—	921
TOA Reinsurance Company of America	666	—	666
Navigators Insurance Company	—	650	650
Mutual Reinsurance Bureau	627	16	643
Other Reinsurers	5,041	728	5,769
Total	<u>\$ 23,301</u>	<u>\$ 10,126</u>	<u>\$ 33,427</u>

The property and casualty insurance segment also cedes reinsurance on a mandatory basis to state organizations in connection with various workers' compensation and assigned risk programs. The Company's portion of premiums written ceded to these organizations for the year ended December 31, 2016 is presented below.

(\$ in thousands) Reinsurer	Property and casualty insurance segment
Michigan Catastrophic Claims Association	\$ 807
Other Reinsurers	238
Total	<u>\$ 1,045</u>

The following table presents amounts due to the Company from reinsurers for losses and settlement expenses, contingent commissions, and prepaid reinsurance premiums as of December 31, 2016. This presentation differs from the presentation utilized in the consolidated financial statements, where all amounts flowing through the pooling and quota share agreements and inter-company reinsurance programs with Employers Mutual are reported as “affiliated” balances.

(\$ in thousands)	Amount recoverable			Percent of total	A.M. Best rating
	Property and casualty insurance segment	Reinsurance segment	Total		
Hartford Steam Boiler Inspection and Insurance Company	\$ 7,247	\$ —	\$ 7,247	23.7%	A++
Country Mutual Insurance Company	—	3,136	3,136	10.2	A+
Mutual Reinsurance Bureau	465	2,126	2,591	8.5	(1)
Wisconsin Compensation Rating Bureau	2,590	—	2,590	8.5	(2)
Michigan Catastrophic Claims Association	2,215	—	2,215	7.2	(2)
Hannover Ruckversicherung AG	1,350	—	1,350	4.4	A+
Underwriters at Lloyd's of London	354	976	1,330	4.3	A
Transatlantic Reinsurance Company	543	729	1,272	4.2	A+
Workers' Compensation Reinsurance Association of Minnesota	1,139	—	1,139	3.7	(2)
General Reinsurance Corporation	807	—	807	2.6	A++
Other Reinsurers	6,313	645	6,958	22.7	
	<u>\$ 23,023</u>	<u>\$ 7,612</u>	<u>\$ 30,635</u>	<u>(3) 100.0%</u>	

- (1) MRB is composed of Employers Mutual and four other unaffiliated mutual insurance companies. MRB is backed by the financial strength of the five member companies. Three of the other member companies have an “A” (Excellent) rating and the fourth has a “B++” (Good) rating from A.M. Best.
- (2) Amounts recoverable reflect the property and casualty insurance subsidiaries’ aggregate pool participation percentage of amounts ceded to these organizations by Employers Mutual in connection with its role as “service carrier.” Under these arrangements, Employers Mutual writes business for these organizations on a direct basis and then cedes the business (typically at 100 percent) to these organizations. Credit risk associated with these amounts is minimal as all companies participating in these organizations are responsible for the liabilities of such organizations on a pro rata basis.
- (3) The total amount recoverable at December 31, 2016 represents \$20.7 million in unpaid losses and settlement expenses, \$662,000 in unpaid contingent commissions, and \$9.3 million in prepaid reinsurance premiums. Employers Mutual settles with the pool participants (monthly) and the reinsurance subsidiary (quarterly) ceded paid losses and settlement expenses under the reinsurance contracts and provides full credit for the ceded paid losses and settlement expenses generated during the period (not just the collected portion). As a result, Employers Mutual's recoverable for paid losses and settlement expenses represents, to the Company, an off-balance sheet arrangement with an unconsolidated entity that results in credit-risk exposure that is not reflected in the Company’s financial statements. See note 1 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K for further discussion of off-balance sheet credit exposures.

Investments

The Company's total invested assets at December 31, 2016 are summarized in the following table:

(\$ in thousands)	December 31, 2016			
	Amortized cost	Fair value	Percent of total fair value	Carrying value
Fixed maturity securities available-for-sale	\$ 1,189,525	\$ 1,199,699	81.7%	\$ 1,199,699
Equity securities available-for-sale	147,479	213,839	14.6	213,839
Short-term investments	39,670	39,670	2.8	39,670
Other long-term investments	12,506	12,506	0.9	12,506
	<u>\$ 1,389,180</u>	<u>\$ 1,465,714</u>	<u>100.0%</u>	<u>\$ 1,465,714</u>

The Company's investment strategy is to conservatively manage its investment portfolio by investing primarily in readily marketable, investment-grade fixed maturity securities and equity securities. The board of directors of each of the Company's insurance company subsidiaries has established investment guidelines and regularly reviews the portfolio for compliance with those guidelines. The Company does not hold foreign denominated investments. The Company does not purchase non-investment grade securities. Any non-investment grade securities held are the result of rating downgrades that occurred subsequent to their purchase.

At December 31, 2016, the portfolio of fixed maturity securities consisted of 0.7 percent U.S. Treasury, 21.0 percent government agency, 14.0 percent asset-backed, 26.9 percent municipal and 37.4 percent corporate securities. As of December 31, 2016, the effective duration of the Company's fixed maturity portfolio, excluding interest-only securities, was 5.2, and the effective duration of its liabilities was 3.1. At December 31, 2016, the Company held \$3.0 million of non-investment grade fixed maturity securities in a net unrealized gain position of \$50,000.

The Company has two separate common stock equity portfolios that are diversified across a large range of industry sectors and are managed for fees based on total assets under management (a large-cap blend equity portfolio managed by BMO Global Asset Management and a high dividend value equity portfolio managed by Schafer Cullen Capital Management). As of December 31, 2016, the common stock equity portfolios were invested in the following industry sectors:

	Percent of equity portfolio
Financial services	18.1%
Information technology	15.8
Healthcare	12.8
Consumer staples	9.9
Consumer discretionary	11.5
Energy	9.9
Industrials	12.5
Other	9.5
	<u>100.0%</u>

The Company's other long-term investments consist of minority ownership interests in limited partnerships and limited liability companies. During 2016 and 2015, the Company invested \$4.9 million and \$4.0 million, respectively, in a limited partnership that is designed to help protect the Company from a sudden and significant decline in the value of its equity portfolio (an equity tail-risk hedging strategy). This investment is carried under the equity method of accounting, with changes in the carrying value (from both expired hedging contracts and changes in the value of contracts that are still in effect) reported as realized gains or losses in the Company's financial statements. During 2016, the Company's reinsurance subsidiary invested approximately \$6.6 million in a limited liability company designed to provide a return on investment through the receipt of renewable energy tax credits. After reductions for the utilization of the tax credits and a \$209,000 impairment loss, the carrying value of this investment was approximately \$2.0 million at December 31, 2016.

Employees

EMC Insurance Group Inc. and its subsidiaries have no employees. The Company's business activities are conducted by the approximately 2,250 employees of Employers Mutual. EMC Insurance Group Inc., EMC Reinsurance Company and EMC Underwriters, LLC are charged their proportionate share of salary and employee benefit costs based on time allocations. Costs not allocated to these companies, and other subsidiaries of Employers Mutual outside the pooling agreement, are charged to the pooling agreement. The Company's property and casualty insurance subsidiaries share the costs charged to the pooling agreement in accordance with their pool participation percentages.

Regulation

The Company's insurance subsidiaries are subject to extensive regulation and supervision by their state of domicile, as well as those states in which they do business. The purpose of such regulation and supervision is primarily to provide safeguards for policyholders, rather than to protect the interests of stockholders. The insurance laws of the various states establish regulatory agencies with broad administrative powers, including the power to grant or revoke operating licenses and regulate trade practices, investments, premium rates, deposits of securities, the form and content of financial statements and insurance policies, accounting practices and the maintenance of specified reserves and capital for the protection of policyholders.

Premium rate regulation varies greatly among jurisdictions and lines of insurance. In most states in which the Company's subsidiaries and the other pool participants write insurance, premium rates for the various lines of insurance are subject to either prior approval or limited review upon implementation. States require rates for property and casualty insurance that are adequate, not excessive, and not unfairly discriminatory.

Like other insurance companies, the pool participants are required to participate in mandatory shared-market mechanisms or state pooling arrangements as a condition for maintaining their insurance licenses to do business in various states. The purpose of these state-mandated arrangements is to provide insurance coverage to individuals who, because of poor driving records or other underwriting reasons, are unable to purchase such coverage voluntarily provided by private insurers. These risks can be assigned to all insurers licensed in the state and the maximum volume of such risks that any one insurance company may be assigned typically is proportional to that insurance company's annual premium volume in that state. The underwriting results of this mandatory business traditionally have been unprofitable.

The Company's insurance subsidiaries are required to file detailed annual reports with the appropriate regulatory agency in each state in which they do business based on applicable statutory regulations, which differ from U.S. generally accepted accounting principles. Their business and accounts are subject to examination by such agencies at any time. Since three of the Company's four insurance subsidiaries and Employers Mutual are domiciled in Iowa, the State of Iowa exercises principal regulatory supervision, and Iowa law requires periodic examination.

State laws governing insurance holding companies also impose standards on certain transactions with related companies, which include, among other requirements, that all transactions be fair and reasonable and that an insurer's surplus as regards policyholders be reasonable and adequate in relation to its liabilities. Under Iowa law, dividends or distributions made by registered insurers are restricted in amount and may be subject to approval from the Iowa Commissioner of Insurance. "Extraordinary" dividends or distributions are subject to prior approval and are defined as dividends or distributions made within a 12 month period which exceed the greater of 10 percent of statutory surplus as regards policyholders as of the preceding December 31, or net income of the preceding calendar year on a statutory basis. North Dakota imposes similar restrictions on the payment of dividends and distributions. At December 31, 2016, \$52.7 million was available for distribution to the Company in 2017 without prior approval. See note 6 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K.

Under state insurance guaranty fund laws, insurance companies doing business in a state can be assessed for certain obligations of insolvent insurance companies to such companies' policyholders and claimants. Maximum assessments allowed in any one year generally vary between one percent and two percent of annual premiums written in that state, but it is possible that caps on such assessments could be raised if there are numerous or large insolvencies. In most states, guaranty fund assessments are recoverable either through future policy surcharges or offsets to state premium tax liabilities.

The National Association of Insurance Commissioners (NAIC) utilizes a risk-based capital model to help state regulators assess the capital adequacy of insurance companies and identify insurers that are in, or are perceived as approaching, financial difficulty. This model establishes minimum capital needs based on the risks applicable to the operations of the individual insurer. The risk-based capital requirements for property and casualty insurance companies measure three major areas of risk: asset risk, credit risk and underwriting risk. Companies having less statutory surplus than required by the risk-based capital requirements are subject to varying degrees of regulatory scrutiny and intervention, depending on the severity of the inadequacy. At December 31, 2016, the Company's insurance subsidiaries had total adjusted statutory capital of \$526.8 million, which is well in excess of the minimum risk-based capital requirement of \$87.3 million.

AVAILABLE INFORMATION

The Company's internet address is www.emcins.com. The Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") are available free of charge through the Company's website as soon as reasonably practicable after the filing or furnishing of such material with the Securities and Exchange Commission.

EXECUTIVE OFFICERS OF THE COMPANY

The Company's executive officers, their positions and ages are shown in the table below:

<u>NAME</u>	<u>AGE</u>	<u>POSITION</u>
Melissa J. Appenzeller	50	Vice President-Chief Actuary of the Company and Employers Mutual effective in 2016. Assistant Vice President of Employers Mutual from 2009 to 2016. She has been employed by Employers Mutual since 1993.
Ian C. Asplund	36	Senior Vice President-Strategic Analytics of the Company and Employers Mutual effective in 2016. Vice President-Chief Actuary of the Company and Employers Mutual from 2015 to 2016. Assistant Vice President of Employers Mutual from 2012 to 2014. He has been employed by Employers Mutual since 2003.
Jason R. Bogart	55	Senior Vice President of the Company and Senior Vice President of Branch Operations of Employers Mutual since 2013. Vice President of the Company and Vice President of Branch Operations of Employers Mutual from 2010 to 2013. Resident Vice President-Lansing Branch of Employers Mutual from 2003 until 2010. He has been employed by Employers Mutual since 1993.
Bradley J. Fredericks	43	Vice President-Chief Investment Officer of the Company and Employers Mutual since 2014. Assistant Vice President of Employers Mutual from 2013 to 2014. He has been employed by Employers Mutual since 2010.
Rodney D. Hanson	61	Senior Vice President-Information Technology of the Company and Employers Mutual since 2013. Vice President-Information Technology of the Company and Employers Mutual from 2003 to 2013. He has been employed by Employers Mutual since 1978.
Kevin J. Hovick	62	Executive Vice President and Chief Operating Officer of the Company and of Employers Mutual since 2011. Senior Vice President-Business Development of the Company from 2004 until 2011 and Employers Mutual from 2001 until 2011. Vice President-Marketing of Employers Mutual from 1997 to 2001. He has been employed by Employers Mutual since 1979.
Scott R. Jean	45	Executive Vice President for Finance & Analytics of the Company and Employers Mutual since 2015. Senior Vice President-Chief Actuary of the Company and Employers Mutual in 2014. Vice President-Chief Actuary of the Company and of Employers Mutual from 2009 to 2014. He has been employed by Employers Mutual since 1993.
Bruce G. Kelley	62	President and Chief Executive Officer of the Company and Employers Mutual since 1992. Reappointed Treasurer of the Company and Employers Mutual in 2014 (previously held that title for Employers Mutual from 1996 until 2000 and the Company from 1996 until 2001). President and Chief Operating Officer of the Company and Employers Mutual from 1991 to 1992 and Executive Vice President of the Company and Employers Mutual from 1989 to 1991. He has been employed by Employers Mutual since 1985.
Robert L. Link	59	Senior Vice President and Assistant Secretary of the Company and Senior Vice President and Corporate Secretary-Administration of Employers Mutual since 2012. Vice President of the Company from 2007 to 2012 and Vice President and Corporate Secretary-Administration of Employers Mutual from 2005 to 2012. He has been employed by Employers Mutual since 1977.
Mick A. Lovell	54	Executive Vice President for Corporate Development of the Company and Employers Mutual since 2015. Senior Vice President for Corporate Development of the Company and Employers Mutual in 2014. Vice President of the Company and Vice President-Business Development of Employers Mutual from 2011 to 2014. Assistant Vice President of the Company and Assistant Vice President-Director of Product Management of Employers Mutual from 2003 to 2011. He has been employed by Employers Mutual since 2003.

Elizabeth A. Nigut	47	Senior Vice President of the Company and Senior Vice President-Human Resources of Employers Mutual since 2014. Vice President of the Company and Vice President-Human Resources of Employers Mutual from 2010 to 2014. She has been employed by Employers Mutual since 2010.
Larry W. Phillips	63	Senior Vice President-Business Development of the Company and Employers Mutual since 2015. Vice President-Underwriting of Employers Mutual from 2013 to 2015. He has been employed by Employers Mutual since 2012. Prior to joining Employers Mutual he was Executive Director of the Iowa Fair Plan from 2011 to 2012, and Vice President of Underwriting of Midwest Family Mutual Insurance Company from 2009 to 2011.
Mark E. Reese	59	Senior Vice President and Chief Financial Officer of the Company and of Employers Mutual since 2004. Vice President of the Company and Employers Mutual from 1996 until 2004 and has been Chief Financial Officer of the Company and Employers Mutual since 1997. He has been employed by Employers Mutual since 1984.
Lisa A. Simonetta	57	Senior Vice President-Claims of the Company and Employers Mutual since 2013. Vice President Claims-Legal of the Company and Vice President of Employers Mutual from 2002 to 2013. She has been employed by Employers Mutual since 1992.
Todd A. Strother	48	Vice President-General Counsel and Secretary of the Company and Vice President-General Counsel of Employers Mutual upon his hiring in 2016. Prior to joining Employers Mutual he was an attorney and shareholder with Bradshaw, Fowler, Proctor & Fairgrave, P.C. from 1999 to 2016.

ITEM 1A. RISK FACTORS

Set forth below is a description of risk factors related to the Company's business, provided to enable investors to assess, and be appropriately apprised of, certain risks and uncertainties the Company faces in conducting its business. An investor should carefully consider the risks described below and elsewhere in this Form 10-K which could materially and adversely affect the Company's business, financial condition or results of operations. The risks and uncertainties discussed below are also applicable to forward-looking statements contained in this Form 10-K and in other reports filed by the Company with the Securities and Exchange Commission, and in management presentations delivered and press releases issued by the Company. Given these risks and uncertainties, investors are cautioned not to place undue reliance on forward-looking statements.

Risks Relating to the Company and Its Business

The Company's business is highly cyclical and competitive, which may make it difficult for it to market its products effectively and profitably.

The property and casualty insurance industry is highly cyclical and competitive, and individual lines of business experience their own cycles within the overall insurance industry cycle. Premium rate levels are subject to many variables, including the availability of insurance coverage, which can vary according to the level of capital within the industry. Increases in industry capital have generally been accompanied by increased price competition. If the pool participants find it necessary to reduce premiums or limit premium increases due to these competitive pressures on pricing, the Company may experience a reduction in its profit margins and revenues and, therefore, lower profitability.

The pool participants compete with insurers that sell insurance policies through independent agents and/or directly to their customers. These competitors are not only national companies, but also insurers and independent agents that operate in a specific region or a single state. Some of these competitors have substantially greater financial and other resources than the pool participants, and may offer a broader range of products or offer competing products at lower prices. The Company's financial condition and results of operations could be materially and adversely affected by a loss of business to its competitors.

The reinsurance business is also highly cyclical and competitive. Employers Mutual, in writing reinsurance business through its HORAD operation, competes in the global reinsurance market with numerous reinsurance companies, many of which have substantially greater financial resources. Competition for reinsurance business is based on many factors, including the perceived financial strength of the reinsurer, industry ratings, stability in products offered and licensing status. There is a segment of the market that favors large, highly-capitalized reinsurance companies who are able to provide "mega" line capacity for multiple lines of business. Employers Mutual faces the risk of ceding companies becoming less interested in diversity and spread of reinsurance risk in favor of having fewer, highly-capitalized reinsurance companies on their program. If Employers Mutual loses reinsurance business to its competitors, the Company's financial condition and results of operations could be materially and adversely affected.

Similar to other industries, the insurance industry is undergoing rapid and significant technological and other change. Traditional insurance industry participants, technology companies, "InsurTech" start-up companies, the number of which has increased significantly in recent years, and others are focused on using technology and innovation to alter business models and cause other potentially disruptive changes in the insurance industry. If management does not anticipate these changes, keep pace with and adapt to technological and other changes impacting the insurance industry, it could harm the Company's ability to compete, decrease the value of the Company's products to insureds and agents, and materially and adversely affect the Company's business. Furthermore, innovation, technological change and changing customer preferences in the markets in which the Company operates also pose risks to the Company's business.

The frequency and severity of significant catastrophe and storm activity could adversely affect the Company's business, financial condition or results of operations.

The Company's insurance operations expose the Company to claims arising out of catastrophic events. Common catastrophic events include tornadoes, wind and hail storms, hurricanes, earthquakes, fires, explosions and severe winter storms. If changing climate conditions result in an increase in the frequency and severity of weather-related losses, the Company could experience additional losses from catastrophic events and destructive weather patterns. High levels of catastrophe and storm losses could lead to changes in the reinsurance programs protecting the Company (including the reinsurance coverage provided by Employers Mutual to the Company's property and casualty insurance subsidiaries and the reinsurance subsidiary). These changes could include increases in the amount of losses retained, increased pricing and decreased availability of catastrophe reinsurance protection. Examples of such changes include increases in the pool participants' retention amounts on ceded contracts covering the pool business, and increases in the amount of losses retained by the reinsurance subsidiary. Future increases in the cost of reinsurance protection, and/or the amount of catastrophe and storm losses retained, could materially adversely affect the Company's business, financial condition or results of operations.

The pool participants currently conduct business in all 50 states and the District of Columbia, with a large portion of business in the Midwest. The occurrence of catastrophes, or other conditions affecting losses in this region, could adversely affect the Company's business, financial condition or results of operations.

In 2016, 69 percent of the pool participant's direct premiums written were generated through ten Midwest branch offices, with 13 percent of the direct premiums written generated in Iowa. While the pool participants actively manage their exposure to catastrophes through their underwriting process and the purchase of third-party reinsurance, a single catastrophic occurrence, destructive weather pattern, changing climate conditions, general economic trend, terrorist attack, regulatory development or any other condition affecting the states in which the pool participants conduct substantial business could materially adversely affect the Company's business, financial condition or results of operations. Moreover, the Company's revenues and profitability are affected by the prevailing regulatory, economic, demographic, competitive and other conditions in these states. Changes in any of these conditions could make it more costly or more difficult for the pool participants to conduct their business. Adverse regulatory developments in these states could include reductions in the maximum rates permitted to be charged, restrictions on rate increases, or fundamental changes to the design or operation of the regulatory framework, and any of these could have a material adverse effect on the Company's business, financial condition or results of operations.

The Company cannot predict the impact that changing climate conditions, including legal, regulatory, and social responses thereto, may have on the Company's business, financial condition or results of operations.

Some scientists, environmentalists, and other experts believe that changing climate conditions have added to the unpredictability, frequency, and severity of weather-related losses. If climate conditions are changing and affecting weather patterns, the Company could experience additional losses from catastrophic events and destructive weather patterns. The Company cannot predict the impact that changing climate conditions, if any, will have on the Company's business, financial condition or results of operations. It is also possible that legal, regulatory and social responses to climate change could have a material adverse effect on the Company's business, financial condition or results of operations.

Losses related to a terrorist attack could have a material adverse impact on the Company's business, financial condition or results of operations.

Terrorist attacks could cause significant losses from insurance claims related to the property and casualty insurance operations of the pool participants and the reinsurance operations of the Company's reinsurance subsidiary, and have a material adverse impact on the Company's business, financial condition or results of operations. The TRIA Reauthorization Act requires that some coverage for terrorism losses be offered by primary property and casualty insurers, and provides federal assistance for recovery of a portion of claims incurred (effective through December 31, 2020). While the pool participants are protected by this federally funded terrorism reinsurance with respect to claims under most commercial insurance products, the pool participants are prohibited from adding terrorism exclusions to the commercial lines policies they write, and a substantial deductible must be met before the TRIA Reauthorization Act provides coverage to the pool. The pool participants' personal lines products do not provide terrorism coverage. The pool participants have underlying reinsurance coverage to partially cover the TRIA Reauthorization Act deductible, but the Company can offer no assurances that the threats or actual occurrence of future terrorist-like events in the United States and abroad, or military actions by the United States, will not have a material adverse effect on its business, financial condition or results of operations.

The Company's results of operations could suffer if the pool participants were to forecast future losses inaccurately, experience unusually severe or frequent losses, inadequately price their insurance products, or fail to control expenses.

The Company's property and casualty insurance subsidiaries participate in a pooling agreement under which they share the underwriting results of the property and casualty insurance business written by all the pool participants (excluding certain assumed reinsurance business). Because of the pooled business the Company is allocated, the insurance operations of the Company's pool participants are integrated with the insurance operations of the Employers Mutual pool participants, and the Company's results of operations depend upon the forecasts, pricing and underwriting results of the Employers Mutual pool participants. Although the pool is intended to produce a more uniform and stable underwriting result from year to year for the participants than they would experience separately by spreading the risk of losses among the participants, if any of the pool participants experience unusually severe or frequent losses or do not adequately price their insurance products, the Company's business, financial condition or results of operations could suffer.

One of the distinguishing features of the property and casualty insurance industry is that its products are priced before the costs are known, as premium rates are generally determined before losses are reported. Accordingly, the pool participants must establish premium rates from forecasts of the ultimate costs they expect to incur from risks underwritten during the policy period, and premiums may not be adequate to cover the ultimate losses incurred. Further, the pool participants must establish reserves for losses and settlement expenses based upon estimates involving actuarial and statistical projections of expected ultimate liability at a given time, and it is possible that the ultimate liability will exceed these estimates because of the future development of known losses, the existence of losses that have occurred but are currently unreported, or larger than expected settlements on pending and unreported claims. Prior to the end of each quarter, Employers Mutual's actuaries review the adequacy of the pool's previous quarter's reserves for the various lines of business underwritten and these reviews have in the past, and may in the future, indicate that additional reserves are necessary to adequately cover anticipated losses and settlement expenses. The process of estimating reserves is inherently judgmental and can be influenced by factors that are subject to variation. If the premium rates or reserves established are not sufficient, the Company's business, financial condition and/or results of operations may be adversely impacted.

The Company's results are also subject to the expenses incurred by its subsidiaries and the other pool participants. One of the metrics used to evaluate property and casualty insurance companies is the underwriting expense ratio. This ratio weighs earned premiums against expenses. Underwriting and administrative expenses should be kept within an acceptable range. This range must be determined and managed with both a short term and long term outlook with regards to premium levels, the underwriting cycle, industry benchmarks, internal trends, and the annual corporate budgeting process. Pursuant to the terms of the pooling agreement, underwriting and administrative expenses are prorated between the participants in the pool. Thus, if the Company's subsidiaries or other pool participants fail to control underwriting or administrative expenses, the Company's financial condition or results of operation could suffer.

An increase in asbestos and environmental claims could have a material adverse effect on the Company's financial condition or results of operations.

The Company has exposure to asbestos and environmental claims arising primarily from the other liability line of business written by the parties to the pooling agreement, as well as the pro rata and excess of loss business assumed by the reinsurance subsidiary. These exposures are closely monitored by management and reserves have been established to cover estimated ultimate losses. Estimating loss and settlement expense reserves for asbestos and environmental claims is very difficult due to the many uncertainties surrounding these types of claims, such as whether coverage exists, the definition of an occurrence, determination of ultimate damages and the assignment of damages to the responsible parties. These uncertainties are compounded by the fact that claims typically emerge long after a policy has expired. It is possible that the ultimate liability for these exposures may increase significantly as a result of the settlement of lawsuits or the receipt of additional claims, which could have a material adverse effect on the Company's financial condition and/or results of operations.

The Company's investment portfolio is subject to economic loss, principally from changes in the market value of financial instruments.

The Company had fixed maturity investments with a fair value of \$1.2 billion at December 31, 2016 that are subject to:

- market risk, which is the risk that the Company's invested assets will decrease in value due to:
 - an increase in interest rates or a change in the prevailing market yields on its investments,
 - an unfavorable change in the liquidity of an investment, or
 - an unfavorable change in the financial prospects, or a downgrade in the credit rating, of the issuer of an investment;
- reinvestment risk, which is the risk that interest rates will decline and funds reinvested will earn less investment income than previously earned; and
- liquidity risk, which is the risk that the Company may have to sell assets at an undesirable time and/or price to provide cash for the payment of claims.

The Company maintains a well diversified portfolio of fixed maturity securities in an attempt to manage market, reinvestment and liquidity risk. The Company primarily pursues a buy and hold strategy for fixed maturity investments. Fixed maturity securities are purchased as new funds become available to the portfolio. This strategy has a laddering effect on portfolio maturities that mitigates some of the effects of adverse interest rate movements.

The Company's fixed maturity investment portfolio includes mortgage-backed securities. As of December 31, 2016, mortgage-backed securities constituted approximately 11.8 percent of the fixed maturity portfolio. As with other fixed maturity investments, the fair value of these securities fluctuates depending on market and other general economic conditions and the interest rate environment. Changes in interest rates can expose the Company to prepayment risks on these investments. In periods of declining interest rates, mortgage prepayments generally increase and mortgage-backed securities are paid more quickly, requiring the Company to reinvest the proceeds at the then current market rates.

The Company's common stock equity portfolio, with a fair value of \$193.5 million as of December 31, 2016, is subject to economic loss from a decline in market prices. The Company invests in publicly traded companies listed in the United States with large market capitalizations. An adverse development in the stock market, or one or more securities that the Company invests in, could adversely affect its capital position. The Company is currently invested in a limited partnership that is designed to help protect the Company from significant monthly downside price volatility in the equity markets. However, this type of protection may be discontinued in the future depending on market conditions and/or the cost of the protection.

The success of any investment activity is affected by general economic conditions, which may adversely affect the markets for fixed maturity and equity securities. Unexpected volatility or illiquidity in the markets in which the Company holds securities could reduce its liquidity and stockholders' equity. To mitigate these risks, the Company's insurance and reinsurance subsidiaries are able to borrow funds on a short-term basis from Employers Mutual and its subsidiaries and affiliate under an Inter-Company Loan Agreement.

The Company relies on Employer Mutual's information technology and telecommunication systems, and the disruption or failure of these systems, or the compromise of the security of the systems that results in the misuse of confidential information, could materially and adversely affect its business.

The Company's business is highly dependent upon the successful and uninterrupted functioning of Employers Mutual's information technology and telecommunications systems. The Company relies on the capacity, reliability and security of these systems to process new and renewal business, provide customer service, process and pay claims, and facilitate collections and cancellations. These systems also enable the performance of actuarial and other modeling functions necessary for underwriting and rate development and establishing and evaluating reserves. Despite security measures in place, the information technology systems could be vulnerable to computer malware or viruses, unauthorized access, or other cyber attacks that could disrupt the systems. The failure or disruption of these systems could interrupt the Company's operations through reduced ability to underwrite and process new and renewal business, pay claims in a timely manner and provide customer service.

A security breach of information technology systems that results in the misuse or misappropriation of confidential information could expose Employers Mutual to litigation, or damage Employers Mutual's reputation. Any legal or other expenses resulting from the misuse of confidential information would be shared by all users of the systems, including the Company and its subsidiaries, and such losses could be significant.

Although Employers Mutual maintains insurance on its real property and other physical assets, this insurance will not compensate Employers Mutual for losses that may occur due to disruptions in service as a result of a computer, data processing or telecommunication systems failure unrelated to covered property damage. Also, this insurance may not necessarily compensate Employers Mutual for all losses resulting from covered events. Employers Mutual retains the risks from disruptions in computer processing and telecommunications services, and has implemented a variety of controls to mitigate these risks including, but not limited to, off-site back-up and redundant processing capabilities, access restrictions to confidential customer data, and documented plans for resuming operations upon the occurrence of an event. A portion of any losses resulting from the failure or disruption of Employers Mutual's information technology and telecommunication systems would be shared by all users of the systems, including the Company and its subsidiaries, and such losses could be significant.

The failure of the pool participants to maintain their current financial strength rating could materially and adversely affect the Company's business and competitive position.

The pool participants, including the Company's property and casualty insurance subsidiaries, are currently rated "A" (Excellent) by A.M. Best, an industry-accepted source of property and casualty insurance company financial strength ratings. A.M. Best ratings are specifically designed to provide an independent opinion of an insurance company's financial health and its ability to meet ongoing obligations to policyholders. These ratings are directed toward the protection of policyholders, not investors. If the ratings of the pool participants were to be downgraded (particularly below "A-") by A.M. Best, it would adversely affect the Company's competitive position and make it more difficult for it to market its products, and retain its existing agents and policyholders. A downgrade of Employers Mutual's rating below "A-" could make it ineligible to assume certain reinsurance business, which could lead to a reduction in the amount of business ceded to the Company's reinsurance subsidiary under the quota share agreement. Thus, a downgrade in the pool participants' (including Employers Mutual's) A.M. Best ratings below "A-" would likely result in a material reduction in the amount of the Company's business.

The profitability of the Company's reinsurance subsidiary is dependent upon the experience of Employers Mutual, and changes to this relationship may adversely affect the reinsurance subsidiary's operations.

The Company's reinsurance subsidiary operates under a quota share reinsurance agreement with Employers Mutual, which generated 22 percent of the Company's net premiums earned in 2016. Under the quota share reinsurance agreement, the reinsurance subsidiary assumes the voluntary reinsurance business written directly by Employers Mutual (subject to certain limited exceptions). The reinsurance subsidiary also has in place an inter-company reinsurance program with Employers Mutual. The reinsurance subsidiary primarily relies on these agreements and on Employers Mutual for its business. If Employers Mutual terminates or otherwise seeks to modify these agreements, the reinsurance subsidiary may not be able to enter into similar arrangements with other companies and may be adversely affected.

Through the quota share reinsurance agreement, the reinsurance subsidiary assumes the voluntary reinsurance business written directly by Employers Mutual with unaffiliated insurance companies, and the reinsurance business assumed by Employers Mutual from MRB, a voluntary underwriting association of property and casualty insurers in which Employers Mutual participates. If Employers Mutual or the other participants of MRB discontinue or reduce the assumption of property and casualty risks, the reinsurance subsidiary could be adversely affected. In connection with the risks assumed from MRB, officers of the reinsurance subsidiary and Employers Mutual have reviewed the relevant underwriting policies and procedures, however, no officer of the reinsurance subsidiary directly reviews such risks assumed at the time of underwriting. If Employers Mutual or MRB are unable to sell reinsurance at adequate premium rates, or were to have poor underwriting experience, the reinsurance subsidiary could be adversely affected. In addition, since MRB is structured on a joint liability basis, Employers Mutual, and therefore the Company's reinsurance subsidiary, would be obligated with respect to the proportionate share of risks assumed by the other participants in the event they were unable to perform. The failure of the other MRB participants to perform could have a material adverse effect on the Company's financial condition or results of operations.

Changes in key assumptions or a deterioration in the debt and equity markets could lead to an increase in Employers Mutual's employee benefit plans' costs and a decline in the funded status, which could have a material adverse effect on the Company's financial condition and/or results of operations.

Employers Mutual's employee benefit plans' costs and funded status reflect the use of key assumptions regarding the discount rate, the expected long-term rate of return on plan assets, and the rate of future compensation increases (pension plans only). Changes in these assumptions could result in a significant decrease in the plans' funded status and increase the future net periodic costs associated with these plans. In addition, large declines in the fair value of the assets held in the plans could result in a significant decrease in the plans' funded status and increase the future net periodic costs associated with these plans. A decrease to the plans' funded status could require Employers Mutual to make significant contributions to its employee benefit plans to maintain adequate funding levels, and the Company would be responsible for its share of these contributions under the pooling agreement. The occurrence of these events could have a material adverse effect on the Company's financial condition and/or results of operations.

The Company may not be successful in reducing its risks and increasing its underwriting capacity through reinsurance arrangements, which could adversely affect its business, financial condition or results of operations.

In order to reduce underwriting risk and increase underwriting capacity, the pool participants transfer portions of the pool's insurance risk to other insurers through reinsurance contracts. The availability, cost and structure of reinsurance protection is subject to changing market conditions that are outside of the pool participants' control. In order for these contracts to qualify for reinsurance accounting and thereby provide the additional underwriting capacity that the pool participants desire, the reinsurer generally must assume significant risk and have a reasonable possibility of a significant loss.

The reinsurance subsidiary assumes and cedes some selected reinsurance business through the quota share agreement in connection with "fronting" activities initiated by Employers Mutual. Under these arrangements, an agreed upon percentage of the selected assumed business is ceded to other reinsurer(s) on a pro rata basis. In addition, in 2016 the reinsurance subsidiary began purchasing additional reinsurance protection from external parties for the assumed reinsurance business.

Although the reinsurers are liable to the extent they assume risk, the Company's insurance subsidiaries remain ultimately liable on all risks reinsured. As a result, ceded reinsurance arrangements do not limit the ultimate obligation to pay claims. The Company's insurance subsidiaries are subject to the credit risks of their reinsurers. They are also subject to the risk that their reinsurers may dispute obligations to pay their claims. As a result, the Company's insurance subsidiaries may not recover on claims made against their reinsurers in a timely manner, if at all, which could have a material adverse effect on the Company's business, financial condition or results of operations.

The Company is subject to comprehensive regulation that may restrict its ability to earn profits.

The Company is subject to comprehensive regulation and supervision by the insurance departments in the states where its subsidiaries are domiciled and where its subsidiaries and the other pool participants sell insurance products, issue policies and handle claims. Certain regulatory restrictions and prior approval requirements may affect the pool participants' ability to operate, compete, innovate or obtain necessary rate adjustments in a timely manner, and may also increase their costs and reduce profitability.

Supervision and regulation by insurance departments extend, among other things, to:

Required Licensing. The pool participants operate under licenses issued by various state insurance departments. These licenses govern, among other things, the types of insurance coverages, agency and claims services, and products that the pool participants may offer consumers in the states in which they operate. The pool participants must apply for and obtain appropriate licenses before they can implement any plan to expand into a new state or offer a new line of insurance or other new products that require separate licensing. If a regulatory authority denies or delays granting a new license, the pool participants' ability to enter new markets quickly or offer new products they believe will be profitable can be substantially impaired.

Regulation of Premium Rates and Approval of Policy Forms. The insurance laws of most states in which the pool participants operate require insurance companies to file premium rate schedules and insurance policy forms for review and approval. State insurance departments have broad discretion in judging whether the pool participants' rates are adequate, not excessive and not unfairly discriminatory. The speed at which the pool participants can change their rates in response to competition or increased costs depends, in part, on the method by which the applicable state's rating laws are administered. Generally, state insurance departments have the authority to disapprove the pool participants' requested rates. Thus, if the pool participants begin using new rates before they are approved, as permitted in some states, they may be required to issue premium refunds or credits to their policyholders if the new rates are ultimately deemed excessive or unfair, and are disapproved by the applicable state department. In addition, in some states, there has been pressure in past years to reduce premium rates for automobile and other personal insurance, or to limit how often an insurer may request increases for such rates. In states where such pressure is applied, the pool participants' ability to respond to market developments or increased costs can be adversely affected.

Restrictions on Cancellation, Non-Renewal or Withdrawal. Many states have laws and regulations that limit an insurer's ability to exit a market. Some states prohibit an insurer from withdrawing from one or more lines of business in the state, except pursuant to a plan approved by the state insurance department. A state insurance department may disapprove a plan that may lead, under its analyses, to market disruption. These laws and regulations could limit the pool participants' ability to exit unprofitable markets or discontinue unprofitable products in the future.

Investment Restrictions. The Company's subsidiaries are subject to state laws and regulations that require diversification of their investment portfolios, and that limit the amount of investments in certain categories. Failure to comply with these laws and regulations would cause nonconforming investments to be treated as non-admitted assets for purposes of measuring statutory surplus and, in some instances, would require divestiture.

Other Regulations. The Company must also comply with laws and regulations involving, among other things:

- disclosure, and in some cases prior approval, of transactions between members of an insurance holding company system;
- acquisition or disposition of an insurance company, or of any company controlling an insurance company;
- involuntary assignments of high-risk policies, participation in reinsurance facilities and underwriting associations, and assessments and other governmental charges;
- use of non-public consumer information and related privacy issues; and
- use of credit history in underwriting and rating.

These laws and regulations could adversely affect the Company's profitability.

The Company cannot provide any assurance that states will not make existing insurance laws and regulations more restrictive in the future, or enact new restrictive laws.

From time to time, the United States Congress and certain federal agencies investigate the current condition of the insurance industry to determine whether federal regulation is necessary. The Company closely monitors the activities of the United States Congress and federal agencies through its membership in various organizations. In particular, our trade organizations are working to monitor and ensure appropriate implementation of the federal terrorism risk insurance program, to shape the activities of the Federal Insurance Office as it continues to evolve and exercise its authority to monitor the insurance industry, to pass appropriate tax reform legislation, and to extend the judicial relief from the remand to an exemption for property and hazard and homeowners insurance from application of the Department of Housing and Urban Development's Disparate Impact Rule. In addition, regulatory bodies in Europe are developing a new capital adequacy directive for insurers and reinsurers. The viability of the recently announced covered agreement between the United States and European Union remains in doubt, and the future impact of this and other such initiatives, if any, on the results of operations or financial condition of the Company's reinsurance subsidiary cannot be determined at this time. The Company is unable to predict whether, or to what extent, new laws and regulations that could affect its business will be adopted in the future, the timing of any such adoption and what effects, if any, they may have on its business, financial condition or results of operations.

Changes in U.S. federal tax laws could adversely affect the Company's financial condition and results of operations.

The Company is subject to U.S. federal tax laws, which may be changed in ways that could adversely impact the Company. Recently, there has been significant debate about reform of the current U.S. Internal Revenue Code. For example, federal tax legislation could be enacted to reduce the U.S. federal corporate income tax rate from the current 35 percent. If the tax rate was reduced, the Company would accordingly reduce any deferred tax asset and would likely be required to recognize a reduction in income in the period enacted. Other potential changes in U.S. tax laws may increase or decrease the Company's income tax expense recognized in results of operations. The Company is unable to predict whether, and to what extent, changes to U.S. tax laws would affect the Company's financial condition or results of operations.

The Company's business may not continue to grow and may be adversely affected if it cannot retain existing, and attract new, independent agents, or if insurance consumers increase their use of other insurance delivery systems.

The continued growth of the Company's business will depend upon the pool participants' ability to retain existing, and attract new, independent agents. The pool participants' agency force is one of the most important components of their competitive position. To the extent that the pool participants' existing agents cannot maintain current levels of production, the Company's business, financial condition and results of operations will suffer. Moreover, if independent agencies find it easier to do business with the pool participants' competitors, it could be difficult for them to retain their existing business or attract new business. While the pool participants believe they maintain good relationships with their independent agents, they cannot be certain that these independent agents will continue to sell their products to the consumers they represent. Some of the factors that could adversely affect the ability to retain existing, and attract new, independent agents include:

- competition in the insurance industry to attract independent agents;
- the pool participants' requirement that independent agents adhere to disciplined underwriting standards; and
- the pool participants' ability to pay competitive and attractive commissions, profit share bonuses and other incentives to independent agents as compensation for selling their products.

While the pool participants sell substantially all their insurance through their network of independent agents, many of their competitors sell insurance through a variety of other delivery methods, including captive agencies, the internet and direct sales. To the extent that businesses and individuals represented by the pool participants' independent agents change their delivery system preferences, the Company's business, financial condition or results of operations may be adversely affected.

The Company's continued success as an insurance company is substantially dependent on the reputation of EMC Insurance Companies.

Management believes that one of the reasons independent agents and insureds prefer to purchase insurance from the pool participants, team members choose Employers Mutual as a place of employment, and vendors choose to do business with Employers Mutual is the reputation EMC Insurance Companies has built over 105 years. To be successful in the future, management must continue to preserve, grow, and leverage the value of EMC Insurance Companies reputation. Reputational value is based in large part on perceptions. While reputations may take decades to build, any negative incidents can quickly erode trust and confidence, particularly if they result in adverse mainstream and social media publicity, governmental investigations, or litigation. Those types of incidents could have an adverse impact on perceptions and lead to tangible adverse effects on the Company's business, including loss of trust, loss of premium, loss of accounts, loss of agency contracts, or team member retention and recruiting difficulties.

The Company's operations are integrated with those of Employers Mutual, the parent company, and potential and actual conflicts exist between the best interests of the Company's stockholders and the best interests of the policyholders of Employers Mutual.

Employers Mutual currently owns shares of the Company's common stock entitling it to cast approximately 55 percent of the aggregate votes eligible to be cast by the Company's stockholders at any meeting of stockholders. These holdings enable Employers Mutual to control the election of the Company's board of directors. In addition, one of the five members of the Company's board of directors is also a member of the board of directors of Employers Mutual. This director has a fiduciary duty to both the Company's stockholders and to the policyholders of Employers Mutual. The Company's executive officers hold the same positions with both Employers Mutual and the Company, and therefore also have a fiduciary duty to both the stockholders of the Company and to the policyholders of Employers Mutual. Certain potential and actual conflicts of interest arise from the Company's relationship with Employers Mutual and these competing fiduciary duties. Among these conflicts of interest are:

- the Company and Employers Mutual must establish the relative participation interests of all the participating insurers in the pooling arrangement, along with other terms of the pooling agreement;
- the Company and Employers Mutual must establish the terms of the quota share agreement and the inter-company reinsurance programs between Employers Mutual and the Company's reinsurance subsidiary and property and casualty insurance subsidiaries;
- the Company and Employers Mutual must establish the terms (including the interest rate, which is reviewed every five years) of the surplus notes issued by the Company's property and casualty insurance subsidiaries to Employers Mutual;
- the Company and Employers Mutual must establish the terms (including the interest rate) of any inter-company loans between Employers Mutual and any of the Company's insurance company subsidiaries;
- the Company and Employers Mutual must make judgments about the allocation of expenses to the Company and its subsidiaries and to Employers Mutual's subsidiaries that do not participate in the pooling agreement; and
- the Company may enter into other transactions and contractual relationships with Employers Mutual and its subsidiaries or affiliates.

As a consequence, the Company and Employers Mutual have each established an Inter-Company Committee, with the Company's Inter-Company Committee consisting of three of the Company's independent directors who are not directors of Employers Mutual and Employers Mutual's Inter-Company Committee consisting of three directors of Employers Mutual who are not members of the Company's board of directors. Any new material agreement or transaction between Employers Mutual and the Company, as well as any proposed material change to an existing material agreement between Employers Mutual and the Company, must receive the approval of both Inter-Company Committees. This approval is granted only if the members of the Company's Inter-Company Committee unanimously conclude that the new agreement or transaction, or proposed material change to an existing material agreement, is fair and reasonable to the Company and its stockholders, and the members of Employers Mutual's Inter-Company Committee unanimously conclude that the new agreement or transaction, or proposed change to an existing material agreement, is fair and reasonable to Employers Mutual and its policyholders.

The Company relies on Employers Mutual to provide employees, facilities and information technology systems to conduct its operations.

The Company does not employ any staff to conduct its operations, nor does the Company own or, with one exception, lease any facilities or information technology systems necessary for its operations. As a result, the Company is totally dependent on Employers Mutual's employees, facilities and information technology systems to conduct its business. There are no agreements in place that obligate Employers Mutual to provide the Company with access to its employees, facilities or information technology systems. In addition, the Company does not have any employment agreements with its executive officers, all of whom are employed by Employers Mutual. These arrangements make it unlikely that anyone could acquire control of the Company or replace its management unless Employers Mutual was in favor of such action. Any of these arrangements could diminish the value of the Company's common stock.

The Company depends on Employers Mutual's ability to attract and retain qualified executive officers, experienced underwriting talent, and other skilled employees who are knowledgeable about insurance. Providing suitable succession planning for such positions is also important. If Employers Mutual cannot attract or retain top-performing executive officers, underwriters, and other employees, if the quality of their performance decreases, or if Employers Mutual fails to implement succession plans for its key staff, Employers Mutual and its subsidiaries and affiliate may be unable to maintain their current competitive position in the markets in which they operate and be unable to expand operations into new markets.

The insolvency of Employers Mutual or its affiliate could result in additional liabilities for the Company's insurance subsidiaries participating in the pooling agreement.

The pooling agreement requires each pool participant to assume its pro rata share (based on its participation interest in the pool) of the liabilities of any pool participant that becomes insolvent or is otherwise subject to liquidation or receivership proceedings. Under this provision, the Company's pool participants could become financially responsible for their pro rata share of the liabilities of one or more of the Employers Mutual pool participants in the event of an insolvency, or a liquidation or receivership proceeding involving such participant(s).

The Company is dependent on dividends from its subsidiaries for the payment of its operating expenses and dividends to stockholders; however, its subsidiaries may be unable to pay dividends to the Company.

As a holding company, the Company relies primarily on dividends from its subsidiaries as a source of funds to meet its corporate obligations and pay dividends to its stockholders. Payment of dividends by the Company's subsidiaries is subject to regulatory restrictions, and depends on the surplus position of its subsidiaries. The maximum amount of dividends that the Company's subsidiaries can pay it in 2017 without prior regulatory approval is approximately \$52.7 million. In addition, state insurance regulators have broad discretion to limit the payment of dividends by the Company's subsidiaries in the future. The ability of its subsidiaries to pay dividends to it may be further constrained by business and regulatory considerations, such as the impact of dividends on surplus, competitive position and the amount of premiums that can be written.

New pricing, claims, coverage issues, class action litigation, and technology innovations are continually emerging in the property and casualty insurance industry, and these new issues could adversely impact the Company's revenues or its methods of doing business.

As property and casualty insurance industry practices, and regulatory, judicial and consumer conditions change, unexpected and unintended issues related to claims, coverages and business practices may emerge. These issues could have an adverse effect on the Company's business by changing the way the pool participants price their products, by extending coverages beyond their underwriting intent, or by increasing the size of claims. The effect of unforeseen emerging issues could negatively affect the Company's results of operations or its methods of doing business. In addition, the advent of driverless cars and usage-based insurance could materially alter the way that automobile insurance is marketed, priced, and underwritten.

Changes to existing accounting standards may adversely affect the Company's consolidated financial statements.

The Company is required to prepare its consolidated financial statements in accordance with GAAP, as promulgated by the Financial Accounting Standards Board ("FASB"), subject to accounting rules and interpretations of the Securities and Exchange Commission. Accordingly, the Company is required to adopt new or revised accounting standards issued by these authoritative bodies from time to time. It is possible that changes to the Company's accounting policies resulting from the adoption of future changes in GAAP, including an updated financial instruments standard issued in January 2016 and a new credit losses accounting standard issued in June 2016, could have a material adverse effect on the Company's reported financial condition and/or results of operations. The Company's significant accounting policies are described in note 1 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K.

Risks Relating to the Company's Common Stock

Employers Mutual has the ability to determine the outcome of all matters submitted to the Company's stockholders for approval. The price of the Company's common stock may be adversely affected because of Employers Mutual's majority ownership of the Company's common stock.

The Company's common stock has one vote per share and voting control of the Company is currently vested in Employers Mutual, which owns approximately 55 percent of the Company's outstanding common stock. Employers Mutual must retain a minimum 50.1 percent ownership of the Company's outstanding common stock at all times in order for the pool participants to have their A.M. Best financial strength ratings determined on a "group" basis. Accordingly, Employers Mutual will retain the ability to control:

- the election of the Company's entire board of directors, which in turn determines its management and policies;
- the outcome of any corporate transaction or other matter submitted to the Company's stockholders for approval, including mergers or other transactions providing for a change of control; and
- the amendment of the Company's organizational documents.

The interests of Employers Mutual may conflict with the interests of the Company's other stockholders and may have a negative effect on the price of the Company's common stock.

Employers Mutual's ownership of the Company's common stock and provisions of certain state laws make it unlikely anyone could acquire control of the Company or replace or remove its management unless Employers Mutual were in favor of such action, which could diminish the value of the Company's common stock.

Employers Mutual's ownership of the Company's common stock and the laws and regulations of Iowa and North Dakota could delay, or prevent, the removal of members of its board of directors, and could make a merger, tender offer or proxy contest involving the Company more difficult to complete, even if such events were beneficial to the interest of its stockholders other than Employers Mutual. The insurance laws of the states in which the Company's subsidiaries are domiciled prohibit any person from acquiring control of it, and thus indirect control of its subsidiaries, without the prior approval of each such state insurance department. Generally, these laws presume that control exists where any person, directly or indirectly, owns, controls, holds the power to vote, or holds proxies representing 10 percent or more of the Company's outstanding common stock. Even persons who do not acquire beneficial ownership of 10 percent or more of the outstanding shares of the Company's common stock may be deemed to have acquired such control, if the relevant insurance department determines that such control exists in fact. Therefore, any person seeking to acquire a controlling interest in the Company would face regulatory obstacles, which could delay, deter or prevent an acquisition that stockholders might consider to be in their best interests. Moreover, the Iowa Business Corporation Act, which governs the Company's corporate activities, contains certain provisions that prohibit certain business combination transactions under certain circumstances. These factors could discourage a third party from attempting to acquire control of the Company and thus could have a negative impact on the value of the Company's common stock.

Although the Company has consistently paid cash dividends in the past, it may not be able to pay cash dividends in the future.

The Company has paid cash dividends to its stockholders on a consistent basis since 1982, following the initial public offering of its common stock. However, future cash dividends will depend upon various factors, including the ability of the Company's subsidiaries to make distributions to it, which may be restricted by financial or regulatory constraints. Also, there can be no assurance that the Company will continue to pay dividends even if the necessary financial and regulatory conditions are met and if sufficient cash is available for distribution.

The Company may be adversely affected by foreign currency fluctuations.

The Company's reporting currency is the U.S. dollar. A portion of the Company's assumed reinsurance business is written in currencies other than the U.S. dollar. The Company may, from time to time, experience losses resulting from fluctuations in the values of foreign currencies, which could adversely affect the Company's financial condition and results of operations.

ITEM 1B. **UNRESOLVED STAFF COMMENTS**

None.

ITEM 2. **PROPERTIES**

The Company does not own any real property; however, one of the property and casualty insurance subsidiaries, Dakota Fire, leases from EMC National Life Company (an affiliate of Employers Mutual) office space in which the Bismarck, North Dakota branch office is located. The Company's home office, which also serves as the home office of Employers Mutual, is located in four office buildings in Des Moines, Iowa, all of which are owned by Employers Mutual. Employers Mutual also owns office buildings in which the Milwaukee and Lansing branch offices operate, and leases office space in 16 other locations where other branch offices and service centers are located.

The Company's subsidiaries that do not participate in the pooling agreement (EMC Reinsurance Company and EMC Underwriters, LLC), as well as subsidiaries of Employers Mutual that do not participate in the pooling agreement, are allocated rent expense based on the square footage occupied by the respective operations. The remaining rent expense is charged to the pool and is allocated among the pool participants based on their respective participation interests.

ITEM 3. **LEGAL PROCEEDINGS**

The Company and Employers Mutual and its other subsidiaries are parties to numerous lawsuits arising in the normal course of the insurance business. The Company believes that the resolution of these lawsuits will not have a material adverse effect on its financial condition or its results of operations. The companies involved have established reserves which are believed adequate to cover any potential liabilities arising out of all such pending or threatened proceedings.

ITEM 4. **MINE SAFETY DISCLOSURES**

Not applicable.

PART II

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

The Company's common stock trades on the NASDAQ Global Select Market tier of The NASDAQ Stock Market, Inc. under the symbol EMCI. The following table shows the high and low sales prices, as reported by NASDAQ, and the dividends paid for each quarter within the two most recent years.

Quarter:	2016				2015			
	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th
High	\$ 25.99	\$ 28.01	\$ 29.01	\$ 31.18	\$ 23.93	\$ 26.00	\$ 26.52	\$ 26.83
Low	21.62	24.02	24.71	23.45	19.84	21.67	20.23	22.20
Period-end close	25.65	27.72	26.93	30.01	22.53	25.07	23.21	25.30
Cash dividends declared	\$ 0.190	\$ 0.190	\$ 0.190	\$ 0.210	\$ 0.167	\$ 0.167	\$ 0.170	\$ 0.190

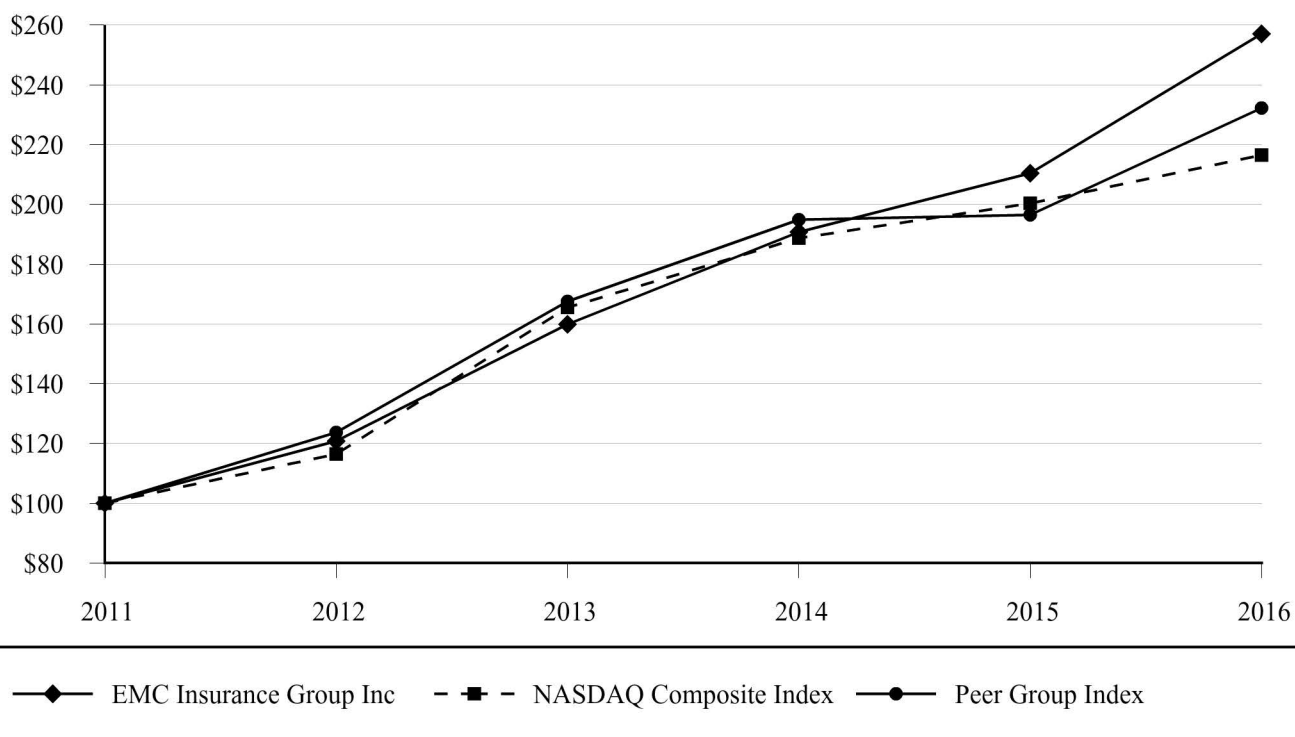
On February 20, 2017, there were 672 registered holders of the Company’s common stock.

There are certain regulatory restrictions relating to the payment of dividends by the Company’s insurance subsidiaries (see note 6 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K). It is the present intention of the Company’s Board of Directors to declare quarterly cash dividends, but the amount and timing thereof, if any, is determined by the Board of Directors at its discretion.

The Company maintains an Amended and Restated Dividend Reinvestment and Common Stock Purchase Plan. More information about the plan can be obtained by calling American Stock Transfer & Trust Company, LLC, the Company’s stock transfer agent and plan administrator. Additional information regarding the plan is contained in note 13 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K. Employers Mutual did not participate in the dividend reinvestment plan during 2016, 2015 or 2014.

The following graph compares the cumulative total stockholder return on the Company’s common stock to the NASDAQ Composite Index and a peer group consisting of publicly traded companies in SIC Code 6330-6339, Fire, Marine & Casualty Insurance, as provided by Research Data Group. The total stockholder return assumes \$100.00 invested at the beginning of the period in the Company’s common stock, the NASDAQ Composite Index and the Peer Group Index. It also assumes reinvestment of all dividends for the periods presented.

COMPARATIVE 5-YEAR CUMULATIVE TOTAL RETURN AMONG EMC INSURANCE GROUP INC., NASDAQ COMPOSITE INDEX AND INDUSTRY INDEX



	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
EMC Insurance Group Inc	\$ 100.00	\$ 120.84	\$ 159.84	\$ 190.78	\$ 210.45	\$ 257.06
NASDAQ Composite Index	100.00	116.41	165.47	188.69	200.32	216.54
Peer Group Index	100.00	123.67	167.50	194.91	196.50	232.25

The following table sets forth information regarding purchases of equity securities by the Company and affiliated purchasers for the three months ended December 31, 2016:

Period	(a) Total number of shares (or units) purchased ¹	(b) Average price paid per share (or unit)	(c) Total number of shares (or units) purchased as part of publicly announced plans or programs ²	(d) Maximum number (or approximate dollar value) of shares (or units) that may yet be purchased under the plans or programs (\$ in thousands) ^{2,3}
10/1/16 - 10/31/16	100	\$ 26.84	—	\$ 19,108
11/1/16 - 11/30/16	1,291	27.97	—	19,108
12/1/16 - 12/31/16	115	30.50	—	19,108
Total	<u>1,506</u>	\$ 28.09	<u>—</u>	

¹ Included in this column are shares purchased in the open market to fulfill the Company's obligations under its dividend reinvestment and common stock purchase plan.

² On November 3, 2011, the Company's Board of Directors authorized a \$15.0 million stock repurchase program. This program does not have an expiration date. A total of \$14.6 million remains available in this plan for the purchase of additional shares.

³ On May 12, 2005, the Company announced that its parent company, Employers Mutual, had initiated a \$15.0 million stock purchase program under which Employers Mutual may purchase shares of the Company's common stock in the open market. This purchase program does not have an expiration date; however, this program has been dormant while the Company's repurchase programs have been in effect. A total of \$4.5 million remains in this program.

The following table sets forth information regarding Employers Mutual's equity compensation plans as of December 31, 2016:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders ¹	649,012	\$ 14.65	1,336,791
Equity compensation plans not approved by security holders ²	—	—	249,843
Total	<u>649,012</u>	\$ <u>14.65</u>	<u>1,586,634</u>

¹ Consists of Employers Mutual's 2007 Stock Incentive Plan, 2003 Incentive Stock Option Plan and 2008 Employee Stock Purchase Plan. Securities available for future issuance includes 987,387 shares that may be issued in the form of restricted stock, restricted stock units, performance shares, performance units or other stock-based awards under Employers Mutual's 2007 Stock Incentive Plan.

² Consists of Employers Mutual's 2013 Non-Employee Director Stock Purchase Plan.

For a description of each plan, see note 13 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K.

ITEM 6. SELECTED FINANCIAL DATA

	Year ended December 31,										
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	
(\$ in thousands, except share and per share amounts)											
INCOME STATEMENT DATA											
Insurance premiums earned	\$ 592,408	\$ 570,266	\$ 540,722	\$ 515,506	\$ 458,846	\$ 416,402	\$ 389,122	\$ 384,011	\$ 389,318	\$ 393,059	
Net investment income	47,490	45,582	46,465	43,022	44,145	46,111	49,489	47,759	48,403	48,482	
Realized investment gains (losses)	4,074	6,153	4,349	8,997	8,017	9,303	3,869	17,922	(24,456)	3,724	
Other income	1,011	1,725	2,931	460	834	828	783	756	627	545	
Total revenues	644,983	623,726	594,467	567,985	511,842	472,644	443,263	450,448	413,892	445,810	
Losses and expenses	581,776	552,070	553,560	507,132	460,209	483,636	400,814	389,021	425,132	387,171	
Income (loss) before income tax expense (benefit)	63,207	71,656	40,907	60,853	51,633	(10,992)	42,449	61,427	(11,240)	58,639	
Income tax expense (benefit)	17,004	21,494	10,915	17,334	13,667	(8,255)	11,100	16,770	(8,917)	16,343	
Net income (loss)	\$ 46,203	\$ 50,162	\$ 29,992	\$ 43,519	\$ 37,966	\$ (2,737)	\$ 31,349	\$ 44,657	\$ (2,323)	\$ 42,296	
Net income (loss) per common share - basic and diluted:	\$ 2.20	\$ 2.43	\$ 1.48	\$ 2.22	\$ 1.96	\$ (0.14)	\$ 1.60	\$ 2.25	\$ (0.11)	\$ 2.05	
Premiums earned by segment:											
Property and casualty insurance	\$ 456,467	\$ 447,197	\$ 422,381	\$ 392,719	\$ 357,139	\$ 321,649	\$ 305,647	\$ 308,079	\$ 315,598	\$ 320,836	
Reinsurance	135,941	123,069	118,341	122,787	101,707	94,753	83,475	75,932	73,720	72,223	
Total	\$ 592,408	\$ 570,266	\$ 540,722	\$ 515,506	\$ 458,846	\$ 416,402	\$ 389,122	\$ 384,011	\$ 389,318	\$ 393,059	
BALANCE SHEET DATA											
Total assets	\$ 1,588,813	\$ 1,535,955	\$ 1,497,820	\$ 1,374,501	\$ 1,290,709	\$ 1,224,031	\$ 1,182,006	\$ 1,159,997	\$ 1,103,022	\$ 1,198,254	
Stockholders' equity	\$ 553,342	\$ 524,938	\$ 502,886	\$ 455,210	\$ 401,209	\$ 352,341	\$ 362,853	\$ 336,627	\$ 277,840	\$ 355,893	

Year ended December 31,

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
OTHER DATA										
Average return on equity	8.6%	9.8%	6.3%	10.2%	10.1%	(0.8)%	9.0%	14.5%	(0.7)%	12.8%
Book value per share	\$ 26.07	\$ 25.26	\$ 24.72	\$ 22.81	\$ 20.72	\$ 18.24	\$ 18.71	\$ 17.11	\$ 13.96	\$ 17.22
Dividends paid per share	\$ 0.78	\$ 0.69	\$ 0.63	\$ 0.57	\$ 0.54	\$ 0.51	\$ 0.49	\$ 0.48	\$ 0.48	\$ 0.46
Property and casualty insurance subsidiaries' aggregate pool percentage	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Reinsurance subsidiary's quota share percentage	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Closing stock price	\$ 30.01	\$ 25.30	\$ 23.64	\$ 20.41	\$ 15.92	\$ 13.71	\$ 15.10	\$ 14.34	\$ 17.10	\$ 15.78
Net investment yield (pre-tax)	3.53%	3.55%	3.81%	3.80%	4.17%	4.49%	4.89%	4.87%	5.00%	5.02%
Cash dividends to closing stock price	2.6%	2.7%	2.7%	2.8%	3.4%	3.7%	3.2%	3.3%	2.8%	2.9%
Common shares outstanding	21,222,535	20,780,439	20,344,409	19,958,980	19,364,127	19,313,387	19,391,517	19,671,722	19,901,502	20,666,820
Statutory trade combined ratio	97.3%	96.8%	101.6%	97.5%	99.0%	115.6%	102.1%	100.3%	109.1%	96.8%

EMC INSURANCE GROUP INC. AND SUBSIDIARIES

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

The term "Company" is used below interchangeably to describe EMC Insurance Group Inc. (Parent Company only) and EMC Insurance Group Inc. and its subsidiaries. The following discussion and analysis of the Company's financial condition and results of operations should be read in conjunction with the Consolidated Financial Statements and Notes to Consolidated Financial Statements included under Part II, Item 8 of this Form 10-K.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

The Private Securities Litigation Reform Act of 1995 provides issuers the opportunity to make cautionary statements regarding forward-looking statements. Accordingly, any forward-looking statement contained in this report is based on management's current beliefs, assumptions and expectations of the Company's future performance, taking all information currently available into account. These beliefs, assumptions and expectations can change as the result of many possible events or factors, not all of which are known to management. If a change occurs, the Company's business, financial condition, liquidity, results of operations, plans and objectives may vary materially from those expressed in the forward-looking statements. The risks and uncertainties that may affect the actual results of the Company include, but are not limited to, the following:

- catastrophic events and the occurrence of significant severe weather conditions;
- the adequacy of loss and settlement expense reserves;
- state and federal legislation and regulations;
- changes in the property and casualty insurance industry, interest rates or the performance of financial markets and the general economy;
- rating agency actions;
- "other-than-temporary" investment impairment losses; and
- other risks and uncertainties inherent to the Company's business, including those discussed under the heading "Risk Factors" in Part I, Item 1A, of this Form 10-K.

Management intends to identify forward-looking statements when using the words "believe", "expect", "anticipate", "estimate", "project" or similar expressions. Undue reliance should not be placed on these forward-looking statements. The Company disclaims any obligation to update such statements or to announce publicly the results of any revisions that it may make to any forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date of such statements.

COMPANY OVERVIEW

The Company, a majority owned subsidiary of Employers Mutual Casualty Company (Employers Mutual), is an insurance holding company with operations in property and casualty insurance and reinsurance. The operations of the Company are highly integrated with those of Employers Mutual through participation in a property and casualty reinsurance pooling agreement (the "pooling agreement"), a quota share retrocessional reinsurance agreement (the "quota share agreement") and inter-company reinsurance programs with Employers Mutual. All transactions occurring under the pooling agreement, quota share agreement and the inter-company reinsurance programs with Employers Mutual are based on statutory accounting principles. Certain adjustments are made to these amounts to bring them into compliance with U.S. generally accepted accounting principles (GAAP).

Property and casualty insurance operations are conducted through three subsidiaries and represent the most significant segment of the Company's business, totaling 77 percent of consolidated premiums earned in 2016. The Company's three property and casualty insurance subsidiaries and two subsidiaries and an affiliate of Employers Mutual (Union Insurance Company of Providence, EMC Property & Casualty Company and Hamilton Mutual Insurance Company) are parties to a pooling agreement with Employers Mutual. Under the terms of the pooling agreement, each company cedes to Employers Mutual all of its insurance business, and assumes from Employers Mutual an amount equal to its participation in the pool. All premiums, losses, settlement expenses, and other underwriting and administrative expenses, excluding the voluntary reinsurance business assumed by Employers Mutual from nonaffiliated insurance companies, are prorated among the parties on the basis of participation in the pool. Employers Mutual negotiates reinsurance agreements that provide protection to the pool and each of its participants, including protection against losses arising from catastrophic events. The aggregate participation of the Company's property and casualty insurance subsidiaries in the pool is 30 percent.

The Inter-Company Committees of the boards of directors of the Company and Employers Mutual approved a new inter-company reinsurance program between the Company's insurance subsidiaries in the property and casualty insurance segment and Employers Mutual for calendar year 2016. This reinsurance program is intended to reduce the volatility of the Company's quarterly results caused by excessive catastrophe and storm losses, and provide protection from both the frequency and severity of such losses. The reinsurance program consists of two semi-annual aggregate catastrophe excess of loss treaties. The first treaty was effective from January 1, 2016 through June 30, 2016, and had a retention of \$20.0 million and a limit of \$24.0 million. The total cost of this treaty was approximately \$6.3 million. The second treaty was effective from July 1, 2016 through December 31, 2016, and had a retention of \$15.0 million and a limit of \$12.0 million. The total cost of this treaty was approximately \$1.5 million. All catastrophe and storm losses assumed by the property and casualty insurance subsidiaries (net of applicable reinsurance recoveries from external reinsurance protections purchased by the pool participants) were subject to the terms of these treaties, and there was no co-participation provision.

Operations of the pool and the inter-company reinsurance program give rise to inter-company balances with Employers Mutual, which are generally settled during the subsequent month. The investment and income tax activities of the pool participants are not subject to the pooling agreement. The pooling agreement provides that Employers Mutual will make up any shortfall or difference resulting from an error in its systems and/or computation processes that would otherwise result in the required restatement of the pool participants' financial statements.

The purpose of the pooling agreement is to spread the risk of an exposure insured by any of the pool participants among all the companies. The pooling agreement produces a more uniform and stable underwriting result from year to year for all companies in the pool than might be experienced individually. In addition, each company benefits from the capacity of the entire pool, rather than being limited to policy exposures of a size commensurate with its own assets, and from the wide range of policy forms, lines of insurance written, rate filings and commission plans offered by each of the companies.

Reinsurance operations are conducted through EMC Reinsurance Company and accounted for 23 percent of consolidated premiums earned in 2016. The Company's reinsurance subsidiary is party to a quota share agreement and an inter-company reinsurance program with Employers Mutual. Under the terms of the quota share agreement, the reinsurance subsidiary assumes 100 percent of Employers Mutual's assumed reinsurance business, subject to certain exceptions. The inter-company reinsurance program in place with Employers Mutual covers both business assumed from Employers Mutual through the quota share agreement, as well as business obtained outside the quota share agreement. The Inter-Company Committees of the boards of directors of the Company and Employers Mutual approved a change in the inter-company reinsurance program between the Company's reinsurance subsidiary and Employers Mutual for calendar year 2016. The 2016 reinsurance program consists of two treaties. The first was a per occurrence catastrophe excess of loss treaty with a retention of \$10.0 million, a limit of \$10.0 million, 20 percent co-participation, and no reinstatement. The total cost of this treaty was approximately \$2.0 million. The second was an annual aggregate catastrophe excess of loss treaty with a retention of \$20.0 million, a limit of \$100.0 million, and 20 percent co-participation. The total cost of this treaty was approximately \$3.1 million. Any losses recovered under the per occurrence treaty inure to the benefit of the aggregate treaty, and only catastrophic events with total losses greater than \$500,000 are subject to the terms of the aggregate treaty. Prior to 2016, the reinsurance program with Employers Mutual consisted of a single excess of loss reinsurance agreement. Under the terms of that agreement, the reinsurance subsidiary retained the first \$4.0 million of losses per event, and also retained 20.0 percent of any losses between \$4.0 million and \$10.0 million and 10.0 percent of any losses between \$10.0 million and \$50.0 million. The cost of the excess of loss reinsurance protection, which included reimbursement for the cost of reinsurance protection purchased by Employers Mutual to protect itself from the assumption of excessive losses in the event of a major catastrophe, was 8.0 percent of the reinsurance subsidiary's total assumed reinsurance premiums written in 2015 and 2014.

In connection with the change in the inter-company reinsurance program in 2016, the reinsurance subsidiary began purchasing additional reinsurance protection in peak exposure territories from external parties in which coverage is triggered when losses experienced by the insurance industry from a catastrophic event exceed a specified threshold. Any reinsurance recoveries received from external parties reduces the amount of losses ceded to Employers Mutual under the inter-company reinsurance program. The net cost of this external reinsurance protection was approximately \$3.5 million in 2016.

The reinsurance subsidiary does not directly reinsure any of the insurance business written by Employers Mutual or the other pool participants; however, Employers Mutual assumes reinsurance business from the Mutual Reinsurance Bureau underwriting association (MRB), which provides a small amount of reinsurance protection to the members of the EMC Insurance Companies pooling agreement. As a result, the reinsurance subsidiary's assumed exposures include a small portion of the EMC Insurance Companies' direct business, after ceded reinsurance protections purchased by MRB are applied. In addition, the reinsurance subsidiary does not reinsure any "involuntary" facility or pool business that Employers Mutual assumes pursuant to state law. The reinsurance subsidiary assumes all foreign currency exchange gain/loss associated with contracts incepting on January 1, 2006 and thereafter that are subject to the quota share agreement. Operations of the quota share agreement and the inter-company reinsurance program give rise to inter-company balances with Employers Mutual, which are generally settled during the month following the end of each quarter. The investment and income tax activities of the reinsurance subsidiary are not subject to the quota share agreement.

INDUSTRY OVERVIEW

An insurance company's underwriting results reflect the profitability of its insurance operations, excluding investment income. Underwriting profit or loss is calculated by subtracting losses and expenses incurred from premiums earned.

Insurance companies collect cash in the form of insurance premiums and pay out cash in the form of loss and settlement expense payments. Additional cash outflows occur through the payment of acquisition and underwriting costs such as commissions, premium taxes, salaries and general overhead. During the loss settlement period, which varies by line of business and by the circumstances surrounding each claim and may cover several years, insurance companies invest the cash premiums; thereby earning interest and dividend income. This investment income supplements underwriting results and contributes to net earnings. Funds from called and matured fixed maturity securities are reinvested at current interest rates. The low interest rate environment that has existed during the past several years has had a negative impact on the insurance industry's investment income.

Insurance pricing has historically been cyclical in nature. Periods of excess capital and increased competition encourage price reductions and liberal underwriting practices (referred to as a soft market) as insurance companies compete for market share, while attempting to cover the inevitable underwriting losses from these actions with investment income. A prolonged soft market generally leads to a reduction in the adequacy of capital in the insurance industry. To cure this condition, underwriting practices are tightened, premium rate levels increase and competition subsides as companies strive to strengthen their balance sheets (referred to as a hard market). At the end of 2013, premium rate level increases were beginning to decline, after increasing consistently during the three previous years. This trend of declining premium rate increases continued through 2016, where premium rate increases were slightly positive. It is important to note that the hardening of the market that occurred during 2011, 2012 and 2013 was somewhat unusual in that it was not driven by a reduction in capital adequacy, but rather by a persistent decline in investment income and an increase in severe weather events. The outlook for 2017 is that the Company's overall premium rate level will remain steady or increase slightly.

A substantial determinant of an insurance company's underwriting results is its loss and settlement expense reserving practices. Insurance companies must estimate the amount of losses and settlement expenses that will ultimately be paid to settle claims that have occurred to date (loss and settlement expense reserves). This estimation process is inherently subjective with the possibility of widely varying results, particularly for certain highly volatile types of claims (i.e., asbestos, environmental and various casualty exposures, such as products liability, where the loss amount and the parties responsible are difficult to determine). During a soft market, inadequate premium rates put pressure on insurance companies to under-estimate their loss and settlement expense reserves in order to report better results. Correspondingly, inadequate reserves can play an integral part in bringing about a hard market, because increased profitability from higher premium rate levels can be used to strengthen inadequate reserves.

The Company closely monitors the activities of state legislatures, the United States Congress and federal and state agencies through its membership in various organizations. In particular, our trade organizations are working to achieve a nationwide data security and breach standard, to promote accident avoidance and accident prevention technology, to oppose legislative or regulatory changes that weaken the private workers' compensation insurance marketplace, to prevent the Federal Insurance Office and other federal and international entities expanding their control of the insurance industry from undermining the consumer-focused state insurance regulatory system, to pass appropriate tax reform legislation, and to continue efforts to obtain an exemption for homeowners' insurers from disparate impact liability under the Fair Housing Act.

MANAGEMENT ISSUES AND PERSPECTIVES

Low interest rate environment

The persistent low interest rate environment has an influence on several operational areas that have the potential to materially impact the Company's financial condition and results of operations. Following is a brief discussion of the major operational areas being monitored by management in light of the current low interest rate environment.

Investment portfolio

The majority of the Company's investment portfolio is invested in fixed maturity securities. The prolonged low interest rate environment has had a positive impact on the Company's financial condition because the portfolio of fixed maturity securities available-for-sale had net unrealized holding gains of \$6.6 million at December 31, 2016, reflecting the fact that the average yield on the Company's portfolio is higher than the yields currently available in the fixed maturity marketplace. However, proceeds from maturing securities and cash from operating activities are being invested at the current lower yields, which has had a negative impact on investment income over the past several years. Interest rates increased approximately 17 basis points during 2016, which reduced the amount of unrealized gains on the Company's fixed maturity portfolio. If the current low interest rate environment continues, future growth in investment income will be limited.

Underwriting results

The Company's portfolio of fixed maturity securities provides a substantial amount of investment income that supplements underwriting results and contributes to net earnings. The prolonged low interest rate environment has resulted in limited growth in investment income, which has increased the need to achieve a consistent underwriting profit. Management continually stresses the importance of striving for an underwriting profit, and is working diligently with the branch offices to maintain prudent underwriting and pricing standards, and establish long-term business plans with the Company's agency force.

Equity portfolio market risk

Approximately 14.6 percent of the Company's investment portfolio is invested in equity securities. Net unrealized investment gains on the equity portfolio totaled approximately \$43.1 million at December 31, 2016, which is reflected as accumulated other comprehensive income in the Company's financial statements and represents \$2.03 per share of the Company's December 31, 2016 book value of \$26.07 per share. To help protect the Company from a sudden and significant decline in the value of its equity portfolio, management began investing in a limited partnership during the first quarter of 2014 to implement and maintain an equity tail-risk hedging strategy. This hedging strategy is designed to help protect the Company from significant monthly downside price volatility in the equity markets. By implementing this hedging strategy, management was able to reduce the level of risk contained in the Company's financial statements without reducing the size of the equity portfolio. While there is a cost associated with this protection, management views this cost similar to the cost of an insurance policy. The cost of the hedging strategy is equal to the decline in the carrying value of the limited partnership that the Company invested in to implement the strategy, and is reported as a realized investment loss in the Company's financial statements. The decline in the carrying value of the limited partnership primarily reflects the cost of hedging contracts that expired without value during the year, but also includes changes in the value of contracts that were still in effect at year-end.

Premium rate levels

Premium rate levels have improved steadily during the past four years, and management has worked diligently with the sixteen branch offices to stress the importance of achieving modest, but consistent, commercial lines rate level increases whenever possible. These efforts have been successful, as the Company was able to implement high-single-digit rate level increases during 2012 and 2013, and more modest increases during 2014, 2015 and 2016. Rate levels for commercial lines of business are projected to decline on an industry-wide basis in 2017, but management currently expects the Company's overall rate level to remain steady or increase slightly in 2017. Management will continue to work with the branch offices to ensure that all opportunities for additional rate level increases are pursued.

Change in personal lines operation

Effective January 1, 2016, Personal Lines Operations assumed responsibility for the growth and profitability of personal lines business throughout the country. In connection with this change in oversight, management implemented new personal auto and homeowners products that are expected to improve profitability. The new products have been rolled-out in all locations and have been well received by agents and policyholders; however, it will take some time before the anticipated improvement in personal lines profitability begins to occur. In addition to the potential for improved profitability in the personal lines of business, this change in oversight has allowed the 16 local branch offices to focus their efforts on commercial lines of business, which accounts for approximately 92 percent of the property and casualty insurance segment's net written premiums.

Commercial Auto Line of Business

The Company, like most of the insurance industry, has experienced a significant increase in both claims frequency and severity in the commercial auto line of business in recent years. The industry is forecasting continued deterioration in the commercial auto line of business in 2017, and management is forecasting similar deterioration in the property and casualty insurance segment's results for this line of business if steps are not taken to improve profitability. The commercial auto line of business represents approximately 25 percent of the property and casualty insurance segment's commercial business, so it is imperative that profitability is restored to this line of business. Recognizing the importance of this issue, management implemented an intensive, multi-year Accelerate Commercial Auto Profitability project during 2016, with a goal of returning this line of business to profitability by mid-2019. While profitability is the end goal of this project, incremental improvements in performance are expected in each of the next three years as the action plans developed by each of the eight teams charged with returning this line of business to profitability are implemented.

Investing in innovation

Management is focused on finding innovative solutions and leveraging technology to create insurance-related solutions that can set our agents apart, while benefiting policyholders. In late 2015, management formed a strategic analytics department focused on utilizing high-quality data to make better decisions. Key priorities for this department include partnering with the Company's 16 local branch offices to develop innovative products and services, improving claims fraud detection capabilities, prioritizing claims resources and integrating a decision science discipline into the decision making process. During 2016, the strategic analytics department undertook several initiatives, including the creation of an innovation lab, which is comprised of team members who are empowered to collaborate, make quick decisions and take action to develop new and creative insurance-related solutions. One of the first projects undertaken by the innovation lab was the development and introduction of a telematics program, which is currently being piloted with select agencies. Management's approach to telematics has been much different than other insurance companies, and has been well received by agents. Rather than focusing solely on improving the Company's underwriting results, the focus has been directed towards agent differentiation and helping policyholders lower their costs of doing business through improvements in fuel economy, uptime and driver retention. Other projects being developed include a computer application to assist insureds in identifying and reporting hazards that can lead to slip and fall accidents, a pilot program with schools that utilizes sensors to monitor and manage property risks using real-time data, and a partnership with a start-up company that has developed patent pending wearable technology that monitors environmental exposures to help identify and address safety risks in industrial workplace environments.

Catastrophe and storm losses

The Company's property and casualty insurance subsidiaries write a large portion of their business in the Midwest, and therefore have exposure to wind, hail, and tornado losses caused by convective storms. Prior to 2013, the Company experienced five consecutive years of above average catastrophe and storm losses, and experienced record levels of catastrophe and storm losses in two of those five years (2008 and 2011). Due to the volatility of catastrophe and storm losses, the Company's net income has historically varied significantly from quarter to quarter and year to year. In an effort to reduce the volatility of the Company's quarterly net income, management implemented a new inter-company reinsurance program between the three insurance subsidiaries in the property and casualty insurance segment and Employers Mutual effective January 1, 2016. In addition, the inter-company reinsurance program between the Company's reinsurance subsidiary and Employers Mutual was modified for 2016. It is expected that these new reinsurance programs will reduce the volatility of the Company's quarterly net income caused by excessive catastrophe and storm losses.

Reserving methodology

During the third quarter of 2016, management implemented a new reserving methodology for the determination of bulk reserves in the property and casualty insurance segment. The new methodology, which is referred to as the accident year ultimate estimate approach, better conforms to industry practices and will provide increased transparency of the drivers of the property and casualty insurance segment's performance.

The implementation of the new reserving methodology did not have a material impact on total carried reserves for the property and casualty insurance segment; however, approximately \$5.6 million of incurred but not reported (IBNR) loss reserves and allocated settlement expense reserves were reallocated from prior accident years to the current accident year in multiple lines of business. This reduction in prior accident year reserves is reported as favorable development; however, this development is "mechanical" in nature, and did not have any impact on earnings because the total amount of carried reserves did not change as a result of this reallocation.

The property and casualty insurance segment's prior reserving methodology was focused on maintaining a consistent level of overall reserve adequacy. Case and IBNR loss reserves, as well as settlement expense reserves, were established independently of each other and added together to get the total loss and settlement expense reserve. The prior reserving methodology also separated the calculation of the aggregate reserves from the allocation of those reserves to the various accident years, and thus did not utilize explicit claim frequency and severity assumptions.

There is an inherent amount of uncertainty involved in the establishment of insurance liabilities. This uncertainty is greatest in the current and more recent accident years because a smaller percentage of the expected ultimate claims have been reported, adjusted and settled compared to more mature accident years. For this reason, the property and casualty insurance segment's carried reserves for these accident years reflect prudently conservative assumptions. As the carried reserves for these accident years run off, the overall expectation is that, more often than not, favorable development will occur.

Management believes the explicit assumptions utilized in the new reserving methodology provide more meaningful accident year information than the implicit assumptions underlying the prior methodology.

European Union/United States Covered Agreement

Solvency II came into effect in the European Union (EU) on January 1, 2016. Solvency II requires that in order for insurers and reinsurers outside of the EU to conduct business in the European market, their country of domicile regulatory system must be deemed equivalent. The US regulatory system has not been deemed equivalent at this time.

Due to this requirement, some European countries (primarily Germany and Belgium) have begun to enforce Solvency II, requiring that nonequivalent reinsurers establish a branch office in their country in order to conduct business. Both countries granted exceptions to this rule for 2017 renewals, which allowed the reinsurance segment to renew most of its EU business; however, these exceptions are not likely to be extended beyond 2017.

On January 13, 2017, the United States and the European Union announced they had completed negotiation of a "Bilateral Agreement between the European Union and the United States of America on Prudential Measures Regarding Insurance and Reinsurance" (the "Covered Agreement"). This agreement was submitted to the US Congress and the Office of the US Trade Representative on the same day so they could begin a required 90-day review of this document. The Covered Agreement eliminates collateral and local presence requirements for US and EU reinsurers operating on a cross-border basis; however, to qualify for the elimination of these requirements, reinsurers must meet several requirements, including a minimum of \$250 million of capital and surplus. At December 31, 2016, the reinsurance subsidiary had \$209 million of capital and surplus.

Management is closely monitoring this situation. If the agreement is ultimately approved, management will have to consider its alternatives. Such alternatives could include injecting additional capital into the reinsurance subsidiary, ceasing operations in the EU, fronting the business through other reinsurers, or utilizing other arrangements deemed acceptable by regulators. In 2017, the Company expects to write approximately \$9 million of assumed reinsurance business in the EU.

MEASUREMENT OF RESULTS

The Company's consolidated financial statements are prepared on the basis of GAAP. The Company also prepares financial statements for each of its insurance subsidiaries based on statutory accounting principles that are filed with insurance regulatory authorities in the states where they do business. Statutory accounting principles are designed to address the concerns of state regulators and stress the measurement of the insurer's ability to satisfy its obligations to its policyholders and creditors.

Management evaluates the Company's operations by monitoring key measures of growth and profitability. Management measures the Company's growth by examining direct premiums written and, perhaps more importantly, premiums written assumed from affiliates. Management generally measures the Company's operating results by examining the Company's net income and return on equity, as well as the loss and settlement expense, acquisition expense and combined ratios. The following provides further explanation of the key measures management uses to evaluate the Company's results:

Direct Premiums Written. Direct premiums written is the sum of the total policy premiums, net of cancellations, associated with policies underwritten and issued by the Company's property and casualty insurance subsidiaries. These direct premiums written are transferred to Employers Mutual under the terms of the pooling agreement and are reflected in the Company's consolidated financial statements as premiums written ceded to affiliates. See note 3 of Notes to Consolidated Financial Statements.

Premiums Written Assumed From Affiliates and Premiums Written Assumed From Nonaffiliates. For the property and casualty insurance segment, premiums written assumed from affiliates and nonaffiliates reflects the property and casualty insurance subsidiaries' aggregate 30 percent participation interest in 1) the total direct premiums written by all the participants in the pooling arrangement, and 2) the involuntary business assumed by the pool participants pursuant to state law, respectively. For the reinsurance segment, premiums written assumed from nonaffiliates reflects the reinsurance business assumed through the quota share agreement (including "fronting" activities initiated by Employers Mutual) and reinsurance business assumed outside the quota share agreement. See note 3 of Notes to Consolidated Financial Statements. Management uses premiums written assumed from affiliates and nonaffiliates, which excludes the impact of written premiums ceded to reinsurers, as a measure of the underlying growth of the Company's insurance business from period to period.

Net Premiums Written. Net premiums written is calculated by summing direct premiums written, premiums written assumed from affiliates and nonaffiliates, and then subtracting from that result premiums written ceded to affiliates and nonaffiliates. For the property and casualty insurance segment, premiums written ceded to nonaffiliates is the portion of the direct and assumed premiums written that is transferred to 1) reinsurers in accordance with the terms of the underlying reinsurance contracts, based upon the risks they accept, and 2) state organizations on a mandatory basis in connection with various workers' compensation and assigned risk programs. For the reinsurance segment, premiums written ceded to nonaffiliates reflects reinsurance business that is ceded to other insurance companies in connection with "fronting" activities initiated by Employers Mutual. Premiums written ceded to affiliates includes both the cession of the Company's property and casualty insurance subsidiaries' direct business to Employers Mutual under the terms of the pooling agreement, and premiums ceded by the Company's subsidiaries to Employers Mutual under the terms of the inter-company reinsurance programs with Employers Mutual. See note 3 of Notes to Consolidated Financial Statements. Management uses net premiums written to measure the amount of business retained after cessions to reinsurers.

Loss and Settlement Expense Ratio. The loss and settlement expense ratio is the ratio (expressed as a percentage) of losses and settlement expenses incurred to premiums earned, and measures the underwriting profitability of a company's insurance business. The loss and settlement expense ratio is generally measured on both a gross (direct and assumed) and net (gross less ceded) basis. Management uses the gross loss and settlement expense ratio as a measure of the Company's overall underwriting profitability of the insurance business it writes and to assess the adequacy of the Company's pricing. The net loss and settlement expense ratio is meaningful in evaluating the Company's financial results, which are net of ceded reinsurance, as reflected in the consolidated financial statements. The loss and settlement expense ratios are generally calculated in the same way for GAAP and statutory accounting purposes.

Acquisition Expense Ratio. The acquisition expense ratio is the ratio (expressed as a percentage) of net acquisition and other expenses incurred to premiums earned, and measures a company's operational efficiency in producing, underwriting and administering its insurance business. For statutory accounting purposes, acquisition and other expenses of an insurance company exclude investment expenses. There is no such industry definition for determining an acquisition expense ratio for GAAP purposes. As a result, management applies the statutory definition to calculate the Company's acquisition expense ratio on a GAAP basis. The net acquisition expense ratio is meaningful in evaluating the Company's financial results, which are net of ceded reinsurance, as reflected in the consolidated financial statements.

GAAP Combined Ratio. The combined ratio (expressed as a percentage) is the sum of the loss and settlement expense ratio and the acquisition expense ratio, and measures a company's overall underwriting profit/loss. If the combined ratio is at or above 100, an insurance company cannot be profitable without investment income (and may not be profitable if investment income is insufficient). Management uses the GAAP combined ratio in evaluating the Company's overall underwriting profitability and as a measure for comparison of the Company's profitability relative to the profitability of its competitors who prepare GAAP-basis financial statements.

Statutory Combined Ratio. The statutory combined ratio (expressed as a percentage) is calculated in the same manner as the GAAP combined ratio, but is based on results determined pursuant to statutory accounting rules and regulations. The statutory “trade combined ratio” differs from the statutory combined ratio in that the acquisition expense ratio is based on net premiums written rather than net premiums earned. Management uses the statutory trade combined ratio as a measure for comparison of the Company’s profitability relative to the profitability of its competitors, all of whom must file statutory-basis financial statements with insurance regulatory authorities.

Catastrophe and storm losses. For the property and casualty insurance segment, catastrophe and storm losses include losses attributed to events that have occurred in the United States which have been assigned an occurrence number by the Property & Liability Resource Bureau (PLRB) Catastrophe Services. According to PLRB, an occurrence number is assigned when an event has produced conditions severe enough to have caused, or to be likely to have caused, property damage. For the reinsurance segment, catastrophe and storm losses include losses that have occurred in the United States, Puerto Rico and the U.S. Virgin Islands which have been designated as catastrophes by Property Claims Services (PCS), as well as non-U.S. catastrophe and storm losses reported by the ceding companies. According to PCS, catastrophe serial numbers are assigned to events that cause \$25.0 million or more in direct insured losses to property, and affect a significant number of policyholders and insurers.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of the Company's financial statements in conformity with GAAP requires management to adopt accounting policies and make estimates and assumptions that affect amounts reported in the consolidated financial statements and related disclosures. The Company's significant accounting policies are described in note 1, Summary of Significant Accounting Policies, of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K. The following estimates and assumptions are considered by management to be critically important in the preparation and understanding of the Company's financial statements and related disclosures. The estimates and assumptions utilized are complex and require subjective judgment.

Loss and settlement expense reserves

Processes and assumptions for establishing loss and settlement expense reserves

In the property and casualty insurance segment, the methodology used to establish direct loss and allocated settlement expense reserves changed in 2016. Beginning in September, estimated ultimate loss and allocated settlement expense amounts for most claims are established by accident year and line of business using standard actuarial techniques. At each reporting date, the amounts to be carried for IBNR loss reserves and allocated settlement expense reserves are determined by subtracting the amounts incurred to date (paid amounts plus case loss reserves carried for reported claims) from the estimated ultimate amounts. Under this methodology, changes in the incurred amounts will result in corresponding adjustments to the reserve amounts. Prior to September 2016, case loss reserves (including bulk case loss reserves), IBNR loss reserves and settlement expense reserves were all established independently of each other, and the amounts were added together to determine the total liability for losses and settlement expenses. Under that methodology, adjustments to any of the reserve components did not result in corresponding adjustments to the other reserve components. The implementation of the new reserving methodology did not have a material impact on total carried reserves for the property and casualty insurance segment; however, there was some movement of allocated settlement expense reserves to IBNR loss reserves, and a reallocation of loss and allocated settlement expense reserves by accident year. In connection with this reallocation of reserves by accident year, approximately \$5.6 million of IBNR loss and allocated settlement expense reserves were moved from prior accident years to the current accident year in multiple lines of business. This reduction in prior accident years' reserves is reported as favorable development; however, this development is "mechanical in nature", and did not have any impact on earnings because the total amount of carried reserves did not change.

In the reinsurance segment, Employers Mutual records the case and IBNR loss reserves reported by the ceding companies for the Home Office Reinsurance Assumed Department (“HORAD”) book of business. Since many ceding companies in the HORAD book of business do not report IBNR loss reserves, Employers Mutual establishes a bulk IBNR loss reserve, which is based on an actuarial reserve analysis, to cover a lag in reporting. For MRB, Employers Mutual records the case and IBNR loss reserves reported to it by the management of the association, along with a relatively small IBNR loss reserve to cover a one-month reporting lag. The booking of the lag IBNR loss reserve may be suspended, and negative bulk IBNR loss reserves may be established, during periods when the actuarial reviews indicate MRB's carried reserves are more than adequate to cover its liabilities. To verify the adequacy of the reported reserves, an actuarial evaluation of MRB's reserves is performed at each year-end.

Property and Casualty Insurance Segment

Following is a summary of the carried loss and settlement expense reserves for the property and casualty insurance segment at December 31, 2016 and 2015.

(\$ in thousands) <u>Line of business</u>	December 31,	
	2016	2015
Commercial lines:		
Automobile	\$ 107,328	\$ 95,564
Property	36,303	34,072
Workers' compensation	154,435	160,645
Liability	170,580	168,062
Other	2,193	2,170
Total commercial lines	470,839	460,513
Personal lines	15,548	19,900
Total property and casualty insurance segment	\$ 486,387	\$ 480,413

Branch claims personnel establish case loss reserves for individual claims, with mandatory home office claims department review of reserves that exceed a specified threshold. The philosophy utilized to establish case loss reserves is exposure based, and implicitly assumes a consistent inflationary and legal environment. When claims department personnel establish case loss reserves, they take into account various factors that influence the potential exposure.

The claims department has implemented specific line-of-business guidelines that are used to establish the individual case loss reserve estimates. These guidelines, which are used for both short-tail and long-tail claims, require the claims department personnel to reserve for the probable (most likely) exposure for each claim. Probable exposure is defined as what is likely to be awarded if the case were to be decided by a civil court in the applicable venue or, in the case of a workers' compensation case, by that state's Workers' Compensation Commission. This evaluation process is repeated throughout the life of the claim at regular intervals, and as additional information becomes available. While performing these regular reviews, the branch claims personnel are able to make adjustments to the case loss reserves for location and time specific factors, such as legal venue, inflation, and changes in applicable laws.

To provide consistency in the reserving process, the claims department utilizes established claims management processes and an automated claims system. Claims personnel conduct periodic random case loss reserve reviews to verify the accuracy of the reserve estimates and adherence to the reserving guidelines. In addition, the claims department has specific line-of-business management controls for case loss reserves. For example, all workers' compensation claim files are reviewed by management before benefits are declined, and all casualty case loss reserves are reviewed every 60 days for reserve adequacy.

The automated claims system utilizes an automatic diary process that helps ensure that case loss reserve estimates are reviewed on a regular basis. The claims system requires written documentation each time a case loss reserve is established or modified, and provides management with the information necessary to perform individual reserve reviews and monitor reserve development. In addition, the claims system produces monthly reports that allow management to analyze case loss reserve development in the aggregate, by branch, by line of business, or by claims adjuster.

As previously noted, a new reserving methodology was implemented in 2016. Under this new methodology, ultimate loss and allocated settlement expense amounts expected to be incurred are established by accident year and line of business. The amount of IBNR loss and allocated settlement expense reserves carried at each reporting dated is determined by subtracting the amounts incurred to date from the ultimate estimated incurred amounts.

Ceded loss reserves are derived by applying the ceded contract terms to the direct loss reserves. For excess of loss contracts (excluding the catastrophe contract), this is accomplished by applying the ceded contract terms to the case loss reserves of the ceded claims. For the catastrophe excess of loss contract, ceded loss reserves are calculated by applying the contract terms to (1) the aggregate case loss reserves on claims stemming from catastrophes and (2) the estimate of IBNR loss reserves developed for each individual catastrophe. For quota share contracts, ceded loss reserves are calculated as the quota share percentage multiplied by both case and IBNR loss reserves on the direct business.

Internal actuarial evaluations of the prior quarter's overall loss reserve levels are performed each quarter for all direct lines of business. There is a certain amount of random variation in loss and allocated settlement expense development patterns, which results in some uncertainty regarding the estimated ultimate projections, particularly for longer-tail lines such as workers' compensation, other liability and commercial auto liability. Therefore, the reasonableness of the actuarial projections is regularly monitored through an examination of the assumptions underlying those projections.

As previously noted, one assumption underlying the reserve estimation process is that the inflation trends implicitly built into the historical loss and allocated settlement expense development patterns will continue into the future. To estimate the sensitivity of the estimated ultimate loss and allocated settlement expense payments to an unexpected change in inflationary trends, the actuarial department derived expected payment patterns separately for each major line of business. These patterns were applied to the December 31, 2016 loss and allocated settlement expense reserves to generate estimated annual incremental loss and allocated settlement expense payments for each subsequent calendar year. Then, for the purpose of sensitivity testing, an explicit annual inflationary variance of one percent was added to the inflationary trend that is implicitly embedded in the estimated payment patterns, and revised incremental loss and settlement expense payments were calculated. This unexpected inflation trend could arise from a variety of sources including a change in economic inflation, social inflation and, especially for the workers' compensation line of business, the introduction of new medical technologies and procedures, changes in the utilization of procedures and changes in life expectancy. The estimated cumulative impact that this unexpected one percent variance in the inflationary trend would have on the Company's results of operations over the lifetime of the underlying claims is shown below. A variance in the inflationary trend would also affect the Company's financial position in that the Company's equity would be impacted by an amount equivalent to the change in net income. A variance of this type would typically be recognized in loss and settlement expense reserves and, accordingly, would not have a material effect on liquidity because the claims have not been paid. A one percent variance in the projected inflationary trend is considered reasonably likely based on the range of actuarial indications developed during the analysis of the property and casualty insurance segment's carried reserves.

(\$ in thousands) Line of business	After-tax impact on earnings from a one percent variance in the projected inflationary trend		
Personal auto liability	\$(83)	to	\$84
Commercial auto liability	(1,096)	to	1,117
Auto physical damage	—	to	—
Workers' compensation	(4,133)	to	4,699
Other liability	(4,401)	to	4,891
Property	(290)	to	298
Homeowners	(23)	to	24

The Company uses standard actuarial methods to produce estimates of ultimate loss ratios by accident year and line of business. Underlying each selection are explicit assumptions regarding the ultimate claim frequency and severity associated with the selected ultimate ratio. As the assumptions are based on estimates made at a specific point in time, it is likely that the ultimate claim frequency and severity experience, and, therefore, the ultimate loss ratio, will vary upwards or downwards from prior estimates. The expected variation will be greater for less mature accident years, and decreases as each accident year ages. This uncertainty is reflected in the unpaid loss estimates underlying the selected estimated ultimate loss ratios, which produce the carried loss reserves. Assuming the unpaid loss estimates are unbiased, the cumulative impact on the Company's results of operations of a one percent variance in the associated carried loss reserves over the lifetime of the underlying claims is shown below. A variance in carried loss reserves would also affect the Company's financial position in that the Company's equity would be impacted by an amount equivalent to the change in net income. A one percent variance in the unpaid loss estimates underlying the selected ultimate loss ratio estimates is considered reasonably likely based on the range of actuarial indications developed during the analysis of the property and casualty insurance segment's carried loss reserves.

(\$ in thousands) Line of business	After-tax impact on earnings from a one percent variance in loss reserves		
Personal auto liability	\$(63)	to	\$64
Commercial auto liability	(584)	to	596
Auto physical damage	(10)	to	10
Workers' compensation	(795)	to	811
Other liability	(796)	to	812
Property	(228)	to	232
Homeowners	(25)	to	25

Similar to the loss reserving process, the Company uses standard actuarial methods to produce estimates of ultimate ratios by accident year and line of business for allocated settlement expenses. Underlying each selection are explicit assumptions regarding the ultimate claim frequency and settlement expense severity associated with the selected estimated ultimate ratio. As the assumptions are based on estimates made at a specific point in time, it is likely that the ultimate allocated settlement expense ratios will vary upwards or downwards from prior estimates. The expected variation will be greater for less mature accident years, and decreases as each accident year ages. This uncertainty is reflected in the unpaid allocated settlement expense estimates underlying the selected estimated ultimate ratios, which produce the carried allocated settlement expense reserves. Assuming the unpaid allocated settlement expense estimates are unbiased, the cumulative impact on the Company's results of operations of a one percent variance in the associated allocated settlement expense reserves over the lifetime of the underlying claims is shown below. A variance in carried allocated settlement expense reserves would also affect the Company's financial position in that the Company's equity would be impacted by an amount equivalent to the change in net income. A one percent variance in the unpaid allocated settlement expense estimates underlying the selected estimated ultimate allocated settlement expense ratios is considered reasonably likely based on the range of actuarial indications developed during the analysis of the property and casualty insurance segment's carried allocated settlement expense reserves.

(\$ in thousands) Line of business	After-tax impact on earnings from a one percent variance in allocated settlement expense reserves		
Personal auto liability	\$(6)	to	\$6
Commercial auto liability	(66)	to	67
Auto physical damage	(2)	to	2
Workers' compensation	(71)	to	73
Other liability	(309)	to	315
Property	(32)	to	33
Homeowners	(3)	to	3

One of the variables impacting the estimation of loss reserves is the assumption that the vast majority of future construction defect losses will continue to occur in those states in which most construction defect claims have historically arisen. Since the vast majority of these losses have been confined to a relatively small number of states, which is consistent with industry experience, there is no provision in the loss reserve for a significant spread of construction defect claims to other states. It is also assumed that various underwriting initiatives implemented in recent years will gradually mitigate the amount of construction defect losses experienced. These initiatives include exclusionary endorsements, increased care regarding additional insured endorsements, a general reduction in the amount of contractor business written relative to the total commercial lines book of business, and underwriting restrictions on the writing of residential contractors. The estimation of the Company's loss reserves also does not contemplate substantial losses from potential mass torts such as Methyl Tertiary Butyl Ether (a gasoline additive that reduces emissions, but causes pollution), tobacco, silicosis, cell phones and lead. Further, consistent with general industry practice, the loss reserve for all liability lines does not provide for any significant retroactive expansion of coverage through judicial interpretation. If these assumptions prove to be incorrect, ultimate paid amounts on losses may differ substantially from the carried loss reserves.

The estimation of settlement expense reserves assumes a consistent claims department philosophy regarding the defense of lawsuits. If the pool participants should in the future take a more aggressive defense posture, defense costs would increase and it is likely that the Company's carried allocated settlement expense reserves would be deficient. However, such a change in philosophy would likely reduce losses, generating some offsetting redundancy in the loss reserves.

The property and casualty insurance subsidiaries have exposure to environmental and asbestos claims arising primarily from the other liability line of business. These exposures are closely monitored by management, and IBNR loss reserves have been established to cover estimated ultimate losses. The loss and settlement expense reserves associated with asbestos claims have been increased each year for the last several years due to continued reporting of new claims at a rate not previously anticipated, as well as updated internal ultimate loss and settlement expense evaluations. In 2016, the loss and settlement expense reserves for asbestos claims were strengthened approximately \$3.5 million.

Environmental IBNR loss reserves are established in consideration of the implied three-year survival ratio (ratio of loss and settlement expense reserves to the three-year average of loss and settlement expense payments). Estimation of ultimate liabilities for these exposures is unusually difficult due to unresolved issues such as whether coverage exists, the definition of an occurrence, the determination of ultimate damages and the allocation of such damages to financially responsible parties. Therefore, any estimation of these liabilities is subject to greater than normal variation and uncertainty, and ultimate payments for losses and settlement expenses for these exposures may differ significantly from the carried reserves.

Reinsurance Segment

Following is a summary of the carried loss and settlement expense reserves for the reinsurance segment at December 31, 2016 and 2015.

(\$ in thousands) <u>Line of business</u>	<u>December 31,</u>	
	2016	2015
Pro rata reinsurance	\$ 60,412	\$ 60,098
Excess of loss reinsurance	143,733	138,263
Total reinsurance segment	<u>\$ 204,145</u>	<u>\$ 198,361</u>

The reinsurance book of business is comprised of two major components. The first is HORAD, which includes the reinsurance business assumed by the reinsurance subsidiary through the quota share agreement and the business written directly by the reinsurance subsidiary outside of the quota share agreement. The second is MRB, which is a voluntary reinsurance pool in which Employers Mutual participates with four other unaffiliated insurers.

The primary actuarial methods used to project ultimate policy year losses on the assumed reinsurance business are paid development, incurred development and Bornhuetter-Ferguson. The assumptions underlying the various projection methods include stability in the mix of business, consistent claims processing procedures, immaterial impact of loss cost trends on development patterns, consistent case loss reserving practices and appropriate Bornhuetter-Ferguson expected loss ratio selections.

At December 31, 2016, the carried reserves for HORAD and MRB combined were in the upper quartile of the range of actuarial reserve indications. This selection reflects the fact that there are inherent uncertainties involved in establishing reserves for assumed reinsurance business. Such uncertainties include the fact that a reinsurance company generally has less knowledge than the ceding company about the underlying book of business and the ceding company's reserving practices. Because of these uncertainties, there is a risk that the reinsurance segment's reserves for losses and settlement expenses could prove to be inadequate, with a consequential adverse impact on the Company's future earnings and stockholders' equity.

At December 31, 2016, there was no backlog in the processing of assumed reinsurance information. Approximately \$133.4 million, or 65 percent, of the reinsurance segment's carried reserves were reported by the ceding companies. Employers Mutual receives loss reserve and paid loss data from its ceding companies on individual excess of loss contracts. If a claim involves a single or small group of claimants, a summary of the loss and claim outlook is normally provided. Summarized data is provided for catastrophe claims and pro rata business, which is subject to closer review if inconsistencies are suspected.

Carried reserves established in addition to those reported by the ceding companies totaled approximately \$70.7 million at December 31, 2016. Since many ceding companies in the HORAD book of business do not report IBNR loss reserves, Employers Mutual establishes a bulk IBNR loss reserve to cover the lag in reporting. For the few ceding companies that do report IBNR loss reserves, Employers Mutual carries them as reported. These reported IBNR loss reserves are subtracted from the total IBNR loss reserve calculated by Employers Mutual's actuaries, with the difference carried as bulk IBNR loss reserves. Except for a negative bulk IBNR loss reserve established by Employers Mutual's actuaries in 2016 and 2015, and a small IBNR loss reserve generally established to cover a one-month lag in reporting, the MRB IBNR loss reserve is established by the management of MRB. Employers Mutual rarely records additional case loss reserves.

Assumed reinsurance losses tend to be reported later than direct losses. This lag is reflected in loss projection factors for assumed reinsurance that tend to be higher than for direct business. The result is that assumed reinsurance IBNR loss reserves as a percentage of total reserves tend to be higher than for direct loss reserves. IBNR loss reserves totaled \$98.4 million and \$101.8 million at December 31, 2016 and 2015, respectively, and accounted for approximately 48 percent and 51 percent, respectively, of the reinsurance segment's total loss and settlement expense reserves. IBNR loss reserves are, by nature, less precise than case loss reserves. A five percent change in IBNR loss reserves at December 31, 2016 would equate to \$3.2 million, net of tax, which represents 6.9 percent of the net income reported for 2016 and 0.6 percent of stockholders' equity.

As previously noted, the assumptions implicit in the methodologies utilized to establish reserves for the reinsurance segment are stability in the mix of business, consistent claims processing procedures, immaterial impact of loss cost trends on development patterns, consistent case loss reserving practices and appropriate Bornhuetter-Ferguson expected loss ratio selections. The tables below display the impact on the Company's results of operations from (1) a one percent variance in case loss reserve adequacy from the level anticipated in the incurred loss projection factors, (2) a one percent variance in the implicit annual claims inflation rate, (3) a one percent variance in IBNR losses as a percentage of reported incurred losses (due, for example, to changes in mix of business or claims processing procedures) and (4) a one percent variance in the expected loss ratios used with the Bornhuetter-Ferguson method. In other words, under each scenario, future loss and settlement expense payments would be expected to vary from actuarial reserve estimates by the amounts shown below. These variances in future loss and settlement expense payments could occur in one year or over multiple years. Variances in future loss and settlement payments would also affect the Company's financial position in that the Company's equity would be impacted by an amount equivalent to the change in net income. Variances of this type would typically be recognized in loss and settlement expense reserves and, accordingly, would not have a material effect on liquidity because the claims have not been paid. Such variances are considered reasonably likely based on the range of actuarial indications developed during the analysis of the reinsurance segment's carried reserves.

The after-tax impact on the Company's earnings under each scenario is as follows:

(\$ in thousands)	Reinsurance segment					
	MRB			HORAD		
(1) One percent variance in case loss reserve adequacy from the level anticipated in the incurred loss projection factors	\$(116)	to	\$118	\$(1,104)	to	\$1,126
(2) One percent variance in the implicit annual claims inflation rate	(516)	to	565	(4,588)	to	5,192
(3) One percent variance in IBNR losses from the level anticipated in the loss projection factors	(91)	to	91	(633)	to	633
(4) One percent variance in the expected loss ratios used with the Bornhuetter-Ferguson method	(72)	to	72	(875)	to	875

To ensure the accuracy and completeness of the information received from the ceding companies, Employers Mutual's actuarial department reviews contract years 1988 and subsequent every quarter, and all policy years on an annual basis. Any significant unexplained departures from historical reporting patterns are brought to the attention of the reinsurance department's staff, who contacts the ceding company or broker for clarification.

Employers Mutual's actuarial department annually reviews the MRB reserves for reasonableness. These analyses use a variety of actuarial techniques, which are applied at a line-of-business level. MRB staff supplies the reserve analysis data, which is verified for accuracy by Employers Mutual's actuaries. This review process is replicated by certain other MRB member companies, using actuarial techniques they deem appropriate. Based on these reviews, Employers Mutual and the other MRB member companies have consistently found the MRB reserves to be adequate.

For the HORAD book of business, paid and incurred loss development patterns for relatively short-tail lines of business (property and marine) are based on data reported by the ceding companies. Employers Mutual has determined that there is sufficient volume and stability in the reported losses to base projections of ultimate losses on these patterns. For longer tail lines of business (casualty), industry incurred development patterns supplement the data reported by ceding companies due to the instability of the development patterns based on reported historical losses.

For long-tail lines of business, unreliable estimates of unreported losses can result from the application of loss projection factors to reported losses. To some extent, this is also true for short-tail lines of business in the early stages of a policy year's development. Therefore, in addition to loss-based projections, Employers Mutual generates estimates of unreported losses based on premiums earned. The latter estimates are sometimes more stable and reliable than projections based on losses.

Disputes with ceding companies do not occur often. Employers Mutual performs claims audits and encourages prompt reporting of reinsurance claims. Employers Mutual also reviews claim reports for accuracy, completeness and adequate reserving. Most reinsurance contracts contain arbitration clauses to resolve disputes, but such disputes are generally resolved without arbitration due to the long-term and ongoing relationships that exist with those companies. There were no matters in dispute at December 31, 2016.

Toxic tort (primarily asbestos), environmental and other uncertain exposures (property and casualty insurance segment and reinsurance segment)

Toxic tort claims include those where the claimant seeks compensation for harm allegedly caused by exposure to a toxic substance or a substance that increases the risk of contracting a serious disease, such as cancer. Typically the injury is caused by latent effects of direct or indirect exposure to a substance or combination of substances through absorption, contact, ingestion, inhalation, implantation or injection. Examples of toxic tort claims include injuries arising out of exposure to asbestos, silica, mold, drugs, carbon monoxide, chemicals and lead.

Since 1989, the pool participants have included an asbestos exclusion in liability policies issued for most lines of business. The exclusion prohibits liability coverage for "bodily injury", "personal injury" or "property damage" (including any associated clean-up obligations) arising out of the installation, existence, removal or disposal of asbestos or any substance containing asbestos fibers. Therefore, the pool participants' current asbestos exposures are primarily limited to commercial policies issued prior to 1989. At present, the pool participants are defending approximately 1,856 asbestos bodily injury lawsuits, some of which involve multiple plaintiffs. Claims activity associated with eight policyholders dominates the pool participants' asbestos claims, representing an aggregate 1,812 lawsuits with 2,074 claimants. Most of the lawsuits are subject to express reservation of rights based upon the lack of an injury within the applicable policy periods, because many asbestos lawsuits do not specifically allege dates of asbestos exposure or dates of injury. The pool participants' policyholders named as defendants in these asbestos lawsuits are typically peripheral defendants who have little or no exposure and are often dismissed from asbestos litigation with nominal or no payment (i.e., small contractors, supply companies, and a furnace manufacturer).

Prior to 2008, actual losses paid for asbestos-related claims had been minimal due to the plaintiffs' failure to identify an exposure to any asbestos-containing products associated with the pool participants' current and former policyholders. However, paid losses and settlement expenses have increased significantly since 2008 as a result of claims attributed to one former policyholder. During the period 2009 through 2016, the Company's share of paid losses and settlement expenses attributed to this former policyholder, a furnace manufacturer, was \$11.2 million (mostly settlement expenses). The asbestos exposure associated with this former policyholder has increased in recent years, and this trend may possibly continue into the future with increased per plaintiff settlements. Settlement expense payments associated with this former policyholder have increased significantly since 2008 and have been a driver behind recently implemented reserve increases. The primary cause of this increase in paid settlement expenses is the retention of a national coordinating counsel in 2008 due to this former policyholder's exposure in numerous jurisdictions. The national coordinating counsel has provided, and continues to provide, significant services in the areas of document review, discovery, deposition and trial preparation. Approximately 728 asbestos exposure claims associated with this former policyholder remain open. Whenever possible, the pool participants have participated in cost sharing agreements with other insurance companies to reduce overall expenses.

The pool participants are defending approximately 70 claim files as a result of lawsuits alleging "silica" exposure in Texas and Mississippi jurisdictions, some of which involve multiple plaintiffs. The plaintiffs allege employment exposure to "airborne respirable silica dust," causing "serious and permanent lung injuries" (i.e., silicosis). Silicosis injuries are identified in the upper lobes of the lungs, while asbestos injuries are localized in the lower lobes.

The plaintiffs in the silicosis lawsuits are sandblasters, gravel and concrete workers, ceramic workers and road construction workers. All of these lawsuits are subject to express reservation of rights based upon the lack of an injury within the applicable policy periods because many silica lawsuits, like asbestos lawsuits, do not specifically allege dates of exposure or dates of injury. The pool participants' policyholders (a refractory product manufacturer, small local concrete and gravel companies and a concrete cutting machine manufacturer) that have been named as defendants in these silica lawsuits have had little or no exposure, and are routinely dismissed from silica litigation with nominal or no payment. While the expense of handling these lawsuits is high, it is not proportional to the number of plaintiffs, and is mitigated through cost sharing agreements with other insurance companies.

Since 2004, the pool participants have included a "pneumoconiosis dust" exclusion to their commercial lines liability policies in the majority of jurisdictions where such action was warranted. This exclusion precludes liability coverage due to "mixed dust" pneumoconiosis, pleural plaques, pleural effusion, mesothelioma, lung cancer, emphysema, bronchitis, tuberculosis or pleural thickening, or other pneumoconiosis-related ailments such as arthritis, cancer (other than lung), lupus, heart, kidney or gallbladder disease. "Mixed dust" includes dusts composed of asbestos, silica, fiberglass, coal, cement, or various other elements. It is anticipated that this mixed dust exclusion will further limit the pool participants' exposure in silica claims, and may be broad enough to limit exposure in other dust claims.

The Company's environmental claims are defined as 1) claims for bodily injury, personal injury, property damage, loss of use of property, diminution of property value, etc., allegedly due to contamination of air, and/or contamination of surface soil or surface water, and/or contamination of ground water, aquifers, wells, etc.; or 2) any/all claims for remediation or clean-up of hazardous waste sites by the United States Environmental Protection Agency, or similar state and local environmental or government agencies, usually presented in conjunction with Federal or local clean up statutes (i.e., CERCLA, RCRA, etc.).

Examples include, but are not limited to: chemical waste; hazardous waste treatment, storage and/or disposal facilities; industrial waste disposal facilities; landfills; superfund sites; toxic waste spills; and underground storage tanks. Widespread use of pollution exclusions since 1970 in virtually all lines of business, except personal lines, has resulted in limited exposure to environmental claims. Absolute pollution exclusions have been used since the 1980's; however, the courts in the State of Indiana have ruled that the absolute pollution exclusion is ambiguous.

The Company's current exposures to environmental claims include losses involving petroleum haulers, lead contamination, and soil and groundwater contamination in the State of Indiana. Claims from petroleum haulers are generally caused by overturned commercial vehicles and overfills at commercial and residential properties. Exposures for accident year losses preceding the 1980s include municipality exposures for closed landfills, small commercial businesses involved with disposing waste at landfills, leaking underground storage tanks and contamination from dry cleaning operations. As of December 31, 2016, all Methyl Tertiary Butyl Ether ("MTBE") claims related to the pool participants' policyholders had been dismissed.

The Company's exposure to asbestos and environmental claims through assumed reinsurance is very limited due to the fact that the Company's reinsurance subsidiary entered into the reinsurance marketplace in the early 1980's, after much attention had already been brought to these issues.

At December 31, 2016, the Company carried asbestos and environmental reserves for direct insurance and assumed reinsurance business totaling \$13.3 million, which represents 1.9 percent of total loss and settlement expense reserves. The asbestos and environmental reserves include \$5.4 million of case loss reserves, \$4.8 million of IBNR loss reserves and \$3.1 million of bulk settlement expense reserves. Ceded reinsurance on these reserves totaled \$335,000. Loss and settlement expense reserves were increased in 2016 because of deterioration in the implied survival ratio.

The pool participants' non-asbestos direct product liability claims are considered to be highly uncertain exposures due to the many uncertainties inherent in determining the loss, and the significant periods of time that can elapse between the occurrence of the loss and the ultimate settlement of the claim. The majority of the pool participants' product liability claims arise from small to medium-sized manufacturers, contractors, petroleum distributors, and mobile home and auto dealerships. No specific claim trends are evident from the pool participants' manufacturing clients, as the claims activity on these policies is generally isolated and can be severe. Specific product liability coverage is provided to the pool participants' mobile home and auto dealership policyholders, and the claims from these policies tend to be relatively small. Certain construction defect claims are also reported under product liability coverage. During 2016, 35 of these claims were reported to the pool participants.

The Company has exposure to construction defect claims arising from general liability policies issued by the pool participants to contractors. Most of the pool participants' construction defect claims are concentrated in a limited number of states, and the pool participants have taken steps to mitigate this exposure. Construction defect is a highly uncertain exposure due to such issues as whether coverage exists, definition of an occurrence, determination of ultimate damages, and allocation of such damages to financially responsible parties. Newly reported construction defect claims numbered 374, 338 and 385 in 2016, 2015 and 2014, respectively, and produced incurred losses and paid settlement expenses of approximately \$3.6 million, \$3.2 million and \$2.9 million in each respective period. Incurred losses and paid settlement expenses on all construction defect claims totaled approximately \$4.2 million in 2016. At December 31, 2016, the Company carried case loss reserves of approximately \$5.6 million on 372 open construction defect claims.

The Company's assumed casualty excess reinsurance business is also considered a highly uncertain exposure due to the significant periods of time that can elapse during the settlement of the underlying claims, and the fact that a reinsurance company generally has less knowledge than the ceding company about the underlying book of business and the ceding company's reserving practices. Employers Mutual attempts to account for this uncertainty by establishing bulk IBNR loss reserves, using conservative assumed treaty limits and, to a much lesser extent, booking of individual treaty IBNR loss reserves (if reported by the ceding company) or establishing additional case loss reserves if the reported case loss reserves appear inadequate on an individual claim. While Employers Mutual is predominantly a property reinsurer, it does write casualty excess business oriented mainly towards shorter-tail casualty lines of coverage. Employers Mutual avoids reinsuring large company working layer casualty risks, and does not write risks with heavy product liability exposures, risks with obvious latent injury manifestation and medical malpractice. Casualty excess business on large companies is written, but generally on a "clash" basis only (layers above the limits written for any individual policyholder) or specialty casualty written with claims-made forms.

Following is a summary of loss and settlement expense reserves and payments associated with asbestos, environmental, products liability and casualty excess reinsurance exposures for 2016, 2015 and 2014:

(\$ in thousands)	Property and casualty insurance segment			Reinsurance segment		
	Case	IBNR	Settlement expense	Case	IBNR	Settlement expense
Reserves at:						
December 31, 2016						
Asbestos	\$ 5,075	\$ 3,566	\$ 2,828	\$ 125	\$ 234	\$ —
Environmental	178	377	292	60	607	—
Products ¹	8,585	5,673	7,912	—	—	—
Casualty excess ²	—	—	—	35,482	44,701	3,697
December 31, 2015						
Asbestos	\$ 4,360	\$ 3,015	\$ 2,193	\$ 136	\$ 250	\$ —
Environmental	91	446	320	46	640	—
Products ¹	7,409	6,680	9,119	—	—	—
Casualty excess ²	—	—	—	30,142	48,350	3,029
December 31, 2014						
Asbestos	\$ 4,725	\$ 1,363	\$ 1,624	\$ 131	\$ 281	\$ —
Environmental	92	297	169	123	615	—
Products ¹	7,416	5,643	6,902	—	—	—
Casualty excess ²	—	—	—	27,992	52,935	2,971
Paid during:						
2016						
Asbestos	\$ 605		\$ 986	\$ 24		\$ 3
Environmental	(8)		28	20		—
Products ¹	1,434		2,268	—		—
Casualty excess ²	—		—	13,479		1,913
2015						
Asbestos	\$ 1,477		\$ 887	\$ 19		\$ 8
Environmental	—		30	52		—
Products ¹	2,481		1,918	—		—
Casualty excess ²	—		—	8,681		2,077
2014						
Asbestos	\$ 624		\$ 960	\$ 16		\$ —
Environmental	197		36	(11)		(1)
Products ¹	1,465		1,876	—		—
Casualty excess ²	—		—	8,091		1,589

¹ Products includes the portion of asbestos and environmental claims reported that are non-premises/operations claims.

² Casualty excess includes the asbestos and environmental claims reported above.

Following is a summary of the claim activity associated with asbestos, environmental and products liability exposures for 2016, 2015 and 2014:

	Asbestos	Environmental	Products
2016			
Open claims at year-end	2,143	6	140
Reported	475	6	254
Disposed	474	4	223
2015			
Open claims at year-end	2,142	4	109
Reported	480	1	192
Disposed	2,605	—	195
2014			
Open claims at year-end	4,267	3	112
Reported	516	—	141
Disposed	521	2	123

Variability of loss and settlement expense reserves

The Company does not determine a range of estimates for all components of the loss and settlement expense reserve at the time the reserves are established. During each quarter, however, an actuarially determined range of estimates is developed for the major components of the loss and settlement expense reserves as of the preceding quarter-end. All reserves are reviewed with the exception of reserves for involuntary workers' compensation pools, which are set by the National Council on Compensation Insurance (NCCI) and are assumed to be adequate (the impact of potential variability of this segment on overall reserve adequacy is considered immaterial). Shown below are the actuarially determined ranges of reserve estimates as of December 31, 2016 along with the statutory-basis carried reserves, which are displayed net of ceded reinsurance. The GAAP-basis loss and settlement expense reserves contained in the Company's financial statements are reported gross of ceded reinsurance, and contain a small number of adjustments from the statutory-basis amounts presented here. The last two columns display the estimated after-tax impact on earnings if the reserves were moved to the high end-point or low end-point of the ranges.

(\$ in thousands)	Range of reserve estimates			After-tax impact on earnings	
	High	Low	Carried	Reserves at high	Reserves at low
Property and casualty insurance segment	\$ 509,675	\$ 411,782	\$ 473,409	\$ (23,573)	\$ 40,058
Reinsurance segment	209,279	170,125	201,936	(4,773)	20,677
	<u>\$ 718,954</u>	<u>\$ 581,907</u>	<u>\$ 675,345</u>	<u>\$ (28,346)</u>	<u>\$ 60,735</u>

The precise location of total carried reserves within the actuarial range is unknown at the time the reserves are established because the actuarial evaluation of reserve adequacy is conducted after the establishment of the reserves.

Changes in loss and settlement expense reserve estimates of prior periods

Loss and settlement expense reserves are estimates at a given time of what an insurer expects to pay on incurred losses, based on facts and circumstances then known. During the loss settlement period, which may be many years, additional facts regarding individual claims become known, and accordingly, it often becomes necessary to refine and adjust the estimates of liability. Such changes in the reserves for losses and settlement expenses are reflected in net income in the year such changes are recorded.

For a detailed discussion of the development experienced on prior accident years' reserves during the past three years, see the discussion entitled "Loss and Settlement Expense Reserves" under the "Narrative Description of Business" heading in the Business Section under Part I, Item 1 of this Form 10-K.

Investments

Fair Value Measurement

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The following fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value:

- Level 1 - Unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access.
- Level 2 - Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; or valuations based on models where the significant inputs are observable (e.g., interest rates, yield curves, prepayment speeds, default rates, loss severities, etc.) or can be corroborated by observable market data.
- Level 3 - Prices or valuation techniques that require significant unobservable inputs because observable inputs are not available. The unobservable inputs may reflect the Company's own judgments about the assumptions that market participants would use.

The Company uses an independent pricing source to obtain the estimated fair values of a majority of its securities, subject to an internal validation. The fair values are based on quoted market prices, where available. This is typically the case for equity securities and money market funds, which are accordingly classified as Level 1 fair value measurements. In cases where quoted market prices are not available, fair values are based on a variety of valuation techniques depending on the type of security. Fixed maturity securities, non-redeemable preferred stocks and various short-term investments in the Company's portfolio may not trade on a daily basis; however, observable inputs are utilized in their valuations, and these securities are therefore classified as Level 2 fair value measurements. Following is a brief description of the various pricing techniques used by the independent pricing source for different asset classes.

- U.S. Treasury securities (including bonds, notes, and bills) are priced according to a number of live data sources, including active market makers and inter-dealer brokers. Prices from these sources are reviewed based on the sources' historical accuracy for individual issues and maturity ranges.
- U.S. government-sponsored agencies and corporate securities (including fixed-rate corporate bonds and medium-term notes) are priced by determining a bullet (non-call) spread scale for each issuer for maturities going out to forty years. These spreads represent credit risk and are obtained from the new issue market, secondary trading, and dealer quotes. An option adjusted spread model is incorporated to adjust spreads of issues that have early redemption features. The final spread is then added to the U.S. Treasury curve.
- Obligations of states and political subdivisions are priced by tracking and analyzing actively quoted issues and reported trades, material event notices and benchmark yields. Municipal bonds with similar characteristics are grouped together into market sectors, and internal yield curves are constructed daily for these sectors. Individual bond evaluations are extrapolated from these sectors, with the ability to make individual spread adjustments for attributes such as discounts, premiums, alternative minimum tax, and/or whether or not the bond is callable.
- Mortgage-backed and asset-backed securities are first reviewed for the appropriate pricing speed (if prepayable), spread, yield and volatility. The securities are priced with models using spreads and other information solicited from Wall Street buy- and sell-side sources, including primary and secondary dealers, portfolio managers, and research analysts. To determine a tranche's price, first the benchmark yield is determined and adjusted for collateral performance, tranche level attributes and market conditions. Then the cash flow for each tranche is generated (using consensus prepayment speed assumptions including, as appropriate, a prepayment projection based on historical statistics of the underlying collateral). The tranche-level yield is used to discount the cash flows and generate the price. Depending on the characteristics of the tranche, a volatility-driven, multi-dimensional single cash flow stream model or an option-adjusted spread model may be used. When cash flows or other security structure or market information is not available, broker quotes may be used.

On a quarterly basis, the Company receives from its independent pricing service a list of fixed maturity securities, if any, that were priced solely from broker quotes. For these securities, fair value may be determined using the broker quotes, or by the Company using similar pricing techniques as the Company's independent pricing service. Depending on the level of observable inputs, these securities would be classified as Level 2 or Level 3 fair value measurements. At December 31, 2016 and 2015, the Company had no securities priced solely from broker quotes.

Essentially all securities in the Company's investment portfolios have transparent pricing. All equity securities (with two exceptions) are traded on national exchanges with observable prices. Fixed maturity securities are typically high quality, liquid issues with daily pricing from the Company's independent pricing source. Prices are validated through a variety of techniques. When performing these validations, the Company uses graduated tolerance levels for determining exceptions. Equity securities and U.S. treasury and government-sponsored agency fixed maturity securities have the highest transparency in pricing, and therefore have the smallest tolerance levels for variance. These are followed by (in order of decreasing transparency/increasing tolerance levels) mortgage-backed, corporate, municipal, and finally high-yield fixed maturity securities. The validations performed include:

1. Comparisons of the prices reported by the independent pricing source to daily runs of offerings and bids from several brokers for a sample of securities.
2. Comparison of the prices reported by the independent pricing source to prices realized from the Company's own purchase and sale transactions.
3. Comparison of the prices reported by the independent pricing source to prices from the Company's investment custodian. It should be noted that the independent pricing source used by the Company is often the same source used by the Company's investment custodian, thus limiting the confidence gained from this validation technique.

Rarely are the independent pricing source's prices outside of tolerance levels. This is most likely to occur in less frequently traded municipal fixed maturity securities, where the price reported by the independent pricing source may have become stale due to a lack of recent trading activity. If it is believed that the price reported by the independent pricing source does not reflect the quality, maturity, optionality and liquidity characteristics of the fixed maturity security, alternative pricing sources are examined, including Bloomberg matrix pricing, regression pricing, and broker runs for offering prices of similar securities. A judgment is then made as to what price best reflects the characteristics of the security, and if the result is materially different than the fair value reported by the independent pricing source for that security, then management's judgment of the fair value is used in the financial statements.

Investment Impairments

The Company regularly monitors its investments which have a fair value that is less than the amortized cost for indications of "other-than-temporary" impairment. Several factors are used to determine whether the amortized cost of an individual security has been "other-than-temporarily" impaired. Such factors include, but are not limited to (1) the security's value and performance in the context of the overall markets, (2) length of time and extent the security's fair value has been below amortized cost, (3) key corporate events, and (4) for equity securities, the ability and intent to hold the security until recovery to its cost basis.

The evaluation of an impaired fixed maturity security includes an assessment of whether the Company has the intent to sell the security, and whether it is more likely than not that the Company will be required to sell the security before recovery of its amortized cost basis. In addition, if the present value of cash flows expected to be collected is less than the amortized cost of the security, a credit loss is deemed to exist and the security is considered "other-than-temporarily" impaired. The portion of the impairment related to credit loss is recognized through earnings, and the portion of the impairment related to other factors, if any, is recognized through "other comprehensive income".

When an equity security is deemed to be "other-than-temporarily" impaired, the amortized cost is reduced to fair value and a realized loss is recognized through earnings.

Deferred policy acquisition costs and related amortization

Acquisition costs, consisting of commissions, premium taxes, and salary and benefit expenses of employees directly involved in the underwriting of insurance policies that are successfully issued, are deferred and amortized to expense as premium revenue is recognized. Deferred policy acquisition costs and related amortization are calculated separately for the property and casualty insurance segment and the reinsurance segment. The methodology followed in computing deferred policy acquisition costs limits the amount of such deferred costs to the estimated realizable value. In determining estimated realizable value, the computation gives effect to the premium to be earned, related investment income, anticipated losses and settlement expenses, anticipated policyholder dividends, and certain other costs expected to be incurred to administer the insurance policies as the premium is earned. The anticipated losses and settlement expenses are based on the segment's projected loss and settlement expense ratios for the next twelve months, which include provisions for anticipated catastrophe and storm losses based on historical results adjusted for recent trends. Utilizing these projections, deferred policy acquisition costs for the property and casualty insurance segment and the reinsurance segment were not subject to limitation at December 31, 2016. Based on an analysis performed by management, the actuarial projections of the expected loss and settlement expense ratios for the next twelve months would have needed to increase 17.8 percentage points in the property and casualty insurance segment and 8.5 percentage points in the reinsurance segment before deferred policy acquisition costs would have been subject to limitation. Such increases in the expected loss and settlement expense ratios would likely be driven by many factors, including higher provisions for anticipated catastrophe and storm losses.

Deferred income taxes

The realization of the deferred income tax asset is based upon projections indicating that a sufficient amount of future taxable income will be earned to utilize the tax deductions that will reverse in the future. These projections are based on the Company's history of producing significant amounts of taxable income, the current premium rate environment for both the property and casualty insurance segment and the reinsurance segment, and initiatives that have been implemented recently to improve performance in the commercial auto and personal lines of business. In addition, management has formulated tax-planning strategies that could be implemented to generate taxable income if needed. Should the projected taxable income and tax planning strategies not provide sufficient taxable income to recover the deferred tax asset, a valuation allowance would be required.

Benefit Plans

Employers Mutual sponsors two defined benefit pension plans (a qualified plan and a non-qualified supplemental plan) and two postretirement benefit plans that provide retiree healthcare and life insurance coverage. Although the Company has no employees of its own, it is responsible for its share of the expenses and related prepaid assets and liabilities of these plans, as determined under the terms of the pooling agreement and the cost allocation methodologies applicable to its subsidiaries that do not participate in the pooling agreement.

The net periodic pension and postretirement benefit costs, as well as the prepaid assets and liabilities of these plans, are determined by actuarial valuations. Inherent in these valuations are key assumptions regarding the discount rate, the expected long-term rate of return on plan assets, and the rate of future compensation increases (pension plans only). The assumptions used in the actuarial valuations are updated annually. Material changes in the net periodic pension and postretirement benefit costs may occur in the future due to changes in these assumptions or changes in other factors, such as the number of plan participants, the level of benefits provided, asset values and applicable legislation or regulations.

The discount rate utilized in the valuations is based on an analysis of the total rate of return that could be generated by a hypothetical portfolio of high-quality bonds created to generate cash flows that match the plans' expected benefit payments. No callable bonds are used in this analysis and the discount rate produced by this analysis is compared to interest rates of applicable published indices for reasonableness. The discount rates used in the pension benefit obligation valuations at December 31, 2016, 2015 and 2014 were 4.07 percent, 3.90 percent and 3.57 percent, respectively. The discount rates used in the postretirement benefit obligation valuations at December 31, 2016, 2015 and 2014 were 4.21 percent, 4.42 percent and 4.04 percent, respectively. The discount rates used in the pension and postretirement benefit obligation valuations are also used in the calculation of the net periodic benefit costs for the subsequent year. A 0.25 percentage point decrease in the discount rates used in the 2016 valuations would increase the Company's net periodic pension and postretirement benefit costs for 2017 by approximately \$293,000. Conversely, a 0.25 percentage point increase in the 2016 discount rates would decrease the Company's net periodic pension and postretirement benefit costs for 2017 by approximately \$278,000.

The expected long-term rate of return on plan assets is developed considering actual historical results, current and expected market conditions, the mix of plan assets and investment strategy. The expected long-term rate of return on plan assets produced by this analysis and used in the calculation of the net periodic pension benefit costs for the years ended December 31, 2016 and 2015 was 7.00 percent and 7.00 percent, respectively. The expected long-term rate of return on plan assets used in the calculation of the net periodic postretirement benefit costs for the years ended December 31, 2016 and 2015 was 6.50 percent and 6.50 percent, respectively. The expected rate of return on plan assets to be used in the calculation of the 2017 net periodic benefit costs for the pension and postretirement benefit plans will be 7.00 percent and 6.50 percent, respectively. The actual rate of return earned on plan assets during 2016 was approximately 9 percent for the pension plan and 6 percent for the postretirement benefit plans. The expected long-term rate of return assumption is subject to the general movement of the economy, but is generally less volatile than the discount rate assumption. A decrease in the expected long-term rate of return assumption increases future expenses, whereas an increase in the assumption reduces future expenses. A 0.25 percentage point change in the expected long-term rate of return assumption for 2017 would change the Company's net periodic pension and postretirement benefit costs by approximately \$272,000. For detailed information regarding the current allocation of assets within the pension and postretirement benefit plans, see note 12 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K.

In accordance with GAAP, actuarial gains/losses contained in the valuations that result from (1) actual experience that differs from that assumed, or (2) a change in actuarial assumptions, is accumulated and, if in excess of a specified corridor, amortized to expense over future periods. As of December 31, 2016, all of the benefit plans had accumulated actuarial losses in excess of the corridor that will be partially amortized into expense in 2017. The Company's share of the accumulated actuarial losses that will be amortized into expense during 2017 amounts to \$1.5 million. Prior service costs/credits for plan amendments are also contained in the valuations, and are amortized into expense/income over the future service periods of the participants. As of December 31, 2016, the postretirement benefit plans have prior service credits that are being amortized into income in future periods, while the qualified defined benefit pension plan has prior service costs that are being amortized into expense in future periods. The net amount of prior service credit being amortized into income during 2017 is \$3.2 million.

In accordance with GAAP, the funded status of defined benefit pension and other postretirement plans is recognized as an asset or liability on the balance sheet. Changes in the funded status of the plans are recognized through other comprehensive income.

RESULTS OF OPERATIONS

Results of operations by segment and on a consolidated basis for the three years ended December 31, 2016 are as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Property and casualty insurance			
Premiums earned	\$ 456,467	\$ 447,197	\$ 422,381
Losses and settlement expenses	294,369	291,883	298,033
Acquisition and other expenses	158,756	147,360	136,657
Underwriting profit (loss)	\$ 3,342	\$ 7,954	\$ (12,309)
GAAP ratios:			
Loss and settlement expense ratio	64.5%	65.3%	70.6%
Acquisition expense ratio	34.8%	32.9%	32.3%
Combined ratio	99.3%	98.2%	102.9%
Losses and settlement expenses:			
Insured events of current year	\$ 324,382	\$ 305,722	\$ 306,143
Decrease in provision for insured events of prior years	(30,013)	(13,839)	(8,110)
Total losses and settlement expenses	\$ 294,369	\$ 291,883	\$ 298,033
Catastrophe and storm losses	\$ 35,299	\$ 29,609	\$ 40,226
Large losses ¹	N/A	\$ 34,239	\$ 35,673

¹ Large losses are defined as reported current accident year losses greater than \$500 for the EMC Insurance Companies' pool, excluding catastrophe and storm losses. Under the property and casualty insurance segment's prior reserving methodology, large losses had a direct impact on earnings. Under the new reserving methodology, large losses are taken into consideration when establishing the current accident year ultimate estimates of losses, but there is no longer a direct relationship between large losses and earnings. As a result, it is no longer meaningful to report large losses separately.

The following table presents the reported amounts of favorable development experienced on prior years' reserves and the portion of the reported development amounts that resulted from the reallocation of direct bulk reserves from prior accident years to the current accident year in the property and casualty insurance segment (no impact on earnings). In 2016, the reallocation of reserves resulted from the implementation of a new reserving methodology for the determination of bulk reserves. In 2015 and 2014, the reallocation of reserves resulted from revisions to the accident year allocation factors used in the prior reserving methodology. The result is an approximation of the implied amount of favorable development that had an impact on earnings.

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Reported amount of favorable development experienced on prior years' reserves	\$ (30,013)	\$ (13,839)	\$ (8,110)
Adjustment for favorable development included in the reported development amount that had no impact on earnings	5,592	423	2,151
Approximation of the implied amount of favorable development that had an impact on earnings	\$ (24,421)	\$ (13,416)	\$ (5,959)

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Reinsurance			
Premiums earned	\$ 135,941	\$ 123,069	\$ 118,341
Losses and settlement expenses	92,528	78,853	87,441
Acquisition and other expenses	33,059	30,947	28,715
Underwriting profit	\$ 10,354	\$ 13,269	\$ 2,185
GAAP ratios:			
Loss and settlement expense ratio	68.1%	64.1%	73.9%
Acquisition expense ratio	24.3%	25.1%	24.3%
Combined ratio	92.4%	89.2%	98.2%
Losses and settlement expenses:			
Insured events of current year	\$ 103,456	\$ 100,128	\$ 100,123
Decrease in provision for insured events of prior years	(10,928)	(21,275)	(12,682)
Total losses and settlement expenses	\$ 92,528	\$ 78,853	\$ 87,441
Catastrophe and storm losses	\$ 12,608	\$ 14,765	\$ 17,025

The following table presents the reported amounts of favorable development experienced on prior years' reserves and the portion of the reported development amount that resulted from the reallocation of reserves on a two-year contract from the current accident year to prior accident years in the reinsurance segment during 2015 (no impact on earnings). The result is an approximation of the implied amount of favorable development that had an impact on earnings.

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Reported amount of favorable development experienced on prior years' reserves	\$ (10,928)	\$ (21,275)	\$ (12,682)
Adjustment for adverse development included in the reported development amount that had no impact on earnings	—	(1,041)	—
Approximation of the implied amount of favorable development that had an impact on earnings	\$ (10,928)	\$ (22,316)	\$ (12,682)

(\$ in thousands, except per share amounts)	Year ended December 31,		
	2016	2015	2014
Consolidated			
REVENUES			
Premiums earned	\$ 592,408	\$ 570,266	\$ 540,722
Net investment income	47,490	45,582	46,465
Realized investment gains	4,074	6,153	4,349
Other income	1,011	1,725	2,931
	<u>644,983</u>	<u>623,726</u>	<u>594,467</u>
LOSSES AND EXPENSES			
Losses and settlement expenses	386,897	370,736	385,474
Acquisition and other expenses	191,815	178,307	165,372
Interest expense	337	337	337
Other expense	2,727	2,690	2,377
	<u>581,776</u>	<u>552,070</u>	<u>553,560</u>
Income before income tax expense	63,207	71,656	40,907
Income tax expense	17,004	21,494	10,915
Net income	<u>\$ 46,203</u>	<u>\$ 50,162</u>	<u>\$ 29,992</u>
Net income per share	<u>\$ 2.20</u>	<u>\$ 2.43</u>	<u>\$ 1.48</u>
GAAP ratios:			
Loss and settlement expense ratio	65.3%	65.0%	71.3%
Acquisition expense ratio	32.4%	31.3%	30.6%
Combined ratio	<u>97.7%</u>	<u>96.3%</u>	<u>101.9%</u>
Losses and settlement expenses:			
Insured events of current year	\$ 427,838	\$ 405,850	\$ 406,266
Decrease in provision for insured events of prior years	(40,941)	(35,114)	(20,792)
	<u>\$ 386,897</u>	<u>\$ 370,736</u>	<u>\$ 385,474</u>
Catastrophe and storm losses	<u>\$ 47,907</u>	<u>\$ 44,374</u>	<u>\$ 57,251</u>
Large losses ¹	<u>N/A</u>	<u>\$ 34,239</u>	<u>\$ 35,673</u>

¹ Large losses are defined as reported current accident year losses greater than \$500 for the EMC Insurance Companies' pool, excluding catastrophe and storm losses. Under the property and casualty insurance segment's prior reserving methodology, large losses had a direct impact on earnings. Under the new reserving methodology, large losses are taken into consideration when establishing the current accident year ultimate estimates of losses, but there is no longer a direct relationship between large losses and earnings. As a result, it is no longer meaningful to report large losses separately.

The following table presents the reported amounts of favorable development experienced on prior years' reserves and the portion of the reported development amounts that resulted solely from changes in the allocation of bulk reserves between the current and prior accident years (no impact on earnings). The result is an approximation of the implied amounts of favorable development that had an impact on earnings.

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Reported amount of favorable development experienced on prior years' reserves	\$ (40,941)	\$ (35,114)	\$ (20,792)
Adjustment for favorable (adverse) development included in the reported development amount that had no impact on earnings	5,592	(618)	2,151
Approximation of the implied amount of favorable development that had an impact on earnings	\$ (35,349)	\$ (35,732)	\$ (18,641)

Year ended December 31, 2016 compared to year ended December 31, 2015

The Company reported net income of \$46.2 million (\$2.20 per share) in 2016 compared to \$50.2 million (\$2.43 per share) in 2015. The decrease in net income is primarily due to declines in underwriting profitability and realized investment gains.

Premiums earned, losses and settlement expenses incurred, and the corresponding loss and settlement expense ratios, by line of business for each segment and on a consolidated basis, for the two years ended December 31, 2016 are as follows:

(\$ in thousands)	Year ended December 31,					
	2016			2015		
	Premiums earned	Losses and settlement expenses	Loss and settlement expense ratio	Premiums earned	Losses and settlement expenses	Loss and settlement expense ratio
Property and casualty insurance						
Commercial lines:						
Automobile	\$ 110,941	\$ 93,364	84.2 %	\$ 105,904	\$ 86,134	81.3%
Property	105,012	64,509	61.4 %	104,303	65,806	63.1%
Workers' compensation	96,517	51,371	53.2 %	92,828	57,803	62.3%
Liability	96,630	56,738	58.7 %	92,665	48,399	52.2%
Other	8,374	(12)	(0.1)%	8,079	854	10.6%
Total commercial lines	417,474	265,970	63.7 %	403,779	258,996	64.1%
Personal lines	38,993	28,399	72.8 %	43,418	32,887	75.7%
Total property and casualty insurance	\$ 456,467	\$ 294,369	64.5 %	\$ 447,197	\$ 291,883	65.3%
Reinsurance						
Pro rata reinsurance	\$ 56,317	\$ 31,498	55.9 %	\$ 47,421	\$ 29,433	62.1%
Excess of loss reinsurance	79,624	61,030	76.6 %	75,648	49,420	65.3%
Total reinsurance	\$ 135,941	\$ 92,528	68.1 %	\$ 123,069	\$ 78,853	64.1%
Consolidated	\$ 592,408	\$ 386,897	65.3 %	\$ 570,266	\$ 370,736	65.0%

Premium income

Premiums earned increased 3.9 percent to \$592.4 million in 2016 from \$570.3 million in 2015. Despite increasingly competitive market conditions, both segments reported an increase in premium income. Rate levels for both segments continue to be constrained by a high level of competition, especially for quality accounts with good loss experience. Average rate level increases were just slightly positive in the property and casualty insurance segment in 2016, while the reinsurance segment continued to experience pricing pressure during the January 1, 2016 renewal season, when approximately 70 percent of its business renews; however, the deterioration in pricing did slow considerably from that experienced in 2015. On an overall basis, the new and revised inter-company reinsurance programs between the Company's insurance segments and Employers Mutual reduced premiums earned by \$5.6 million in 2016. For 2017, the cost the inter-company reinsurance programs will decline by \$730,000.

Premiums earned for the property and casualty insurance segment increased 2.1 percent to \$456.5 million in 2016 from \$447.2 million in 2015. The premium amount for 2016 reflects \$7.8 million ceded to Employers Mutual for the cost of the new inter-company reinsurance program. Excluding this amount, premiums earned increased 3.8 percent, primarily due to growth in insured exposures, new business, and small rate level increases on renewal business. New business premium (representing 14 percent of the pool participants' direct written premiums) was approximately ten percent higher than in 2015. Commercial lines accounted for most of the increase in new business premium; however, personal lines also reported an increase in new business premium after several years of declining premium. Commercial lines new business continues to be in the desired range of growth, and management is encouraged by the reversal in personal lines, which experienced an approximate 36 percent increase in new business premium. This large increase is based on a relatively small amount of new business premium in 2015; however, it does reflect agents' and policyholders' satisfaction with the new products that were rolled out during 2016. While management continues to seek growth in most territories, it is particularly focused on achieving the strongest growth outside of the core Midwest market, which will help diversify the pool participants' book of business geographically, while staying consistent with the industry and line of business mix of the existing book of business. Renewal business premium increased approximately three percent during 2016. After factoring in the continued implementation of some mandatory rate reductions on workers' compensation business in a few states, the overall rate change on renewal business remained positive, but was less than one percent. Rates are expected to be mixed in 2017, with the largest rate increases expected in the troubled commercial auto line of business. Rate decreases are expected in the workers' compensation and general liability lines of business, and rates on most other lines of business are expected to be flat or increase slightly. During 2016, the overall policy retention rate remained strong at 86.8 percent (commercial lines at 87.0 percent and personal lines at 84.6 percent). These retention rates approximate those reported at the end of 2015.

Premiums earned for the reinsurance segment increased 10.5 percent to \$135.9 million in 2016 from \$123.1 million in 2015. This increase reflects a \$2.3 million reduction in the total cost of the revised inter-company reinsurance program with Employers Mutual. For purposes of this comparison, the total cost of the 2016 reinsurance program includes the premium paid to Employers Mutual (\$5.1 million), as well as the cost of additional reinsurance protection purchased from external parties to provide increased protection in peak exposure territories. During 2015, the premium paid to Employers Mutual (\$10.8 million, or 8 percent of total assumed reinsurance premiums written) included the cost of reinsurance protection purchased from external parties by Employers Mutual for its benefit. The reinsurance subsidiary purchased \$5.1 million of additional reinsurance protection from external parties during 2016, with \$3.5 million of ceded earned premium recognized in 2016. Excluding the reduction in the cost of the revised inter-company reinsurance program with Employers Mutual, premiums earned increased 8.6 percent, or \$10.5 million; however, a \$7.2 million negative premium adjustment recorded in the fourth quarter of 2015 is distorting this percentage increase. This premium adjustment was reported by the ceding company for the offshore energy and liability proportional account, and reduced the ultimate amount of premiums expected to be earned for underwriting years 2012 through 2014. Without this adjustment, and excluding the reduction in the cost of the revised inter-company reinsurance program with Employers Mutual, premiums earned increased approximately 2.6 percent in 2016. This increase was largely from growth in the property pro rata line of business, as well as the addition of some new domestic excess of loss contracts. During 2015, the ceded premium associated with the inter-company reinsurance program was allocated to all lines of business (both pro rata and excess of loss) because the premium was based on total assumed reinsurance premiums written. Beginning in 2016, the ceded premium for the inter-company reinsurance program is a fixed amount that is allocated to only the excess of loss line of business. The assumed reinsurance market continues to experience pricing pressure due to the influx of nontraditional capital and the lack of major catastrophic events. Pricing declines moderated somewhat during the January 1, 2017 renewal season, as rate level declines were much lower than those experienced on January 1, 2016 renewals. Rate decreases are currently estimated to be in the low-to-mid single digits across the excess of loss book of business.

Losses and settlement expenses

Losses and settlement expenses increased 4.4 percent to \$386.9 million in 2016 from \$370.7 million in 2015, and the loss and settlement expense ratio increased slightly to 65.3 percent in 2016 from 65.0 percent in 2015. An increase in the reinsurance segment's loss and settlement expense ratio was largely offset by a decline in the property and casualty insurance segment's ratio. During the third quarter of 2016, management implemented a new reserving methodology for the determination of direct bulk reserves in the property and casualty insurance segment, which impacted the process for determining how reserve adequacy is measured, and how reserves are allocated by accident year. Due to the expansion of the number of historical accident years included in the review process, the size of the range of reasonable reserves increased. The actuarial analysis of the Company's carried reserves at December 31, 2016 indicates that they are in the upper half of the range of reasonable reserves. This placement in the range is lower than in previous years due to the range expansion associated with the process change; however, exclusive of the process change, the adequacy of the carried reserves appears to be consistent with prior evaluations.

The loss and settlement expense ratio for the property and casualty insurance segment decreased to 64.5 percent in 2016 from 65.3 percent in 2015. This decrease is primarily attributed to a significant amount of favorable reserve development experienced on loss reserves and allocated settlement expense reserves in the workers' compensation and other liability lines of business. The favorable development in the workers' compensation line of business was generated by decreases in the claim frequency assumption for accident year 2015 and decreases in the claim severity assumptions for the five most recent accident years. The favorable development in the other liability line of business was generated by decreases in the claim severity assumptions for the last ten accident years. As previously noted, approximately \$5.6 million of "mechanical" favorable development was generated during the implementation of the new reserving methodology in 2016. This development did not have any impact on earnings because it resulted from the movement of direct bulk reserves from prior accident years into the current accident year, with no change in total reserves.

Other factors impacting the property and casualty insurance segment's 2016 loss and settlement expense ratio include an increase in claim severity in the commercial auto line of business, and an increase in catastrophe and storm losses. Both the commercial auto and personal lines of business continued to generate unfavorable results in 2016, posting loss and settlement expense ratios of 84.2 percent and 72.8 percent, respectively. The industry is forecasting continued deterioration in the commercial auto line of business in 2017, and management is forecasting similar deterioration in the property and casualty insurance segment's results for this line of business if no additional steps are taken to improve profitability. Recognizing the importance of this issue, management implemented an intensive, multi-year Accelerate Commercial Auto Profitability project during 2016, with a goal of returning this line of business to profitability by mid-2019. Management continues to focus on the implementation of its new personal lines strategy, and has completed the roll-out of the new personal auto and homeowners policies in all states where personal lines business is written. Early indications are that the new policies have been well received by agents and policyholders; however, it will take some time before profitability improves.

Catastrophe and storm losses accounted for 7.7 percentage points of the property and casualty insurance segment's loss and settlement expense ratio in 2016, compared to 6.6 percentage points in 2015. The most recent 10-year average for this period is 9.8 percentage points. The property and casualty insurance segment recovered \$7.5 million of catastrophe and storm losses under the new inter-company reinsurance program with Employers Mutual in 2016 (\$5.0 million under the treaty covering the period from January 1 through June 30, and \$2.5 million under the treaty covering the period from July 1 through December 31). Taking the loss recoveries received and the premiums paid to Employers Mutual into consideration, the new inter-company reinsurance program with Employers Mutual reduced the catastrophe and storm loss ratio for 2016 by 0.5 percentage points.

The loss and settlement expense ratio for the reinsurance segment increased to 68.1 percent in 2016 from 64.1 percent in 2015. The loss and settlement expense ratio for 2015 reflects an unusually low amount of reported large losses (losses greater than \$100,000) and two large reductions in reported reserves for prior accident year events. A decline in catastrophe and storm losses helped limit the increase in the reinsurance segment's loss and settlement expense ratio. The largest catastrophe and storm loss incurred in 2016 was a \$3.5 million loss stemming from the Alberta, Canada wildfire, while the largest loss incurred in 2015 was \$4.5 million (\$4.1 million net of reinsurance recovery under the inter-company reinsurance program with Employers Mutual) from the Tianjin, China explosion. No recoveries were made under the revised inter-company reinsurance program with Employers Mutual during 2016. The decline in the total cost of the revised inter-company reinsurance program with Employers Mutual produced a 1.4 percentage point decline in the loss and settlement expense ratio for 2016. This reduction is reflected in the catastrophe and storm loss ratio, which declined to 9.3 percentage points in 2016 from 12.0 percentage points in 2015. The most recent 10-year average for catastrophe and storm losses is 13.0 percentage points.

Acquisition and other expenses

Acquisition and other expenses increased 7.6 percent to \$191.8 million in 2016 from \$178.3 million in 2015. The acquisition expense ratio increased to 32.4 percent in 2016 from 31.3 percent in 2015. Acquisition and other expenses reported for both years include net periodic postretirement benefit income resulting from the amortization of a large prior service credit that resulted from an amendment of Employers Mutual's postretirement medical plan in the fourth quarter of 2013. This prior service credit was recognized in accumulated other comprehensive income in the fourth quarter of 2013, and is being amortized out of accumulated other comprehensive income and into net income over a period of 10 years. The increase in the 2016 ratio is primarily attributed to higher policyholder dividend expense in the property and casualty insurance segment.

The acquisition expense ratio for the property and casualty insurance segment increased to 34.8 percent in 2016 from 32.9 percent in 2015. The increase is primarily attributed to higher policyholder dividend expense resulting from favorable loss experience on some safety dividend groups. The 2016 ratio also reflects the premiums ceded to Employers Mutual under the new inter-company reinsurance program, which added 0.6 percentage points to the ratio.

The acquisition expense ratio for the reinsurance segment decreased to 24.3 percent in 2016 from 25.1 percent in 2015. The 2015 ratio reflects a \$1.1 million commission adjustment for prior periods reported by a ceding company. A decrease in contingent commission expense on the offshore energy and liability proportional account contributed to the decline in the acquisition expense ratio in 2016. The 2016 ratio also reflects the reduction in the total cost of the revised inter-company reinsurance program with Employers Mutual, which reduced the acquisition expense ratio by 0.2 percentage points.

Investment results

Net investment income increased 4.2 percent to \$47.5 million in 2016 from \$45.6 million in 2015. The increase is primarily attributed to a higher amount of dividend income in 2016, but also reflects an increase in investment income from other long-term investments. The Company's equity portfolio produced dividend income of \$6.9 million and \$5.6 million in 2016 and 2015, respectively. Current interest rate levels remain below the average book yield of the fixed maturity portfolio, and will therefore likely continue to limit future growth in net investment income. The average coupon rate on the fixed maturity portfolio, excluding interest-only securities, has declined slightly over the past year, coming in at 3.8 percent at December 31, 2016 compared to 3.9 percent at both December 31, 2015 and 2014. The effective duration of the fixed maturity portfolio, excluding interest-only securities, increased to 5.2 at December 31, 2016 from 4.6 at December 31, 2015.

The Company reported net realized investment gains of \$4.1 million in 2016, compared to \$6.2 million in 2015. Included in these amounts are losses of \$6.3 million and \$1.5 million in 2016 and 2015, respectively, from declines in the carrying value of a limited partnership that the Company has invested in since 2014 to help protect the equity portfolio from a sudden and significant decline in value (an equity tail-risk hedging strategy). Due to the sharp decline in the equity markets in August of 2015, the losses from this investment were much lower in 2015. The large amount of losses experienced in 2016 were more than offset by gains recognized during the fourth quarter from the sale of some equity securities in connection with a small re-balance of the investment portfolio. The Company recognized "other-than-temporary" impairment losses of \$1.3 million and \$1.5 million during 2016 and 2015, respectively. With the exception of a \$209,000 impairment loss recorded in 2016 on a new investment that conveys investment tax credits (included in other long-term investments), these impairment losses were recognized on securities held in the Company's equity portfolio.

Other income

Included in other income are foreign currency exchange gains and losses recognized on the reinsurance segment's foreign currency denominated reinsurance business. The reinsurance segment had foreign currency exchange gains of \$356,000 and \$898,000 in 2016 and 2015, respectively.

Income tax

Income tax expense decreased 20.9 percent to \$17.0 million in 2016 from \$21.5 million in 2015. The effective tax rate for 2016 was 26.9 percent, compared to 30.0 percent in 2015. The primary contributors to the differences between these effective tax rates and the United States federal corporate tax rate of 35 percent are tax-exempt interest income earned, the dividends received deduction, and, in 2016, \$1.5 million of investment tax credits recognized from a renewable energy tax credit investment.

Year ended December 31, 2015 compared to year ended December 31, 2014

The Company reported net income of \$50.2 million (\$2.43 per share) in 2015 compared to \$30.0 million (\$1.48 per share) in 2014. Improved premium rate adequacy, an increase in favorable development on prior years' reserves and below average catastrophe and storm losses together produced an excellent combined ratio, the lowest since 2006.

Premiums earned, losses and settlement expenses incurred, and the corresponding loss and settlement expense ratios, by line of business for each segment and on a consolidated basis, for the two years ended December 31, 2015 are as follows:

(\$ in thousands)	Year ended December 31,					
	2015			2014		
	Premiums earned	Losses and settlement expenses	Loss and settlement expense ratio	Premiums earned	Losses and settlement expenses	Loss and settlement expense ratio
Property and casualty insurance						
Commercial lines:						
Automobile	\$ 105,904	\$ 86,134	81.3%	\$ 96,908	\$ 79,838	82.4%
Property	104,303	65,806	63.1%	97,155	67,444	69.4%
Workers' compensation	92,828	57,803	62.3%	88,356	52,537	59.5%
Liability	92,665	48,399	52.2%	86,108	57,869	67.2%
Other	8,079	854	10.6%	7,416	1,713	23.1%
Total commercial lines	403,779	258,996	64.1%	375,943	259,401	69.0%
Personal lines	43,418	32,887	75.7%	46,438	38,632	83.2%
Total property and casualty insurance	\$ 447,197	\$ 291,883	65.3%	\$ 422,381	\$ 298,033	70.6%
Reinsurance						
Pro rata reinsurance	\$ 47,421	\$ 29,433	62.1%	\$ 41,883	\$ 36,421	87.0%
Excess of loss reinsurance	75,648	49,420	65.3%	76,458	51,020	66.7%
Total reinsurance	\$ 123,069	\$ 78,853	64.1%	\$ 118,341	\$ 87,441	73.9%
Consolidated	\$ 570,266	\$ 370,736	65.0%	\$ 540,722	\$ 385,474	71.3%

Premium income

Premiums earned increased 5.5 percent to \$570.3 million in 2015 from \$540.7 million in 2014. The property and casualty insurance segment continued to report an increase in premiums earned due to rate level increases on renewal business, growth in insured exposures and an increase in retained policies. Premiums earned also increased in the reinsurance segment, primarily due to growth in MRB business. Rate levels for both segments continued to be restrained by increased competition, especially for quality accounts with good loss experience. Average rate level increases were in the low single-digits in the property and casualty insurance segment during 2015, and were expected to remain at that level throughout 2016. Rates-on-line for excess of loss reinsurance renewal business declined approximately 3.0 percent during the January 1, 2015 renewal season, but those declines were partially offset by a slight increase in retentions and an increase in limits purchased.

Premiums earned for the property and casualty insurance segment increased 5.9 percent to \$447.2 million in 2015 from \$422.4 million in 2014. The increase was primarily associated with renewal business, which increased four percent during 2015 due to a combination of rate level increases and growth in insured exposures. Renewal rates across both commercial and personal lines of business increased approximately two percent during 2015, and were expected to continue to increase at low single-digit levels throughout 2016 due to competition restraints. New business premium (representing 13 percent of the pool participants' direct written premiums) was approximately three percent higher than 2014, with an increase in commercial lines new business premium being partially offset by a decline in personal lines new business premium. Commercial lines new business continued to be in the desired range of growth, and was strongest outside of the core Midwest market. This growth helped diversify the pool participants' book of business geographically, while staying consistent with the industry and line of business mix of the existing book of business. While retention levels for personal lines of business remained stable, new business written premiums were down as management continued to focus on the development and implementation of its new personal lines strategy. During 2015, the overall policy retention rate remained strong at 86.5 percent (commercial lines at 86.7 percent and personal lines at 84.8 percent). These retention rates approximated those experienced in 2014.

Premiums earned for the reinsurance segment increased 4.0 percent to \$123.1 million in 2015 from \$118.3 million in 2014; however, premium adjustments made in 2015 and 2014 were impacting this percentage increase. In 2015, a negative premium adjustment of \$7.2 million reported by the ceding company for the offshore energy and liability proportional account was recorded to reduce the ultimate amount of premiums expected to be earned for underwriting years 2012 through 2014. In 2014, a \$7.7 million reduction in earned but not reported premiums was recognized on pro rata accounts. Without these adjustments, premiums earned would have increased approximately 3.3 percent. This growth was driven by new accounts, changes in current contract structures, a decline in terminated accounts in the HORAD book of business, and an increase in pro rata business in the MRB book of business. The premium adjustments made in 2015 and 2014 did not have a material impact on net income because corresponding adjustments were made to IBNR loss reserves, commission expense reserves and the cost of the excess of loss reinsurance protection. The negative premium adjustment recorded for the offshore energy and liability proportional account, coupled with reduced participation in this account for the 2015 contract year, resulted in a \$10.3 million decline in premiums earned from this program in 2015. Competition in the reinsurance market began to increase during 2014 due to the entrance of non-traditional capital into the marketplace. This trend continued into 2015, but at a more moderate level. As a result, total premiums earned for excess of loss business was down slightly in 2015 compared to 2014. The January 1, 2016 renewal season, when approximately 70 percent of the reinsurance segment's business renewed, saw continued pricing pressure similar to that experienced in 2015.

Losses and settlement expenses

Losses and settlement expenses decreased 3.8 percent to \$370.7 million in 2015 from \$385.5 million in 2014, and the loss and settlement expense ratio decreased to 65.0 percent in 2016 from 71.3 percent in 2014. Both segments experienced significant improvements in their loss and settlement expense ratios during 2015, due in large part to below normal catastrophe and storm losses and an increase in favorable reserve development. The actuarial analysis of the Company's carried reserves at December 31, 2015 indicated that the level of reserve adequacy was consistent with other recent evaluations. From management's perspective, this measure was more relevant to an understanding of the Company's results of operations than the composition of the underwriting results between the current and prior accident years.

The loss and settlement expense ratio for the property and casualty insurance segment decreased to 65.3 percent in 2015 from 70.6 percent in 2014. This decrease was attributed to lower catastrophe and storm losses, a decline in overall claim frequency and continued improvement in premium rate adequacy. The decline in overall claim frequency was across many of the major lines of business, and was partially driven by the unusually high level of losses experienced during the first quarter of 2014 due to severe winter weather. Catastrophe and storm losses accounted for 6.6 percentage points of the loss and settlement expense ratio in 2015, down from 9.5 percentage points in 2014, and lower than the then most recent 10-year average of 9.6 percentage points. Large losses (which the Company defined as losses greater than \$500,000 for the EMC Insurance Companies' pool, excluding catastrophe losses) accounted for 7.7 percentage points of the loss and settlement expense ratio in 2015, compared to 8.4 percentage points in 2014. Included in the large loss amount reported for 2014 was \$1.5 million stemming from a fire at an adjacent building being renovated that damaged two office buildings owned by the Company's parent, Employers Mutual. At the time of the loss, Employers Mutual was self-insured for the first \$5.0 million of loss to its campus, and the loss was subject to the EMC Insurance Companies' inter-company pooling agreement. Overall claims severity increased during 2015, after remaining fairly steady throughout 2014. Increased claims frequency and severity was the primary driver of the high loss and settlement expense ratios reported for the commercial auto line of business in both 2015 and 2014, which was consistent with industry results.

The property and casualty insurance segment's loss and settlement expense ratios for 2015 and 2014 reflected \$13.8 million (3.1 percent of earned premiums) and \$8.1 million (1.9 percent of earned premiums), respectively, of reported favorable development on prior years' reserves; however, these amounts included \$423,000 and \$2.2 million, respectively, of favorable development that resulted solely from changes in the allocation of bulk reserves between the current and prior accident years, and therefore had no impact on net income. Net income was only impacted by changes in the total amount of carried reserves.

The loss and settlement expense ratio for the reinsurance segment decreased to 64.1 percent in 2015 from 73.9 percent in 2014. This decrease reflected a decline in both reported large losses (losses greater than \$100,000) and catastrophe and storm losses, as well as a significant increase in the amount of favorable reserve development experienced on prior years' reserves. Results for 2015 included \$4.1 million of catastrophe and storm losses from the Tianjin, China explosion, which was net of \$400,000 of reinsurance recovery under the excess of loss reinsurance protection provided by Employers Mutual.

Approximately \$500,000 of this loss was from the MRB book of business and was reflected in the pro rata property line of business, while the remaining \$3.6 million of this loss was reflected in the excess of loss property line of business (accounted for approximately 3.5 and 5.6 percentage points of the loss and settlement expense ratios reported for the pro rata property and excess of loss property lines of business, respectively). The elevated loss and settlement expense ratio reported for the excess of loss liability line of business was attributed to an increase in reported losses for contract years 2010 through 2014, and a corresponding increase in the amount of bulk IBNR loss reserves allocated to these relatively immature years of this long-tailed coverage. Two large reductions in carried reserves implemented during 2015 had an impact on the loss and settlement expense ratios reported for two lines of business. First, revised ultimate loss ratio information was received for several contract years from the ceding company for the offshore energy and liability proportional account, which reduced the carried amount of IBNR loss reserves. This reduction in IBNR loss reserves, coupled with the decrease in IBNR loss reserves resulting from the downward adjustment in expected ultimate premiums on this account (see discussion above), produced a small negative amount of incurred losses and settlement expenses in the pro rata marine line of business, and a corresponding negative loss and settlement expense ratio. Second, a large estimated loss reserve that was established on a German account in the fourth quarter of 2014 was taken down because of favorable development contained in an account statement received in 2015. This resulted in a lower than normal loss and settlement expense ratio in the multiline line of business. In addition to the two large reductions in carried reserves noted above, the favorable development experienced on prior years' reserves reflected a reduction in IBNR loss reserves established for the 2014 contract year that could no longer be justified. Catastrophe and storm losses accounted for 12.0 percentage points of the loss and settlement expense ratio in 2015, which was lower than both the 14.4 percentage points reported in 2014 and the most recent 10-year average of 13.0 percentage points.

The reinsurance segment's loss and settlement expense ratio for 2015 reflected \$21.3 million (17.3 percent of earned premiums) of reported favorable development on prior years' reserves; however, this amount included \$1.0 million of adverse development that resulted solely from changes in the allocation of bulk reserves between the current and prior accident years, and therefore had no impact on net income. Net income was only impacted by changes in the total amount of carried reserves.

Acquisition and other expenses

Acquisition and other expenses increased 7.8 percent to \$178.3 million in 2015 from \$165.4 million in 2014. The acquisition expense ratio increased to 31.3 percent in 2015 from 30.6 percent in 2014. Acquisition and other expenses reported for both years included net periodic postretirement benefit income resulting from the amortization of a large prior service credit that resulted from an amendment of Employers Mutual's postretirement medical plan in the fourth quarter of 2013. This prior service credit was recognized in accumulated other comprehensive income in the fourth quarter of 2013, and was being amortized out of accumulated other comprehensive income and into net income over a period of 10 years. The increase in the 2015 ratio was attributed to a combination of higher technology costs, increased pension expense, and an increase in variable expenses such as contingent commissions and bonus accruals that are based on the improved underwriting results reported in 2015.

For the property and casualty insurance segment, the acquisition expense ratio increased to 32.9 percent in 2015 from 32.3 percent in 2014. The higher acquisition expense ratio in 2015 was primarily attributed to higher technology costs, increased pension expense, and an increase in the variable expense categories of contingent commissions and bonus accruals. Policyholders' dividend expense, another variable expense based on the underwriting results of some individual policies and the safety dividend groups, declined significantly and thus limited the increase in the acquisition expense ratio.

For the reinsurance segment, the acquisition expense ratio increased to 25.1 percent in 2015 from 24.3 percent in 2014. This increase was primarily attributed to higher contingent commission expense on the offshore energy and liability proportional account. Growth in pro rata business, which carried higher commission rates than excess of loss business, also contributed to the increase in the ratio.

Investment results

Net investment income decreased 1.9 percent to \$45.6 million in 2015 from \$46.5 million in 2014. Net investment income for 2014 included approximately \$442,000 that resulted from the early payoff of a commercial mortgage-backed security that was purchased at a significant discount to par value, which accelerated the accretion of the discount to par value and therefore increased investment income. Excluding this amount, net investment income declined approximately 1.0 percent. Current interest rate levels remained below the average book yield of the fixed maturity portfolio, and were therefore likely to continue to limit future growth in net investment income. The average coupon rate on the fixed maturity portfolio, excluding interest-only securities, remained relatively steady at 3.9 percent since December 31, 2014, but was down slightly from 4.0 percent at December 31, 2013. The effective duration of the fixed maturity portfolio, excluding interest-only securities, also remained steady at 4.6 at December 31, 2015 and 2014. The Company's equity portfolio produced dividend income of \$5.6 million and \$6.0 million in 2015 and 2014, respectively.

The Company reported net realized investment gains of \$6.2 million in 2015 compared to \$4.3 million in 2014. Included in these amounts were \$1.5 million and \$2.8 million in 2015 and 2014, respectively, of realized losses attributed to declines in the carrying value of a limited partnership that the Company first invested in during 2014 to help protect it from a sudden and significant decline in the value of its equity portfolio (an equity tail-risk hedging strategy). The Company recognized "other-than-temporary" impairment losses of \$1.5 million and \$878,000 during 2015 and 2014, respectively. The vast majority of these impairment losses were recognized on securities held in the Company's equity portfolio.

Other income and interest expense

Included in other income was foreign currency exchange gains and losses recognized on the reinsurance segment's foreign currency denominated reinsurance business. The reinsurance segment had foreign currency exchange gains of \$898,000 and \$2.2 million in 2015 and 2014, respectively.

Income tax

Income tax expense increased 96.9 percent to \$21.5 million in 2015 from \$10.9 million in 2014. The effective tax rate for 2015 was 30.0 percent, compared to 26.7 percent in 2014. The primary contributor to the differences between these effective tax rates and the United States federal corporate tax rate of 35 percent was tax-exempt interest income earned.

LIQUIDITY AND CAPITAL RESOURCES

Liquidity

Liquidity is a measure of a company's ability to generate sufficient cash flows to meet cash obligations. The Company had positive cash flows from operations of \$83.4 million in 2016, \$85.6 million in 2015 and \$91.8 million in 2014. The Company typically generates substantial positive cash flows from operations because cash from premium payments is generally received in advance of cash payments made to settle claims. These positive cash flows provide the foundation of the Company's asset/liability management program and are the primary driver of the Company's liquidity. The Company invests in high quality, liquid securities to match the anticipated payments of losses and settlement expenses of the underlying insurance policies. Because the timing of the losses is uncertain, the majority of the portfolio is maintained in short to intermediate maturity securities that can be easily liquidated or that generate adequate cash flow to meet liabilities.

The Company is a holding company whose principal asset is its investment in its property and casualty insurance subsidiaries and its reinsurance subsidiary ("insurance subsidiaries"). As a holding company, the Company is dependent upon cash dividends from its insurance subsidiaries to meet all its obligations, including cash dividends to stockholders and the funding of the Company's stock repurchase program. State insurance regulations restrict the maximum amount of dividends insurance companies can pay without prior regulatory approval. The maximum amount of dividends that the insurance subsidiaries can pay to the Company in 2017 without prior regulatory approval is approximately \$52.7 million. The Company received \$9.7 million, \$9.2 million and \$378,000 of dividends from its insurance subsidiaries and paid cash dividends to its stockholders totaling \$16.2 million, \$14.2 million and \$12.6 million in 2016, 2015 and 2014, respectively.

The Company's insurance subsidiaries must maintain adequate liquidity to ensure that their cash obligations are met; however, because of the property and casualty insurance subsidiaries' participation in the pooling agreement and the reinsurance subsidiary's participation in the quota share agreement, they do not have the daily liquidity concerns normally associated with an insurance company. This is because under the terms of the pooling and quota share agreements, Employers Mutual receives all premiums and pays all losses and expenses associated with the insurance business produced by the pool participants and the assumed reinsurance business ceded to the Company's reinsurance subsidiary, and then settles inter-company balances generated by these transactions with the participating companies on a monthly (pool participants) or quarterly (reinsurance subsidiary) basis.

At the insurance subsidiary level, the primary sources of cash are premium income, investment income and proceeds from called or matured investments. The principal outflows of cash are payments of claims, commissions, premium taxes, operating expenses, income taxes, dividends, interest and principal payments on debt, and investment purchases. Cash outflows vary because of uncertainties regarding settlement dates for unpaid losses and the potential for large losses, either individually or in the aggregate. Accordingly, the insurance subsidiaries maintain investment and reinsurance programs intended to provide adequate funds to pay claims without forced sales of investments. The insurance subsidiaries also have the ability to borrow funds on a short-term basis (180 days) from Employers Mutual and its subsidiaries and affiliate under an Inter-Company Loan Agreement. In addition, Employers Mutual maintains access to a line of credit with the Federal Home Loan Bank that could be used to provide the insurance subsidiaries additional liquidity if needed.

The Company maintains a portion of its investment portfolio in relatively short-term and highly liquid investments to ensure the availability of funds to pay claims and expenses. A variety of maturities are maintained in the Company's investment portfolio to assure adequate liquidity. The maturity structure of the fixed maturity portfolio is also established by the relative attractiveness of yields on short, intermediate and long-term securities. The Company does not invest in non-investment grade debt securities. Any non-investment grade securities held by the Company are the result of rating downgrades subsequent to their purchase.

The Company invests for the long term and generally purchases fixed maturity securities with the intent to hold them to maturity. Despite this intent, the Company currently classifies fixed maturity securities as available-for-sale to provide flexibility in the management of its investment portfolio. At December 31, 2016 and 2015, the Company had net unrealized holding gains, net of deferred taxes, on its fixed maturity securities available-for-sale of \$6.6 million and \$20.0 million, respectively. The fluctuation in the fair value of these investments is primarily due to changes in the interest rate environment during this time period, but also reflects fluctuations in risk premium spreads over U.S. Treasuries. Since the Company intends to hold fixed maturity securities to maturity, such fluctuations in the fair value of these investments are not expected to have a material impact on the operations of the Company, as forced liquidations of investments are not anticipated. The Company closely monitors the bond market and makes appropriate adjustments in its portfolio as conditions warrant.

The majority of the Company's assets are invested in fixed maturity securities. These investments provide a substantial amount of investment income that supplements underwriting results and contributes to net earnings. As these investments mature, or are called, the proceeds are reinvested at current interest rates, which may be higher or lower than those now being earned; therefore, more or less investment income may be available to contribute to net earnings. Due to the prolonged low interest rate environment, proceeds from calls and maturities in recent years have been reinvested at lower yields, which has had a negative impact on investment income.

The Company held \$12.5 million and \$9.9 million in minority ownership interests in limited partnerships and limited liability companies at December 31, 2016 and 2015, respectively. During the 2016 and 2015, the Company invested \$4.9 million and \$4.0 million, respectively, in a limited partnership that is designed to help protect the Company from a sudden and significant decline in the value of its equity portfolio. During 2016, the Company's reinsurance subsidiary invested approximately \$6.6 million in a limited liability company as an investment that conveys renewable energy tax credits. After reductions for the utilization of tax credits and a \$209,000 impairment loss, the carrying value of this investment was approximately \$2.0 million at December 31, 2016. These investments are included in "other long-term investments" in the Company's financial statements, with the limited partnership carried under the equity method of accounting.

The Company participates in reverse repurchase arrangements, involving the purchase of investment securities from third-party sellers with the agreement that the purchased securities be sold back to the third-party sellers for agreed-upon prices at specified future dates. The third-party sellers are required to pledge collateral with a value greater than the amount of cash received in the transactions. In accordance with GAAP, the investment securities purchased under the reverse repurchase agreements are not reflected in the Company's consolidated balance sheets, but instead a receivable is recorded for the principal amount lent. The Company's receivable under reverse repurchase agreements was \$20.0 million and \$16.9 million at December 31, 2016 and 2015, respectively.

The Company's cash balance was \$307,000 and \$224,000 at December 31, 2016 and 2015, respectively.

Employers Mutual contributed \$9.0 million, \$4.0 million and \$7.0 million to its qualified pension plan in 2016, 2015 and 2014, respectively, and plans to contribute approximately \$9.0 million to the qualified pension plan in 2017. The Company reimbursed Employers Mutual \$2.7 million, \$1.2 million and \$2.2 million for its share of the pension contributions in 2016, 2015 and 2014, respectively. Employers Mutual did not make any contributions to its postretirement benefit plans during 2016, 2015, or 2014, and does not expect to make any contributions in 2017 due to the plan amendment that was announced during 2013.

Capital Resources

Capital resources consist of stockholders' equity and debt, representing funds deployed or available to be deployed to support business operations. For the Company's insurance subsidiaries, capital resources are required to support premium writings. Regulatory guidelines suggest that the ratio of a property and casualty insurer's annual net premiums written to its statutory surplus should not exceed three to one. All of the Company's property and casualty insurance subsidiaries were well under this guideline at December 31, 2016.

The Company's insurance subsidiaries are required to maintain a certain minimum level of surplus on a statutory basis, and are subject to regulations under which the payment of dividends from statutory surplus is restricted and may require prior approval of their domiciliary insurance regulatory authorities. The Company's insurance subsidiaries are also subject to annual Risk Based Capital (RBC) requirements that may further impact their ability to pay dividends. RBC requirements attempt to measure minimum statutory capital needs based upon the risks in a company's mix of products and investment portfolio. At December 31, 2016, the Company's insurance subsidiaries had total adjusted statutory capital of \$526.8 million, which is well in excess of the minimum risk-based capital requirement of \$87.3 million.

The Company's total cash and invested assets at December 31, 2016 and 2015 are summarized as follows:

(\$ in thousands)	December 31, 2016			
	Amortized cost	Fair value	Percent of total fair value	Carrying value
Fixed maturity securities available-for-sale	\$ 1,189,525	\$ 1,199,699	81.8%	\$ 1,199,699
Equity securities available-for-sale	147,479	213,839	14.6	213,839
Cash	307	307	—	307
Short-term investments	39,670	39,670	2.7	39,670
Other long-term investments	12,506	12,506	0.9	12,506
	<u>\$ 1,389,487</u>	<u>\$ 1,466,021</u>	<u>100.0%</u>	<u>\$ 1,466,021</u>

(\$ in thousands)	December 31, 2015			
	Amortized cost	Fair value	Percent of total fair value	Carrying value
Fixed maturity securities available-for-sale	\$ 1,130,217	\$ 1,161,025	82.0%	\$ 1,161,025
Equity securities available-for-sale	144,176	206,243	14.6	206,243
Cash	224	224	—	224
Short-term investments	38,599	38,599	2.7	38,599
Other long-term investments	9,930	9,930	0.7	9,930
	<u>\$ 1,323,146</u>	<u>\$ 1,416,021</u>	<u>100.0%</u>	<u>\$ 1,416,021</u>

The amortized cost and estimated fair value of fixed maturity and equity securities at December 31, 2016 were as follows:

(\$ in thousands)	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair values
Securities available-for-sale:				
Fixed maturity securities:				
U.S. treasury	\$ 7,841	\$ —	\$ 11	\$ 7,830
U.S. government-sponsored agencies	249,495	311	10,609	239,197
Obligations of states and political subdivisions	319,663	17,034	940	335,757
Commercial mortgage-backed	37,964	741	1,133	37,572
Residential mortgage-backed	102,307	1,435	7,308	96,434
Other asset-backed	26,592	732	931	26,393
Corporate	445,663	12,232	1,379	456,516
Total fixed maturity securities	<u>1,189,525</u>	<u>32,485</u>	<u>22,311</u>	<u>1,199,699</u>
Equity securities:				
Common stocks:				
Financial services	22,922	12,410	210	35,122
Information technology	19,832	10,739	29	30,542
Healthcare	16,092	8,700	85	24,707
Consumer staples	13,438	5,787	125	19,100
Consumer discretionary	14,812	7,672	163	22,321
Energy	14,276	4,873	78	19,071
Industrials	13,005	11,258	18	24,245
Other	13,071	5,345	32	18,384
Non-redeemable preferred stocks	20,031	483	167	20,347
Total equity securities	<u>147,479</u>	<u>67,267</u>	<u>907</u>	<u>213,839</u>
Total securities available-for-sale	<u>\$ 1,337,004</u>	<u>\$ 99,752</u>	<u>\$ 23,218</u>	<u>\$ 1,413,538</u>

The Company's property and casualty insurance subsidiaries have \$25.0 million of surplus notes issued to Employers Mutual. The interest rate on the surplus notes is 1.35 percent. Reviews of the interest rate are conducted by the Inter-Company Committees of the boards of directors of the Company and Employers Mutual every five years, with the next review due in 2018. Payments of interest and repayments of principal can only be made out of the applicable subsidiary's statutory surplus and are subject to prior approval by the insurance commissioner of the respective states of domicile. The surplus notes are subordinate and junior in right of payment to all obligations or liabilities of the applicable insurance subsidiaries. Total interest expense incurred on these surplus notes was \$337,000 in each year 2016, 2015 and 2014. At December 31, 2016, the Company's property and casualty insurance subsidiaries had received approval for the payment of interest accrued on the surplus notes during 2016.

As of December 31, 2016, the Company had no material commitments for capital expenditures.

Off-Balance Sheet Arrangements

Employers Mutual collects from agents, policyholders and ceding companies all written premiums associated with the insurance business produced by the pool participants and the assumed reinsurance business ceded to the reinsurance subsidiary. Employers Mutual also collects from its reinsurers all losses and settlement expenses recoverable under the reinsurance contracts protecting the pool participants and, starting in 2016, the reinsurance subsidiary, as well as the fronting business ceded to the reinsurance subsidiary. Employers Mutual settles with the pool participants (monthly) and the reinsurance subsidiary (quarterly) the premiums written from these insurance policies and the paid losses and settlement expenses recoverable under the external reinsurance contracts, providing full credit for the premiums written and the paid losses and settlement expenses recoverable under the external reinsurance contracts generated during the period (not just the collected portion). Due to this arrangement, and since a significant portion of the premium balances are collected over the course of the underlying coverage periods, Employers Mutual carries a substantial receivable balance for insurance and reinsurance premiums in process of collection and, to a lesser extent, paid losses and settlement expenses recoverable from the external reinsurance companies. Any of these receivable amounts that are ultimately deemed to be uncollectible are charged-off by Employers Mutual and the expense is charged to the reinsurance subsidiary or allocated to the pool members on the basis of pool participation. As a result, the Company has off-balance sheet arrangements with an unconsolidated entity that results in credit-risk exposures (Employers Mutual's insurance and reinsurance premium receivable balances, and paid loss and settlement expense recoverable amounts) that are not reflected in the Company's financial statements. The average annual expense for such charge-offs allocated to the Company over the past ten years is \$362,000. Based on this historical data, this credit-risk exposure is not considered to be material to the Company's results of operations or financial position and, accordingly, no loss contingency liability has been recorded.

Investment Impairments and Considerations

The Company recorded \$1.3 million of "other-than-temporary" investment impairment losses during 2016, compared to \$1.5 million during 2015. With the exception of a \$209,000 impairment loss recorded in 2016 on a new investment that conveys renewable energy tax credits (included in other long-term investments), these impairment losses were recognized on securities held in the Company's equity portfolio.

At December 31, 2016, the Company had unrealized losses on available-for-sale securities as presented in the following table. The estimated fair value is based on quoted market prices, where available. In cases where quoted market prices are not available, fair values are based on a variety of valuation techniques depending on the type of security. None of these securities are considered to be in concentrations by either security type or industry. The Company uses several factors to determine whether the carrying value of an individual security has been "other-than-temporarily" impaired. Such factors include, but are not limited to, the security's value and performance in the context of the overall markets, length of time and extent the security's fair value has been below carrying value, key corporate events and, for fixed maturity securities, the amount of collateral available. Based on these factors, the absence of management's intent to sell these securities prior to recovery or maturity, and the fact that management does not anticipate that it will be forced to sell these securities prior to recovery or maturity, it was determined that the carrying value of these securities were not "other-than-temporarily" impaired at December 31, 2016. Risks and uncertainties inherent in the methodology utilized in this evaluation process include interest rate risk, equity price risk, and the overall performance of the economy, all of which have the potential to adversely affect the value of the Company's investments. Should a determination be made at some point in the future that these unrealized losses are "other-than-temporary", the Company's earnings would be reduced by approximately \$15.1 million, net of tax; however, the Company's financial position would not be affected because unrealized losses on available-for-sale securities are reflected in the Company's financial statements as a component of stockholders' equity, net of deferred taxes.

Following is a schedule of the length of time securities have continuously been in an unrealized loss position as of December 31, 2016.

(\$ in thousands)	Less than twelve months		Twelve months or longer		Total	
	Fair values	Unrealized losses	Fair values	Unrealized losses	Fair values	Unrealized losses
Fixed maturity securities:						
U.S. treasury	\$ 7,830	\$ 11	\$ —	\$ —	\$ 7,830	\$ 11
U.S. government-sponsored agencies	202,900	10,609	—	—	202,900	10,609
Obligations of states and political subdivisions	43,777	940	—	—	43,777	940
Commercial mortgage-backed	21,695	1,133	—	—	21,695	1,133
Residential mortgage-backed	26,217	1,232	23,625	6,076	49,842	7,308
Other asset-backed	19,091	931	—	—	19,091	931
Corporate	82,657	1,273	8,625	106	91,282	1,379
Total fixed maturity securities	404,167	16,129	32,250	6,182	436,417	22,311
Equity securities:						
Common stocks:						
Financial services	1,462	12	908	198	2,370	210
Information technology	1,947	29	—	—	1,947	29
Healthcare	3,585	85	—	—	3,585	85
Consumer staples	2,427	125	—	—	2,427	125
Consumer discretionary	1,637	163	—	—	1,637	163
Energy	1,621	33	1,188	45	2,809	78
Industrials	779	18	—	—	779	18
Other	1,472	32	—	—	1,472	32
Non-redeemable preferred stocks	3,356	44	1,877	123	5,233	167
Total equity securities	18,286	541	3,973	366	22,259	907
Total temporarily impaired securities	\$ 422,453	\$ 16,670	\$ 36,223	\$ 6,548	\$ 458,676	\$ 23,218

Following is a schedule of the maturity dates of the fixed maturity securities presented in the above table.

(\$ in thousands)	Book value	Fair value	Gross unrealized loss
Due in one year or less	\$ 5,493	\$ 5,459	\$ 34
Due after one year through five years	24,444	24,390	54
Due after five years through ten years	101,023	99,306	1,717
Due after ten years	245,100	233,045	12,055
Securities not due at a single maturity date	82,668	74,217	8,451
	\$ 458,728	\$ 436,417	\$ 22,311

The Company does not purchase non-investment grade fixed maturity securities. Any non-investment grade fixed maturity securities held are the result of rating downgrades that occurred subsequent to their purchase. At December 31, 2016, the Company held \$3.0 million of non-investment grade fixed maturity securities in a net unrealized gain position of \$50,000.

Following is a schedule of gross realized losses recognized in 2016. The schedule is aged according to the length of time the underlying securities were in an unrealized loss position.

(\$ in thousands)	Realized losses from sales			"Other-than-temporary" impairment losses	Total gross realized losses
	Book value	Sales price	Gross realized losses		
Fixed maturity securities:					
Three months or less	\$ 5,736	\$ 5,429	\$ 307	\$ —	\$ 307
Over three months to six months	17,377	15,798	1,579	—	1,579
Over six months to nine months	—	—	—	—	—
Over nine months to twelve months	—	—	—	—	—
Over twelve months	7,534	6,591	943	—	943
Subtotal, fixed maturity securities	30,647	27,818	2,829	—	2,829
Equity securities:					
Three months or less	15,373	13,618	1,755	237	1,992
Over three months to six months	6,775	6,012	763	104	867
Over six months to nine months	515	479	36	450	486
Over nine months to twelve months	900	828	72	—	72
Over twelve months	348	299	49	264	313
Subtotal, equity securities	23,911	21,236	2,675	1,055	3,730
Total realized losses	\$ 54,558	\$ 49,054	\$ 5,504	\$ 1,055	\$ 6,559

LEASES, COMMITMENTS AND CONTINGENT LIABILITIES

The following table reflects the Company's contractual obligations as of December 31, 2016. Included in the table are the estimated payments that the Company expects to make in the settlement of its loss and settlement expense reserves and with respect to its long-term debt. One of the Company's property and casualty insurance subsidiaries leases office facilities in Bismarck, North Dakota with lease terms expiring in 2024. Employers Mutual has entered into various leases for branch and service office facilities with lease terms expiring through 2026. All of these lease costs are included as expenses under the pooling agreement. Included in the following table is the Company's current 30.0 percent aggregate participation percentage of all operating lease obligations of the parties to the pooling agreement.

(\$ in thousands)	Payments due by period				
	Total	Less than 1 year	1 - 3 years	4 - 5 years	More than 5 years
<u>Contractual obligations</u>					
Loss and settlement expense reserves ¹	\$ 690,532	\$ 278,733	\$ 260,697	\$ 80,007	\$ 71,095
Long-term debt ²	25,000	—	—	—	25,000
Interest expense on long-term debt ³	3,375	337	675	675	1,688
Real estate operating leases	2,572	391	844	665	672
Total	\$ 721,479	\$ 279,461	\$ 262,216	\$ 81,347	\$ 98,455

¹ The amounts presented are estimates of the dollar amounts and time periods in which the Company expects to pay out its gross loss and settlement expense reserves. 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 Long-term debt reflects the surplus notes issued by the Company's property and casualty insurance subsidiaries to Employer Mutual, which have no maturity date. Excluded from long-term debt are pension and other postretirement benefit obligations.

³ Interest expense on long-term debt reflects the interest expense on the surplus notes issued by the Company's property and casualty insurance subsidiaries to Employers Mutual. The interest rate on the surplus notes is subject to change every five years (rate was decreased to 1.35 percent effective February 1, 2013, with the next review scheduled for 2018). Interest payments on the surplus notes are subject to prior approval of the regulatory authorities of the issuing company's state of domicile. The balance shown under the heading "More than 5 years" represents estimated interest expense for years six through ten. Since the surplus notes have no maturity date and the interest rate is subject to change every five years, interest expense could be greater than the amounts shown.

The participants in the pooling agreement are subject to guaranty fund assessments by states in which they write business. Guaranty fund assessments are used by states to pay policyholder liabilities of insolvent insurers domiciled in those states. Many states allow assessments to be recovered through premium tax offsets. The Company has accrued estimated guaranty fund assessments of \$851,000 and \$912,000 as of December 31, 2016 and 2015, respectively. Premium tax offsets of \$1.0 million and \$1.1 million, which are related to prior guarantee fund payments and current assessments, have been accrued as of December 31, 2016 and 2015, respectively. The guaranty fund assessments are expected to be paid over the next two years and the premium tax offsets are expected to be realized within ten years of the payments. The participants in the pooling agreement are also subject to second-injury fund assessments, which are designed to encourage employers to employ workers with pre-existing disabilities. The Company had accrued estimated second-injury fund assessments of \$1.9 million and \$1.9 million as of December 31, 2016 and 2015, respectively. The second-injury fund assessment accruals are based on projected loss payments. The periods over which the assessments will be paid is not known.

The participants in the pooling agreement have purchased annuities from life insurance companies, under which the claimant is payee, to fund future payments that are fixed pursuant to specific claim settlement provisions. The Company's share of case loss reserves eliminated by the purchase of those annuities was \$110,000 at December 31, 2016. The Company had a contingent liability for the aggregate guaranteed amount of the annuities of \$183,000 at December 31, 2016 should the issuers of those annuities fail to perform. The probability of a material loss due to failure of performance by the issuers of these annuities is considered remote.

MARKET RISK

The main objectives in managing the Company's investment portfolios are to maximize after-tax investment return while minimizing risk, in order to provide maximum support for the underwriting operations. Investment strategies are developed based upon many factors including the economic environment, business cycle, regulatory requirements, fluctuations in interest rates, underwriting results and consideration of other market risks. Investment decisions are centrally managed by investment professionals and are supervised by the investment committees of the respective boards of directors for each of the Company's subsidiaries.

Market risk represents the potential for loss due to adverse changes in the fair value of financial instruments, and is directly influenced by the volatility and liquidity in the markets in which the related underlying assets are traded. The market risks of the financial instruments owned by the Company relate to the investment portfolio, which exposes the Company to interest rate (inclusive of credit spreads) and equity price risk and, to a lesser extent, credit quality and prepayment risk. Monitoring systems and analytical tools are in place to assess each of these elements of market risk; however, there can be no assurance that future changes in interest rates, creditworthiness of issuers, prepayment activity, liquidity available in the market and other general market conditions will not have a material adverse impact on the Company's results of operations, liquidity or financial position.

Interest rate risk (inclusive of credit spreads) includes the price sensitivity of a fixed maturity security to changes in interest rates, and the effect on the Company's future earnings from short-term investments and maturing long-term investments given a change in interest rates. The following table illustrates the sensitivity of the Company's portfolio of fixed maturity securities available-for-sale to hypothetical changes in market rates and prices.

<u>December 31, 2016</u>	<u>Estimated fair value</u>	<u>Hypothetical change in interest rate (bp=basis points)</u>	<u>Estimated fair value after hypothetical change in interest rate</u>	<u>Hypothetical percentage increase (decrease) in stockholders' equity</u>
(\$ in thousands)				
Securities available-for-sale:				
Fixed maturity securities:				
U.S. treasury	\$ 7,830	200 bp decrease	\$ 8,814	0.12%
		100 bp decrease	8,306	0.06
		100 bp increase	7,385	(0.05)
		200 bp increase	6,967	(0.10)
U.S. government-sponsored agencies	\$ 239,197	200 bp decrease	\$ 255,895	1.96%
		100 bp decrease	252,190	1.53
		100 bp increase	219,640	(2.30)
		200 bp increase	200,613	(4.53)
Obligations of states and political subdivisions	\$ 335,757	200 bp decrease	\$ 370,140	4.04%
		100 bp decrease	352,654	1.98
		100 bp increase	318,116	(2.07)
		200 bp increase	298,642	(4.36)
Commercial mortgage-backed	\$ 37,572	200 bp decrease	\$ 42,024	0.52%
		100 bp decrease	39,702	0.25
		100 bp increase	35,615	(0.23)
		200 bp increase	33,817	(0.44)
Residential mortgage-backed	\$ 96,434	200 bp decrease	\$ 101,734	0.62%
		100 bp decrease	99,440	0.35
		100 bp increase	92,585	(0.45)
		200 bp increase	89,072	(0.86)
Other asset-backed	\$ 26,393	200 bp decrease	\$ 29,604	0.38%
		100 bp decrease	27,924	0.18
		100 bp increase	24,994	(0.16)
		200 bp increase	23,714	(0.31)
Corporate	\$ 456,516	200 bp decrease	\$ 504,220	5.60%
		100 bp decrease	479,709	2.72
		100 bp increase	434,530	(2.58)
		200 bp increase	413,953	(5.00)
Total fixed maturity securities	\$ 1,199,699	200 bp decrease	\$ 1,312,431	13.24%
		100 bp decrease	1,259,925	7.07
		100 bp increase	1,132,865	(7.85)
		200 bp increase	1,066,778	(15.61)

The Company monitors interest rate risk through an analysis of interest rate simulations, and adjusts the average duration of its fixed maturity portfolio by investing in either longer or shorter term instruments given the results of interest rate simulations and judgments of cash flow needs. The effective duration of the Company's fixed maturity portfolio, excluding interest-only securities, at December 31, 2016 was 5.2. Duration extended slightly during the year as interest rates increased.

The valuation of the Company's marketable equity portfolio is subject to equity price risk. In general, equities have more year-to-year price variability than bonds. However, returns from equity securities have been consistently higher over longer time frames. The Company invests in a diversified portfolio of readily marketable equity securities. A hypothetical 10 percent decrease in the S&P 500 index as of December 31, 2016 would result in a corresponding pre-tax decrease in the fair value of the Company's equity portfolio of approximately \$17.9 million. Management implemented an equity tail-risk hedging strategy during 2014 to protect the Company from significant monthly downside price volatility in the equity markets. The cost of this protection (recorded as a realized investment loss) totaled \$6.3 million during 2016. This hedging strategy may be discontinued in the future depending on market conditions and/or the cost of the protection.

Fixed maturity securities held by the Company generally have an investment quality rating of "A" or better by independent rating agencies. The following table shows the composition of the Company's fixed maturity securities, by rating, as of December 31, 2016.

(\$ in thousands) December 31, 2016	Securities available-for-sale (at fair value)	
	Amount	Percent
Rating:		
AAA	\$ 461,898	38.5%
AA	346,075	28.9
A	313,401	26.1
BAA	75,314	6.3
BA	2,799	0.2
B	1	—
CAA	211	—
Total fixed maturities	\$ 1,199,699	100.0%

Ratings for preferred stocks and fixed maturity securities are assigned by nationally recognized statistical rating organizations ("NRSRO"). NRSRO rating processes seek to evaluate the quality of a security by examining the factors that affect returns to investors. NRSRO ratings are based on quantitative and qualitative factors, as well as the economic, social and political environment in which the issuing entity operates. For further discussion of credit risk and related topics (i.e., "other-than-temporary" impairment losses, unrealized losses in the investment portfolios, and non-investment grade securities held by the Company) see the section entitled "Investment Impairments and Considerations" within this Management's Discussion and Analysis of Financial Condition and Results of Operations.

Municipal fixed maturity securities, including taxable, tax-exempt and pre-refunded securities, totaled \$335.8 million as of December 31, 2016. Municipal securities are well diversified between general obligation and revenue bonds, as well as geographically. The Company's credit analysis of municipal securities is predominantly based on the underlying credit quality of the obligor. Therefore, although a portion of the Company's municipal securities are guaranteed by financial guaranty insurers, reliance is placed on the underlying obligor to pay all contractual cash flows. The ratings of insured municipal securities generally reflect the rating of the underlying primary obligor. The average quality of the municipal fixed maturity securities portfolio is Aa2/AA+ with over 99 percent of securities rated A3/A- or higher. Approximately \$49.8 million of the Company's municipal securities have been pre-refunded, which means that funds have been set aside in escrow to satisfy the future interest and principal obligations of the securities.

Prepayment risk refers to changes in prepayment patterns that can shorten or lengthen the expected timing of principal repayments and thus the average life and the effective yield of a security. Such risk exists within the portfolio of mortgage-backed securities. Prepayment risk is monitored regularly through the analysis of interest rate simulations. At December 31, 2016, the effective duration of the mortgage-backed securities, excluding interest-only securities, is 4.9 with an average life of 5.9 years and a yield to worst of 2.8 percent. At December 31, 2015, the effective duration of the mortgage-backed securities, excluding interest-only securities, was 3.6, with an average life of 4.4 years and a yield to worst of 2.9 percent.

IMPACT OF INFLATION

Inflation has a widespread effect on the Company's results of operations, primarily through increased losses and settlement expenses. The Company considers inflation, including social inflation that reflects an increasingly litigious society and increasing jury awards, when setting loss and settlement expense reserve amounts. Premiums are also affected by inflation, although they are often restricted or delayed by competition and the regulatory rate-setting environment.

NEW ACCOUNTING PRONOUNCEMENTS

See note 1 of Notes to Consolidated Financial Statements under Part II, Item 8 of this Form 10-K for a description of new accounting pronouncements not yet adopted by the Company.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information under the caption "Market Risk" in "Management's Discussion and Analysis of Financial Condition and Results of Operations", which is included in Part II, Item 7 of this Form 10-K, is incorporated herein by reference.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Management's Report on Internal Control Over Financial Reporting

Management of EMC Insurance Group Inc. and Subsidiaries is responsible for the preparation, integrity and objectivity of the accompanying Consolidated Financial Statements, as well as all other financial information in this report. The Consolidated Financial Statements and the accompanying notes have been prepared in accordance with U.S. generally accepted accounting principles and include amounts that are based on management's estimates and judgments where necessary.

Management is responsible for establishing and maintaining adequate internal control over financial reporting, including safeguarding of assets and reliability of financial records. The Company's internal control over financial reporting, designed by or under the supervision of management, 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 U.S. 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. This control structure is further reinforced by a program of internal audits, including audits of the Company's decentralized branch locations, which requires responsive management action.

There are inherent limitations in the effectiveness of any internal control, including the possibility of human error and the circumvention or overriding of controls. Accordingly, adequate internal controls can provide only reasonable assurance with respect to financial statement preparation. Further, because of changes in conditions, the effectiveness of internal control may vary over time.

Management assessed the effectiveness of the Company's internal control over financial reporting 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). Based on this assessment, management believes that, as of December 31, 2016, the Company maintained effective internal control over financial reporting.

The Audit Committee of the Board of Directors is comprised of three directors who are independent of the Company's management. The Audit Committee is responsible for the selection of the independent registered public accounting firm. It meets periodically with management, the independent registered public accounting firm, and the internal auditors to ensure that they are carrying out their responsibilities. In addition to reviewing the Company's financial reports, the Audit Committee is also responsible for performing an oversight role by reviewing and monitoring the financial, accounting and auditing procedures of the Company. The independent registered public accounting firm and the internal auditors have full and free access to the Audit Committee, with or without the presence of management, to discuss the adequacy of internal control over financial reporting and any other matters which they believe should be brought to the attention of the Audit Committee.

The Company's financial statements and internal control over financial reporting have been audited by Ernst & Young LLP, an independent registered public accounting firm. Management has made available to Ernst & Young LLP all of the Company's financial records and related data, as well as the minutes of the stockholders' and directors' meetings. Furthermore, management believes that all representations made to Ernst & Young LLP during its audit were valid and appropriate. Their reports with respect to the fairness of presentation of the Company's financial statements and the effectiveness of the Company's internal control over financial reporting appear elsewhere in this annual report.

/s/ Bruce G. Kelley

Bruce G. Kelley
President, Chief Executive Officer and Treasurer
(Principal Executive Officer)

/s/ Mark E. Reese

Mark E. Reese
Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
EMC Insurance Group Inc.

We have audited EMC Insurance Group Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2016, 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). EMC Insurance Group Inc. and Subsidiaries' 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 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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

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.

In our opinion, EMC Insurance Group Inc. and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of EMC Insurance Group Inc. and Subsidiaries as of December 31, 2016 and 2015, and 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, 2016 of EMC Insurance Group Inc. and Subsidiaries and our report dated March 6, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Des Moines, Iowa
March 6, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
EMC Insurance Group Inc.

We have audited the accompanying consolidated balance sheets of EMC Insurance Group Inc. and Subsidiaries (the Company) as of December 31, 2016 and 2015, and 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, 2016. Our audits also included the financial statement schedules listed in the Index at Item 15(a). These financial statements and schedules are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedules based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of EMC Insurance Group Inc. and Subsidiaries at December 31, 2016 and 2015, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedules, when considered in relation to the basic financial statements taken as a whole, present fairly in all material respects the information set forth therein.

We also have audited, in accordance with standards of the Public Company Accounting Oversight Board (United States), EMC Insurance Group Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 6, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Des Moines, Iowa
March 6, 2017

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

December 31,

(\$ in thousands, except share and per share amounts)

	2016	2015
ASSETS		
Investments:		
Fixed maturity securities available-for-sale, at fair value (amortized cost \$1,189,525 and \$1,130,217)	\$ 1,199,699	\$ 1,161,025
Equity securities available-for-sale, at fair value (cost \$147,479 and \$144,176)	213,839	206,243
Other long-term investments	12,506	9,930
Short-term investments	39,670	38,599
Total investments	1,465,714	1,415,797
Cash	307	224
Reinsurance receivables due from affiliate	21,326	24,236
Prepaid reinsurance premiums due from affiliate	9,309	6,563
Deferred policy acquisition costs (affiliated \$40,660 and \$40,535)	40,939	40,720
Prepaid pension and postretirement benefits due from affiliate	12,314	12,133
Accrued investment income	11,050	10,789
Amounts receivable under reverse repurchase agreements	20,000	16,850
Accounts receivable	2,076	804
Income taxes recoverable	—	1,735
Goodwill	942	942
Other assets (affiliated \$4,632 and \$4,595)	4,836	5,162
Total assets	\$ 1,588,813	\$ 1,535,955

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

(\$ in thousands, except share and per share amounts)	December 31,	
	2016	2015
LIABILITIES		
Losses and settlement expenses (affiliated \$685,533 and \$671,169)	\$ 690,532	\$ 678,774
Unearned premiums (affiliated \$243,682 and \$238,637)	244,885	239,435
Other policyholders' funds (all affiliated)	13,068	8,721
Surplus notes payable to affiliate	25,000	25,000
Amounts due affiliate to settle inter-company transaction balances	11,222	6,408
Pension benefits payable to affiliate	4,097	4,299
Income taxes payable	2,359	—
Deferred income taxes	11,321	19,029
Other liabilities (affiliated \$27,871 and \$28,598)	32,987	29,351
Total liabilities	1,035,471	1,011,017
STOCKHOLDERS' EQUITY		
Common stock, \$1 par value, authorized 30,000,000 shares; issued and outstanding, 21,222,535 shares in 2016 and 20,780,439 shares in 2015	21,223	20,781
Additional paid-in capital	119,054	108,747
Accumulated other comprehensive income	46,081	58,433
Retained earnings	366,984	336,977
Total stockholders' equity	553,342	524,938
Total liabilities and stockholders' equity	\$ 1,588,813	\$ 1,535,955

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

(\$ in thousands, except share and per share amounts)	Year ended December 31,		
	2016	2015	2014
REVENUES			
Premiums earned (affiliated \$586,609, \$566,103 and \$534,105)	\$ 592,408	\$ 570,266	\$ 540,722
Net investment income	47,490	45,582	46,465
Net realized investment gains, excluding impairment losses on securities available-for-sale	5,338	7,634	5,227
Total "other-than-temporary" impairment losses on securities available-for-sale	(1,264)	(1,481)	(878)
Portion of "other-than-temporary" impairment losses on fixed maturity securities available-for-sale reclassified from other comprehensive income (before taxes)	—	—	—
Net impairment losses on securities available-for-sale	(1,264)	(1,481)	(878)
Net realized investment gains	4,074	6,153	4,349
Other income (affiliated \$1,021, \$1,214 and \$1,784)	1,011	1,725	2,931
Total revenues	644,983	623,726	594,467
LOSSES AND EXPENSES			
Losses and settlement expenses (affiliated \$385,708, \$368,722 and \$378,263)	386,897	370,736	385,474
Dividends to policyholders (all affiliated)	13,800	7,705	9,504
Amortization of deferred policy acquisition costs (affiliated \$106,931, \$101,090 and \$97,551)	108,403	102,184	99,042
Other underwriting expenses (affiliated \$69,560, \$68,305 and \$57,148)	69,612	68,418	56,826
Interest expense (all affiliated)	337	337	337
Other expenses (affiliated \$1,860, \$1,822 and \$1,570)	2,727	2,690	2,377
Total losses and expenses	581,776	552,070	553,560
Income before income tax expense	63,207	71,656	40,907
INCOME TAX EXPENSE (BENEFIT)			
Current	18,061	18,611	7,280
Deferred	(1,057)	2,883	3,635
Total income tax expense	17,004	21,494	10,915
Net income	\$ 46,203	\$ 50,162	\$ 29,992
Net income per common share - basic and diluted	\$ 2.20	\$ 2.43	\$ 1.48
Average number of common shares outstanding - basic and diluted	21,006,302	20,621,919	20,205,935

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Net income	\$ 46,203	\$ 50,162	\$ 29,992
OTHER COMPREHENSIVE INCOME (LOSS)			
Unrealized holding gains (losses) on investment securities, net of deferred income tax expense (benefit) of \$(2,092), \$(7,021) and \$18,664	(3,885)	(13,037)	34,663
Reclassification adjustment for realized investment gains included in net income, net of income tax expense of \$(3,628), \$(2,668) and \$(2,518)	(6,736)	(4,956)	(4,677)
Reclassification adjustment for amounts amortized into net periodic pension and postretirement benefit income, net of deferred income tax expense of \$(457), \$(693) and \$(955):			
Net actuarial loss	1,549	863	375
Prior service credit	(2,399)	(2,150)	(2,149)
Total reclassification adjustment associated with affiliate's pension and postretirement benefit plans	(850)	(1,287)	(1,774)
Change in funded status of affiliate's pension and postretirement benefit plans, net of deferred income tax benefit of \$(474), \$(2,126) and \$(2,994):			
Net actuarial loss	(542)	(3,637)	(5,525)
Prior service cost	(339)	(312)	(35)
Total change in funded status of affiliate's pension and postretirement benefit plans	(881)	(3,949)	(5,560)
Other comprehensive income (loss)	(12,352)	(23,229)	22,652
Total comprehensive income	\$ 33,851	\$ 26,933	\$ 52,644

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(\$ in thousands, except per share amounts)	Common stock	Additional paid-in capital	Accumulated other comprehensive income	Retained earnings	Total stockholders' equity
Balance at December 31, 2013	\$ 19,959	\$ 92,656	\$ 59,010	\$ 283,585	\$ 455,210
Issuance of common stock through affiliate's stock plans	385	7,007			7,392
Increase resulting from stock-based compensation expense associated with affiliate's stock plans allocated to the Company		228			228
Other comprehensive income (loss)			22,652		22,652
Net income				29,992	29,992
Dividends paid to public stockholders (\$.627 per share)				(5,211)	(5,211)
Dividends paid to affiliate (\$.627 per share)				(7,377)	(7,377)
Balance at December 31, 2014	20,344	99,891	81,662	300,989	502,886
Issuance of common stock through affiliate's stock plans	437	8,641			9,078
Increase resulting from stock-based compensation expense associated with affiliate's stock plans allocated to the Company		215			215
Other comprehensive income (loss)			(23,229)		(23,229)
Net income				50,162	50,162
Dividends paid to public stockholders (\$.693 per share)				(6,012)	(6,012)
Dividends paid to affiliate (\$.693 per share)				(8,162)	(8,162)
Balance at December 31, 2015	20,781	108,747	58,433	336,977	524,938
Issuance of common stock through affiliate's stock plans	459	10,611			11,070
Repurchase of common stock	(17)	(366)			(383)
Increase resulting from stock-based compensation expense associated with affiliate's stock plans allocated to the Company		62			62
Other comprehensive income (loss)			(12,352)		(12,352)
Net income				46,203	46,203
Dividends paid to public stockholders (\$.780 per share)				(7,014)	(7,014)
Dividends paid to affiliate (\$.780 per share)				(9,182)	(9,182)
Balance at December 31, 2016	<u>\$ 21,223</u>	<u>\$ 119,054</u>	<u>\$ 46,081</u>	<u>\$ 366,984</u>	<u>\$ 553,342</u>

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ 46,203	\$ 50,162	\$ 29,992
Adjustments to reconcile net income to net cash provided by operating activities:			
Losses and settlement expenses (affiliated \$14,364, \$20,517 and \$50,339)	11,758	17,465	51,128
Unearned premiums (affiliated \$5,045, \$8,177 and \$11,672)	5,450	7,342	11,466
Other policyholders' funds due to affiliate	4,347	(1,432)	1,662
Amounts due to/from affiliate to settle inter-company transaction balances	4,814	(2,151)	(531)
Net pension and postretirement benefits due from affiliate	(3,045)	(2,691)	(4,761)
Reinsurance receivables due from affiliate	2,910	4,367	1,725
Prepaid reinsurance premiums due from affiliate	(2,746)	2,302	852
Commissions payable (affiliated \$(1,662), \$3,191 and \$(196))	(1,697)	3,265	(408)
Deferred policy acquisition costs (affiliated \$(125), \$(1,605) and \$(1,516))	(219)	(1,377)	(1,551)
Accrued investment income	(261)	(494)	(311)
Current income tax	8,512	(1,643)	(1,424)
Deferred income tax	(1,057)	2,883	3,635
Net realized investment gains	(4,074)	(6,153)	(4,349)
Other, net (affiliated \$960, \$1,796 and \$(1,122))	12,539	13,767	4,690
Total adjustments to reconcile net income to net cash provided by operating activities	37,231	35,450	61,823
Net cash provided by operating activities	\$ 83,434	\$ 85,612	\$ 91,815

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS, CONTINUED

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
CASH FLOWS FROM INVESTING ACTIVITIES			
Purchases of fixed maturity securities available-for-sale	\$ (403,134)	\$ (235,242)	\$ (209,885)
Disposals of fixed maturity securities available-for-sale	330,239	174,971	131,942
Purchases of equity securities available-for-sale	(63,683)	(83,098)	(50,154)
Disposals of equity securities available-for-sale	71,106	70,905	45,698
Purchases of other long-term investments	(8,720)	(8,416)	(7,613)
Disposals of other long-term investments	571	2,297	530
Net (purchases) disposals of short-term investments	(1,071)	14,663	2,904
Net disbursements under reverse repurchase agreements	(3,150)	(16,850)	—
Net cash used in investing activities	<u>(77,842)</u>	<u>(80,770)</u>	<u>(86,578)</u>
CASH FLOWS FROM FINANCING ACTIVITIES			
Issuance of common stock through affiliate's stock plans	11,070	9,078	7,392
Excess tax benefit associated with affiliate's stock plans	—	95	103
Repurchase of common stock	(383)	—	—
Dividends paid to stockholders (affiliated \$(9,182), \$(8,162) and \$(7,377))	(16,196)	(14,174)	(12,588)
Net cash used in financing activities	<u>(5,509)</u>	<u>(5,001)</u>	<u>(5,093)</u>
NET INCREASE (DECREASE) IN CASH	83	(159)	144
Cash at the beginning of the year	224	383	239
Cash at the end of the year	<u>\$ 307</u>	<u>\$ 224</u>	<u>\$ 383</u>
Income taxes paid	\$ 13,967	\$ 20,254	\$ 8,703
Interest paid to affiliate	\$ 337	\$ 337	\$ 384

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

See accompanying Notes to Consolidated Financial Statements.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Business

EMC Insurance Group Inc., a majority owned subsidiary of Employers Mutual Casualty Company (Employers Mutual), is an insurance holding company with operations in property and casualty insurance and reinsurance. The Company conducts its property and casualty insurance operations through the following subsidiaries: EMCASCO Insurance Company, Illinois EMCASCO Insurance Company and Dakota Fire Insurance Company, and its reinsurance operations through its subsidiary, EMC Reinsurance Company. The Company also has an excess and surplus lines insurance agency subsidiary, EMC Underwriters, LLC. The term “Company” is used interchangeably to describe EMC Insurance Group Inc. (Parent Company only) and EMC Insurance Group Inc. and its subsidiaries.

The Company writes property and casualty insurance in both commercial and personal lines of insurance, with a focus on medium-sized commercial accounts. Approximately 37 percent of the premiums written are in Iowa and contiguous states. The Company’s reinsurance business is primarily written through a quota share reinsurance agreement with Employers Mutual. A small portion of the assumed reinsurance business is written on a direct basis, outside the quota share reinsurance agreement.

Principles of Consolidation and Basis of Presentation

The consolidated financial statements have been prepared on the basis of U.S. generally accepted accounting principles (GAAP), which differ in some respects from those followed in reports to insurance regulatory authorities. All significant inter-company balances and transactions have been eliminated.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates. The Company has evaluated all subsequent events through the date the financial statements were issued.

Property and Casualty Insurance and Reinsurance Operations

Premiums written is the amount charged for policies issued during a reporting period. Property and casualty insurance premiums are recognized as revenue ratably over the terms of the respective policies. Unearned premiums are calculated on the daily pro rata method. Both domestic and foreign assumed reinsurance premiums are recognized as revenues ratably over the terms of the related contracts and underlying policies. Amounts paid as ceded reinsurance premiums are reported as prepaid reinsurance premiums and are amortized over the remaining contract period in proportion to the amount of reinsurance protection provided. Reinsurance reinstatement premiums are recognized in the same period as the loss event that gave rise to the reinstatement premiums.

Costs related to the acquisition of insurance contracts are deferred and amortized to expense as the associated premium revenue is recognized. Only incremental costs or costs directly related to the successful acquisition of new or renewal insurance contracts are capitalized. Accordingly, acquisition costs consist of commissions, premium taxes, and salary and benefit expenses of employees directly involved in the underwriting of insurance policies that are successfully issued.

The method followed in computing deferred policy acquisition costs limits the amount of such deferred costs to the estimated realizable value. In determining estimated realizable value, the computation gives effect to the premium to be earned, related investment income, anticipated losses and settlement expenses, anticipated policyholder dividends, and certain other costs expected to be incurred to administer the insurance policies as the premium is earned. The anticipated losses and settlement expenses are not discounted and are based on the Company’s projected loss and settlement expense ratios for the next twelve months, which include catastrophe loads based on historical results adjusted for recent trends. The occurrence of a significant catastrophic event, and/or the accumulation of catastrophe losses would not have a direct impact on the determination of premium deficiencies; however, such occurrences would be included in the historical results that are used to establish the catastrophe loads. A premium deficiency is first recognized by expensing the amount of unamortized deferred policy acquisition costs necessary to eliminate the deficiency. If the premium deficiency is greater than the unamortized deferred policy acquisition costs, a liability is accrued for the excess deficiency. The Company did not record a premium deficiency for the years ended December 31, 2016, 2015 or 2014.

Certain commercial lines of business written by the property and casualty insurance subsidiaries, including workers' compensation, are eligible for policyholder dividends in accordance with provisions of the underlying insurance policies. Net premiums written subject to policyholder dividends represented approximately 22 percent of the property and casualty insurance subsidiaries' total net commercial line premiums written in 2016. Policyholder dividends are accrued over the terms of the underlying policy periods.

Liabilities for losses reflect losses incurred through the balance sheet date and are based upon the estimated ultimate loss ratios established by line of business and accident year, and estimates of losses expected under assumed reinsurance contracts. Liabilities for settlement expenses are provided by estimating expenses expected to be incurred in settling the claims provided for in the loss reserves. Changes in reserves estimates are reflected in net income in the year such changes are recorded (see note 4).

Ceded reinsurance amounts with nonaffiliated reinsurers relating to reinsurance receivables for unpaid losses and settlement expenses and prepaid reinsurance premiums are reported on the balance sheet on a gross basis. Amounts ceded to Employers Mutual under the affiliated reinsurance pooling agreement and the inter-company reinsurance programs (see note 2) have not been grossed up because the contracts provide that receivables and payables may be offset upon settlement.

Based on current information, the liabilities for losses and settlement expenses are considered to be adequate. Since the provisions are necessarily based on estimates, the ultimate liabilities may be more or less than such provisions.

Investments

Currently, all securities are classified as available-for-sale and are carried at fair value, with unrealized holding gains and losses reported as a component of accumulated other comprehensive income in stockholders' equity, net of deferred income taxes. Other long-term investments consist of holdings in limited partnerships that are carried under the equity method of accounting, and holdings in limited partnerships and limited liability companies that are carried at amortized cost. The Company has an investment in a limited partnership that is designed to help protect the Company from a sudden and significant decline in the value of its equity portfolio. This limited partnership is carried under the equity method of accounting. Because of the nature of this investment, which is used solely to support the equity tail-risk hedging strategy, changes in the carrying value of the limited partnership are recorded as realized investment gains (losses), rather than as a component of investment income. Short-term investments generally include money market funds, U.S. Treasury bills and commercial paper that are carried at fair value, which approximates cost.

The Company participates in a reverse repurchase arrangement involving the purchase of investment securities from third-party sellers, with the agreement that the purchased securities be sold back to the third-party sellers for agreed-upon prices at specified future dates. The third-party sellers are required to pledge collateral with a value greater than the amount of cash received in the transactions. In accordance with GAAP, the investment securities purchased under the reverse repurchase agreements are not reflected in the Company's consolidated balance sheets, but instead a receivable is recorded for the principal amount lent. Net proceeds/disbursements related to the reverse repurchase transactions are reported as a component of investing activities in the consolidated statements of cash flows, and the income as a component of operating activities.

The Company uses independent pricing sources to obtain the estimated fair value of securities. The fair value is based on quoted market prices, where available. In cases where quoted market prices are not available, fair values are based on a variety of valuation techniques depending on the type of investment. The fair values obtained from independent pricing sources are reviewed for reasonableness and any discrepancies are investigated for final valuation (see note 8). The Company uses a practical expedient to measure the pooled separate account investments in Employers Mutual's qualified pension plan at the net asset value per share (see note 12).

Premiums and discounts on fixed maturity securities are amortized over the life of the security as an adjustment to yield using the effective interest method. Amortization of premiums and discounts on mortgage-backed securities incorporates prepayment assumptions to estimate expected lives. Gains and losses realized on the disposition of investments are included in net income. The cost of investments sold is determined on the specific identification method using the highest cost basis first. Included in investments at December 31, 2016 and 2015 are securities on deposit with various regulatory authorities as required by law amounting to \$11.0 million and \$11.2 million, respectively.

The Company regularly monitors its investment portfolio for securities whose fair value is less than the carrying value for indications of “other-than-temporarily” impairment. Several factors are used to determine whether the carrying value of an individual security has been “other-than-temporarily” impaired. Such factors include, but are not limited to (1) the security’s value and performance in the context of the overall markets, (2) length of time and extent the security’s fair value has been below carrying value, (3) key corporate events, (4) for fixed maturity securities, the amount of collateral available, and (5) for equity securities, the ability and intent to hold the security until recovery to its cost basis. When an equity security is deemed to be “other-than-temporarily” impaired, the carrying value is reduced to fair value and a realized loss is recognized and charged to income. For fixed maturity securities, if the present value of cash flows expected to be collected is less than the amortized cost of the security, a credit loss is deemed to exist and the security is considered “other-than-temporarily” impaired. The portion of the impairment related to a credit loss is recognized through earnings, and the portion of the impairment related to other factors, if any, is recognized through “other comprehensive income”. Alternatively, if the Company has the intent to sell a fixed maturity security that is in an unrealized loss position, or determines that it will “more likely than not” be required to sell a fixed maturity security that is in an unrealized loss position before recovery of its amortized cost basis, then the carrying value is reduced to fair value and the entire amount of the impairment is recognized through earnings.

Income Taxes

The Company files a consolidated Federal income tax return with its subsidiaries. Consolidated income taxes/benefits are allocated among the entities based upon separate tax liabilities.

Deferred income taxes are provided for temporary differences between the tax basis of assets and liabilities and the reported amounts of those assets and liabilities for financial reporting purposes. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Income tax expense provisions increase or decrease in the same period in which a change in tax rates is enacted. A valuation allowance is established to reduce deferred tax assets to their net realizable value if it is “more likely than not” that a tax benefit will not be realized.

An assessment of the Company’s current tax positions indicated no uncertainties that would warrant different recognition and valuation from that applied in the Company’s tax returns.

Stock-Based Compensation

The Company has no stock-based compensation plans of its own; however, Employers Mutual has several stock plans that utilize the common stock of the Company. The Company receives the current fair value for all shares issued under these plans. A portion of the compensation expense recognized by Employers Mutual (as the requisite service period for granted options and restricted stock awards is rendered) is allocated to the Company’s property and casualty insurance subsidiaries through their participation in the pooling agreement (see note 2). Because a portion of Employers Mutual’s stock compensation expense is reflected in the Company’s financial statements and issuances of the Company’s stock under Employers Mutual’s stock plans have an impact on the Company’s capital accounts, the disclosures required by the Compensation – Stock Compensation Topic 718 of the Financial Accounting Standards Board (FASB) Accounting Standards Codification™ (Codification or ASC) are included in the Company’s consolidated financial statements.

Employee Retirement Plans

Employers Mutual has various employee benefit plans, including two defined benefit pension plans, and two postretirement benefit plans that provide retiree healthcare and life insurance benefits. Although the Company has no employees of its own, it is responsible for its share of the plans' expenses and related prepaid assets and liabilities (the "funded status") as determined under the terms of the pooling agreement. Accordingly, the Company recognizes its share of the funded status of Employers Mutual’s pension and postretirement benefit plans on its balance sheet, with changes in the funded status of the plans recognized through “other comprehensive income.” In addition, the Company is responsible for its share of costs of these plans allocated by Employers Mutual to subsidiaries that do not participate in the pooling agreement (see note 2). During 2016, Employers Mutual's management determined that an allocation of the plans' funded status to the Company's reinsurance subsidiary would no longer be made because the amounts were immaterial and significant time and cost was needed to determine the allocation. As a result, the assets and liabilities allocated to the reinsurance subsidiary as of December 31, 2015 were settled with Employers Mutual during 2016.

Accounts Receivable

The accounts receivable balance consists of assumed reinsurance premiums receivable (net of any commissions) on business written directly by the reinsurance subsidiary, and commission income receivable on excess and surplus lines business marketed by EMC Underwriters, LLC. These receivables are carried at their initial recognition amounts. It is the Company's policy to reflect the impairment of receivables through a valuation allowance until ultimately collected or charged-off. No valuation allowance is currently carried, as no amounts are deemed impaired. No interest income, other fees, or deferred costs related to these receivables are assessed or recognized.

Off-Balance-Sheet Credit Exposure

Employers Mutual collects from agents, policyholders and ceding companies all written premiums associated with the insurance business produced by the pool participants and the assumed reinsurance business ceded to the reinsurance subsidiary. Employers Mutual also collects from its reinsurers all losses and settlement expenses recoverable under the reinsurance contracts protecting the pool participants and, starting in 2016, the additional reinsurance protection (see note 2) protecting the reinsurance subsidiary, as well as the fronting business ceded to the reinsurance subsidiary. Employers Mutual settles with the pool participants (monthly) and the reinsurance subsidiary (quarterly) the premiums written from these insurance policies and the paid losses and settlement expenses recoverable under the external reinsurance contracts, providing full credit for the premiums written and the paid losses and settlement expenses recoverable under the external reinsurance contracts generated during the period (not just the collected portion). Due to this arrangement, and since a significant portion of the premium balances are collected over the course of the underlying coverage periods, Employers Mutual carries a substantial receivable balance for insurance and reinsurance premiums in process of collection and, to a lesser extent, paid losses and settlement expenses recoverable from the external reinsurance companies. Any of these receivable amounts that are ultimately deemed to be uncollectible are charged-off by Employers Mutual and the expense is charged to the reinsurance subsidiary or allocated to the pool members on the basis of pool participation. As a result, the Company has off-balance sheet arrangements with an unconsolidated entity that results in credit-risk exposures (Employers Mutual's insurance and reinsurance premium receivable balances, and paid loss and settlement expense recoverable amounts) that are not reflected in the Company's financial statements. The average annual expense for such charge-offs allocated to the Company over the past ten years is \$362,000. Based on this historical data, this credit-risk exposure is not considered to be material to the Company's results of operations or financial position and, accordingly, no loss contingency liability has been recorded.

Foreign Currency Transactions

Included in the underlying reinsurance business assumed by the reinsurance subsidiary are reinsurance transactions conducted with foreign cedants denominated in their local functional currencies. In accordance with the terms of the quota share agreement (see note 2), the reinsurance subsidiary assumes all foreign currency exchange gains/losses associated with contracts incepting on January 1, 2006 and thereafter that are subject to the quota share agreement. The reinsurance subsidiary also has foreign currency exchange gains/losses associated with the business assumed outside the quota share agreement. The assets and liabilities resulting from these foreign reinsurance transactions are reported in U.S. dollars based on the foreign currency exchange rates that existed at the balance sheet dates. The foreign currency exchange rate gains/losses reported in the consolidated statements of income that resulted from these foreign reinsurance transactions are reported in U.S. dollars re-measured from the foreign currency exchange rates that existed at the inception of each reinsurance contract. The foreign currency exchange rate gains/losses resulting from these re-measurements to U.S. dollars are reported as a component of other income in the consolidated statements of income.

Net Income Per Share - Basic and Diluted

The Company's basic and diluted net income per share is computed by dividing net income by the weighted average number of common shares outstanding during each period. As previously noted, the Company receives the current fair value for all shares issued under Employers Mutual's stock plans. As a result, the Company had no potential common shares outstanding during 2016, 2015 or 2014 that would have been dilutive to the calculation of net income per share.

Goodwill

Goodwill represents the excess of cost over the fair value of net assets of acquired subsidiaries. Goodwill is not amortized, but is instead subject to impairment if the carrying value of the goodwill exceeds the estimated fair value of net assets. If the carrying amount of the reporting unit (including goodwill) exceeds the computed fair value, an impairment loss is recognized through the income statement equal to the excess amount, but not greater than the balance of the goodwill. Goodwill was not deemed to be impaired in 2016, 2015 or 2014.

Accounting Pronouncements Adopted

In February 2015, the FASB updated its guidance related to the Consolidation Topic 810 of the (ASC). The objective of this update is to improve consolidation guidance through changes in the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. The guidance modifies the evaluation of whether limited partnerships and similar legal entities are variable interest entities or voting interest entities, while also eliminating the presumption that a general partner should consolidate a limited partnership. This guidance was effective for interim and annual periods beginning after December 15, 2015, and was to be applied either retrospectively or through a modified retrospective approach by recording a cumulative-effect adjustment to equity as of the beginning of the fiscal year of adoption. The Company adopted this guidance in the first quarter of 2016. Adoption of this guidance did not have an impact on the consolidated financial condition or operating results of the Company.

In May 2015, the FASB updated its guidance related to the Financial Services-Insurance Topic 944 of the ASC. The objective of this update is to add disclosures which provide transparency of significant estimates made in measuring the liability for losses and settlement expenses, thus providing more insight into an insurance entity's ability to underwrite and anticipate costs associated with claims. The new disclosures primarily include incurred and paid claims development tables prepared net of reinsurance (not to exceed ten years), and a reconciliation of the carrying amount of the liability for losses and settlement expenses. Also included (for each accident year of incurred claims development disclosed), is disclosure of incurred but not reported (IBNR) loss reserves, claim frequency information, and the average annual percentage payout of incurred claims by age. This guidance is applied to annual reporting periods beginning after December 15, 2015, and certain disclosures to interim reporting periods beginning after December 15, 2016. The Company adopted this guidance during the fourth quarter of 2016 (see note 4). Since the guidance only affects disclosure, adoption had no impact on the consolidated financial condition or operating results of the Company.

In August 2014, the FASB updated its guidance related to the Presentation of Financial Statements - Going Concern Subtopic 205-40 of the ASC. The objective of this update is to provide guidance regarding management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern, and to provide related footnote disclosures if indeed substantial doubts do exist. This guidance is effective for annual periods ending after December 15, 2016, and for interim and annual reporting periods thereafter. The Company adopted this guidance in the fourth quarter of 2016. Management completed an evaluation and determined no disclosures were necessary.

In March 2016, the FASB updated its guidance related to Stock Compensation Topic 718 of the ASC. The objective of this update is to simplify the accounting for employee share-based payments. The provisions applicable to the Company primarily involve the accounting treatment for excess tax benefits, which is the excess of the actual tax benefit realized by the Company upon the exercise of non-qualified stock options (by Employers Mutual's employees) over the deferred income tax benefit previously recognized in conjunction with the compensation expense (tax deficiency if the actual tax benefit realized is less than the previously recognized deferred income tax benefit). The FASB permitted early prospective adoption of these provisions, and the Company elected to adopt effective January 1, 2016. As a result, effective January 1, 2016, the Company no longer records to additional paid-in capital the excess tax benefits (deficiencies) allocated to it through the pooling agreement, but instead recognizes these amounts through the consolidated statements of income as components of current and deferred income taxes. The requirement that these excess tax benefits (deficiencies) be reflected as financing cash flows in the consolidated statements of cash flows was also removed, and these amounts are now reflected as cash flows from operating activities on a prospective basis.

New Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB updated its guidance related to the Revenue from Contracts with Customers Topic 606 of the ASC. The objective of this update (and other related following updates) is to improve the reporting of revenue by providing a more robust framework for addressing revenue issues, and improved disclosure requirements. Current revenue recognition guidance in U.S. GAAP is comprised of broad revenue recognition concepts together with numerous revenue requirements for particular industries or transactions, which sometimes result in different accounting for economically similar transactions. This guidance is to be applied retrospectively to annual and interim reporting periods beginning after December 15, 2017, with early adoption permitted as of the original effective date (annual and interim reporting periods beginning after December 15, 2016). The Company will adopt this guidance during the first quarter of 2018. Since premium revenue from insurance contracts is excluded from the scope of this updated guidance, adoption is expected to have little or no impact on the consolidated financial condition or operating results of the Company. The Company's largest non-premium revenue items are service charges related to the billing of the pool participants' direct written premiums to policyholders, and commission income on excess and surplus lines business marketed by EMC Underwriters, LLC, both of which are included in "Other income" in the consolidated statements of income.

In January 2016, the FASB updated its guidance related to the Financial Instruments-Overall Subtopic 825-10 of the ASC. The objective of this update is to enhance the reporting model for financial instruments to provide financial statement users with more decision-useful information. The major change in reporting from this update that will impact the Company is a requirement that equity investments (excluding those accounted for under the equity method of accounting or those that are consolidated) be measured at fair value, with changes in fair value recognized in net income. While all of the Company's equity investments are already measured at fair value (with the exception of those that are consolidated and those that are accounted for under the equity method of accounting), the Company currently classifies all of its investments in equity securities as available-for-sale, and as such, the changes in fair value are currently recognized in other comprehensive income rather than net income. This guidance is to be applied to annual and interim reporting periods beginning after December 15, 2017, with recognition of a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. Early adoption is not permitted. The Company will adopt this guidance during the first quarter of 2018. Adoption is not expected to impact consolidated stockholders' equity, but is expected to introduce a material amount of volatility to the Company's operating results.

In February 2016, the FASB issued updated guidance in Leases Topic 842 of the ASC, which supersedes the guidance in Leases Topic 840 of the ASC. The objective of this update is to increase transparency and comparability among organizations by requiring recognition of lease assets and lease liabilities on the balance sheet, and disclosure of key information about leasing arrangements. This guidance is effective for interim and annual periods beginning after December 15, 2018, and is to be applied using a modified retrospective approach. Early adoption is permitted. The Company will adopt this guidance during the first quarter of 2019. Management continues to research this guidance, which thus far has lead management to a preliminary determination that this update will not have a material impact to the Company's consolidated financial condition or operating results.

In June 2016, the FASB issued updated guidance in Financial Instruments-Credit Losses Topic 326 of the ASC. The objective of this update is to provide information about expected credit losses on financial instruments and other commitments to extend credit. Specifically, this updated guidance replaces the current incurred loss impairment methodology, which delays recognition of a loss until it is probable a loss has been incurred, with a methodology that reflects expected credit losses considering a broader range of reasonable and supportable information. This guidance covers financial assets that are not accounted for at fair value through net income, thus will not be applicable to the Company's equity investments upon implementation of the updated guidance described above for the Financial Instruments-Overall Subtopic 825-10. This guidance is effective for interim and annual periods beginning after December 15, 2019, and is to be applied with a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective (modified-retrospective approach). Early adoption is permitted, but only to fiscal years beginning after December 15, 2018. The Company will adopt this guidance during the first quarter of 2020. The Company is currently evaluating the impact this guidance will have on the Company's consolidated financial condition and operating results.

2. AFFILIATION AND TRANSACTIONS WITH AFFILIATES

The operations of the Company are highly integrated with those of Employers Mutual through participation in a property and casualty reinsurance pooling agreement (the "pooling agreement"), a quota share retrocessional reinsurance agreement (the "quota share agreement") and inter-company reinsurance programs. All transactions occurring under the pooling agreement, quota share agreement and the inter-company reinsurance programs are based on statutory accounting principles. Certain adjustments are made to the statutory-basis amounts assumed by the property and casualty insurance subsidiaries and the reinsurance subsidiary to bring the amounts into compliance with GAAP.

Property and Casualty Insurance Subsidiaries

The Company's three property and casualty insurance subsidiaries and two subsidiaries and an affiliate of Employers Mutual (Union Insurance Company of Providence, EMC Property & Casualty Company and Hamilton Mutual Insurance Company) are parties to a pooling agreement with Employers Mutual. Under the terms of the pooling agreement, each company cedes to Employers Mutual all of its insurance business, and assumes from Employers Mutual an amount equal to its participation in the pool. All premiums, losses, settlement expenses, and other underwriting and administrative expenses, excluding the voluntary reinsurance business assumed by Employers Mutual from nonaffiliated insurance companies, are prorated among the parties on the basis of participation in the pool. Employers Mutual negotiates reinsurance agreements that provide protection to the pool and each of its participants, including protection against losses arising from catastrophic events. The aggregate participation of the Company's property and casualty insurance subsidiaries in the pool is 30 percent.

The Inter-Company Committees of the boards of directors of the Company and Employers Mutual approved a new inter-company reinsurance program between the Company's insurance subsidiaries in the property and casualty insurance segment and Employers Mutual for calendar year 2016. This reinsurance program is intended to reduce the volatility of the Company's quarterly results caused by excessive catastrophe and storm losses, and provide protection from both the frequency and severity of such losses. The reinsurance program consists of two semi-annual aggregate catastrophe excess of loss treaties. The first treaty was effective from January 1, 2016 through June 30, 2016, and had a retention of \$20.0 million and a limit of \$24.0 million. The total cost of this treaty was approximately \$6.3 million. The second treaty was effective from July 1, 2016 through December 31, 2016, and had a retention of \$15.0 million and a limit of \$12.0 million. The total cost of this treaty was approximately \$1.5 million. All catastrophe and storm losses assumed by the property and casualty insurance subsidiaries (net of applicable reinsurance recoveries from external reinsurance protections purchased by the pool participants) were subject to the terms of these treaties, and there was no co-participation provision. Losses and settlement expenses ceded to Employers Mutual under these treaties totaled \$7.5 million.

Operations of the pool and the inter-company reinsurance program give rise to inter-company balances with Employers Mutual, which are generally settled during the subsequent month. The investment and income tax activities of the pool participants are not subject to the pooling agreement. The pooling agreement provides that Employers Mutual will make up any shortfall or difference resulting from an error in its systems and/or computation processes that would otherwise result in the required restatement of the pool participants' financial statements.

The purpose of the pooling agreement is to spread the risk of an exposure insured by any of the pool participants among all the companies. The pooling agreement produces a more uniform and stable underwriting result from year to year for all companies in the pool than might be experienced individually. In addition, each company benefits from the capacity of the entire pool, rather than being limited to policy exposures of a size commensurate with its own assets, and from the wide range of policy forms, lines of insurance written, rate filings and commission plans offered by each of the companies.

Reinsurance Subsidiary

The Company's reinsurance subsidiary is party to a quota share agreement and an inter-company reinsurance program with Employers Mutual. Under the terms of the quota share agreement, the reinsurance subsidiary assumes 100 percent of Employers Mutual's assumed reinsurance business, subject to certain exceptions. The inter-company reinsurance program in place with Employers Mutual covers both business assumed from Employers Mutual through the quota share agreement, as well as business obtained outside the quota share agreement. The Inter-Company Committees of the boards of directors of the Company and Employers Mutual approved a change in the inter-company reinsurance program between the Company's reinsurance subsidiary and Employers Mutual for calendar year 2016. The 2016 reinsurance program consists of two treaties. The first was a per occurrence catastrophe excess of loss treaty with a retention of \$10.0 million, a limit of \$10.0 million, 20 percent co-participation, and no reinstatement. The total cost of this treaty was approximately \$2.0 million. The second was an annual aggregate catastrophe excess of loss treaty with a retention of \$20.0 million, a limit of \$100.0 million, and 20 percent co-participation. The total cost of this treaty was approximately \$3.1 million. Any losses recovered under the per occurrence treaty inure to the benefit of the aggregate treaty, and only catastrophic events with total losses greater than \$500,000 are subject to the terms of the aggregate treaty. Prior to 2016, the reinsurance program with Employers Mutual consisted of a single excess of loss reinsurance agreement. Under the terms of that agreement, the reinsurance subsidiary retained the first \$4.0 million of losses per event, and also retained 20.0 percent of any losses between \$4.0 million and \$10.0 million and 10.0 percent of any losses between \$10.0 million and \$50.0 million. The cost of the excess of loss reinsurance protection, which included reimbursement for the cost of reinsurance protection purchased by Employers Mutual to protect itself from the assumption of excessive losses in the event of a major catastrophe, was 8.0 percent of the reinsurance subsidiary's total assumed reinsurance premiums written in 2015 and 2014.

In connection with the change in the inter-company reinsurance program in 2016, the reinsurance subsidiary began purchasing additional reinsurance protection in peak exposure territories from external parties in which coverage is triggered when losses experienced by the insurance industry from a catastrophic event exceed a specified threshold. Any reinsurance recoveries received from external parties reduces the amount of losses ceded to Employers Mutual under the inter-company reinsurance program. The net cost of the external reinsurance protection was approximately \$3.5 million in 2016.

The reinsurance subsidiary does not directly reinsure any of the insurance business written by Employers Mutual or the other pool participants; however, Employers Mutual assumes reinsurance business from the Mutual Reinsurance Bureau underwriting association (MRB), which provides a small amount of reinsurance protection to the members of the EMC Insurance Companies pooling agreement. As a result, the reinsurance subsidiary's assumed exposures include a small portion of the EMC Insurance Companies' direct business, after ceded reinsurance protections purchased by MRB are applied. In addition, the reinsurance subsidiary does not reinsure any "involuntary" facility or pool business that Employers Mutual assumes pursuant to state law. The reinsurance subsidiary assumes all foreign currency exchange gain/loss associated with contracts incepting on January 1, 2006 and thereafter that are subject to the quota share agreement. Operations of the quota share agreement and the inter-company reinsurance program, as well as the purchase of the reinsurance protection from external parties, give rise to inter-company balances with Employers Mutual, which are generally settled during the month following the end of each quarter. The investment and income tax activities of the reinsurance subsidiary are not subject to the quota share agreement.

Premiums earned assumed by the reinsurance subsidiary from Employers Mutual amounted to \$135.2 million, \$129.6 million and \$122.1 million in 2016, 2015 and 2014, respectively. The reinsurance subsidiary ceded premiums of \$5.1 million, \$10.8 million and \$10.3 million in 2016, 2015 and 2014, respectively, to Employers Mutual as payment for the inter-company reinsurance program. Losses and settlement expenses assumed by the reinsurance subsidiary from Employers Mutual amounted to \$90.9 million, \$77.5 million and \$79.5 million in 2016, 2015 and 2014, respectively. Losses and settlement expenses ceded to Employers Mutual under the inter-company reinsurance program totaled (\$467,000), \$622,000 and (\$720,000) in 2016, 2015 and 2014, respectively.

It is customary in the reinsurance business for the assuming company to compensate the ceding company for the acquisition expenses incurred in the generation of the business. Commissions incurred by the reinsurance subsidiary under the quota share agreement with Employers Mutual amounted to \$27.4 million, \$27.3 million and \$25.6 million in 2016, 2015 and 2014, respectively.

The net foreign currency exchange gains assumed by the reinsurance subsidiary from Employers Mutual were \$367,000 in 2016, \$386,000 in 2015 and \$1.0 million in 2014. The total amount of net foreign currency exchange gains assumed by the reinsurance subsidiary, including the business written on a direct basis outside the quota share agreement, were \$356,000 in 2016, \$898,000 in 2015 and \$2.2 million in 2014.

Services Provided by Employers Mutual

The Company does not have any employees of its own. Employers Mutual performs all operations for all of its subsidiaries and affiliate. Such services include data processing, claims, financial, actuarial, legal, auditing, marketing and underwriting. Employers Mutual allocates a portion of the cost of these services to its subsidiaries that do not participate in the pooling agreement based upon a number of criteria, including usage of the services and the number of transactions. The remaining costs are charged to the pooling agreement and each pool participant shares in the total cost in accordance with its pool participation percentage. Costs allocated to the Company by Employers Mutual for services provided to the holding company and its subsidiaries that do not participate in the pooling agreement amounted to \$4.7 million, \$3.4 million and \$3.5 million in 2016, 2015 and 2014, respectively. Costs allocated to the Company through the operation of the pooling agreement amounted to \$92.3 million, \$87.4 million and \$76.0 million in 2016, 2015 and 2014, respectively.

Investment expenses are based on actual expenses incurred by the Company and its subsidiaries, plus an allocation of other investment expenses incurred by Employers Mutual, which is based on a weighted-average of total invested assets and number of investment transactions. Investment expenses allocated to the Company by Employers Mutual amounted to \$1.4 million, \$1.4 million and \$1.3 million in 2016, 2015 and 2014, respectively.

3. REINSURANCE

The parties to the pooling agreement cede insurance business to other insurers in the ordinary course of business for the purpose of limiting their maximum loss exposure through diversification of their risks. In its consolidated financial statements, the Company treats risks to the extent they are reinsured as though they were risks for which the Company is not liable. However, insurance ceded by the pool participants does not relieve their primary liability as the originating insurers. Employers Mutual evaluates the financial condition of the reinsurers of the parties to the pooling agreement and monitors concentrations of credit risk arising from similar geographic regions, activities or economic characteristics of the reinsurers to minimize exposure to significant losses from reinsurer insolvencies.

As of December 31, 2016 and 2015, amounts recoverable from nonaffiliated reinsurers (two in 2016 and three in 2015) totaled \$10.4 million and \$12.7 million respectively, which represents a significant portion of the total prepaid reinsurance premiums and reinsurance receivables for losses and settlement expenses. Included in these balances are amounts due from the MRB underwriting association, of which the Company (through Employers Mutual) is a member with other unaffiliated reinsurers. All members of MRB have joint and several liability for MRB's obligations. Also included in these balances is the property and casualty insurance subsidiaries' aggregate pool participation percentage of amounts ceded by Employers Mutual to organizations on a mandatory basis. Credit risk associated with these amounts are minimal, as all companies participating in the organizations are responsible for the liabilities of the organizations on a pro rata basis.

The effect of reinsurance on premiums written and earned, and losses and settlement expenses incurred, for the three years ended December 31, 2016 is presented below. The classification of the assumed and ceded reinsurance amounts between affiliates and nonaffiliates is based on the participants in the underlying reinsurance agreements, and is intended to provide an understanding of the actual source of the reinsurance activities. This presentation differs from the classifications used in the consolidated financial statements, where all amounts flowing through the pooling and quota share agreements and inter-company reinsurance programs with Employers Mutual are reported as "affiliated" balances.

(\$ in thousands)	Year ended December 31, 2016		
	Property and casualty insurance	Reinsurance	Total
Premiums written			
Direct	\$ 383,811	\$ —	\$ 383,811
Assumed from nonaffiliates	4,544	146,236	150,780
Assumed from affiliates	491,315	—	491,315
Ceded to nonaffiliates	(24,346)	(10,126)	(34,472)
Ceded to affiliates	(391,651)	(5,080)	(396,731)
Net premiums written	<u>\$ 463,673</u>	<u>\$ 131,030</u>	<u>\$ 594,703</u>
Premiums earned			
Direct	\$ 382,300	\$ —	\$ 382,300
Assumed from nonaffiliates	4,444	148,851	153,295
Assumed from affiliates	483,759	—	483,759
Ceded to nonaffiliates	(23,896)	(7,830)	(31,726)
Ceded to affiliates	(390,140)	(5,080)	(395,220)
Net premiums earned	<u>\$ 456,467</u>	<u>\$ 135,941</u>	<u>\$ 592,408</u>
Losses and settlement expenses incurred			
Direct	\$ 229,859	\$ —	\$ 229,859
Assumed from nonaffiliates	2,712	93,306	96,018
Assumed from affiliates	304,007	1,811	305,818
Ceded to nonaffiliates	(4,891)	(3,056)	(7,947)
Ceded to affiliates	(237,318)	467	(236,851)
Net losses and settlement expenses incurred	<u>\$ 294,369</u>	<u>\$ 92,528</u>	<u>\$ 386,897</u>

Year ended December 31, 2015

(\$ in thousands)	Year ended December 31, 2015		
	Property and casualty insurance	Reinsurance	Total
Premiums written			
Direct	\$ 370,955	\$ —	\$ 370,955
Assumed from nonaffiliates	4,392	138,700	143,092
Assumed from affiliates	474,323	—	474,323
Ceded to nonaffiliates	(24,281)	(3,369)	(27,650)
Ceded to affiliates	(370,955)	(10,827)	(381,782)
Net premiums written	<u>\$ 454,434</u>	<u>\$ 124,504</u>	<u>\$ 578,938</u>
Premiums earned			
Direct	\$ 366,752	\$ —	\$ 366,752
Assumed from nonaffiliates	4,240	139,839	144,079
Assumed from affiliates	466,966	—	466,966
Ceded to nonaffiliates	(24,009)	(5,943)	(29,952)
Ceded to affiliates	(366,752)	(10,827)	(377,579)
Net premiums earned	<u>\$ 447,197</u>	<u>\$ 123,069</u>	<u>\$ 570,266</u>
Losses and settlement expenses incurred			
Direct	\$ 198,504	\$ —	\$ 198,504
Assumed from nonaffiliates	2,407	83,515	85,922
Assumed from affiliates	294,324	857	295,181
Ceded to nonaffiliates	(4,848)	(4,897)	(9,745)
Ceded to affiliates	(198,504)	(622)	(199,126)
Net losses and settlement expenses incurred	<u>\$ 291,883</u>	<u>\$ 78,853</u>	<u>\$ 370,736</u>

Year ended December 31, 2014

(\$ in thousands)	Property and casualty insurance	Reinsurance	Total
Premiums written			
Direct	\$ 367,732	\$ —	\$ 367,732
Assumed from nonaffiliates	3,955	143,564	147,519
Assumed from affiliates	455,183	—	455,183
Ceded to nonaffiliates	(25,431)	(14,322)	(39,753)
Ceded to affiliates	(367,732)	(10,339)	(378,071)
Net premiums written	<u>\$ 433,707</u>	<u>\$ 118,903</u>	<u>\$ 552,610</u>
Premiums earned			
Direct	\$ 372,658	\$ —	\$ 372,658
Assumed from nonaffiliates	3,787	144,439	148,226
Assumed from affiliates	443,440	—	443,440
Ceded to nonaffiliates	(24,846)	(15,759)	(40,605)
Ceded to affiliates	(372,658)	(10,339)	(382,997)
Net premiums earned	<u>\$ 422,381</u>	<u>\$ 118,341</u>	<u>\$ 540,722</u>
Losses and settlement expenses incurred			
Direct	\$ 227,382	\$ —	\$ 227,382
Assumed from nonaffiliates	2,201	96,281	98,482
Assumed from affiliates	304,579	1,278	305,857
Ceded to nonaffiliates	(8,747)	(10,838)	(19,585)
Ceded to affiliates	(227,382)	720	(226,662)
Net losses and settlement expenses incurred	<u>\$ 298,033</u>	<u>\$ 87,441</u>	<u>\$ 385,474</u>

Individual lines in the above tables are defined as follows:

- “Direct” represents business produced by the property and casualty insurance subsidiaries.
- “Assumed from nonaffiliates” for the property and casualty insurance subsidiaries represents their aggregate 30 percent pool participation percentage of involuntary business assumed by the pool participants pursuant to state law. For the reinsurance subsidiary, this line represents the reinsurance business assumed through the quota share agreement (including “fronting” activities initiated by Employers Mutual) and the business assumed outside the quota share agreement.
- “Assumed from affiliates” for the property and casualty insurance subsidiaries represents their aggregate 30 percent pool participation percentage of all the pool members’ direct business. The amounts reported under the caption “Losses and settlement expenses incurred” also include claim-related services provided by Employers Mutual that are allocated to the property and casualty insurance subsidiaries and the reinsurance subsidiary.
- “Ceded to nonaffiliates” for the property and casualty insurance subsidiaries represents their aggregate 30 percent pool participation percentage of 1) the amounts ceded to nonaffiliated reinsurance companies in accordance with the terms of the reinsurance agreements providing protection to the pool and each of its participants, and 2) the amounts ceded on a mandatory basis to state organizations in connection with various programs. For the reinsurance subsidiary, this line includes 1) reinsurance business that is ceded to other insurance companies in connection with “fronting” activities initiated by Employers Mutual, and 2) starting in 2016, amounts ceded to purchase additional reinsurance protection from external parties for the assumed reinsurance business.
- “Ceded to affiliates” for the property and casualty insurance subsidiaries represents the cession of their direct business to Employers Mutual under the terms of the pooling agreement and amounts ceded to Employers Mutual under the terms of the inter-company reinsurance program. For the reinsurance subsidiary this line represents amounts ceded to Employers Mutual under the terms of the inter-company reinsurance program.

4. LIABILITY FOR LOSSES AND SETTLEMENT EXPENSES

The following table sets forth a reconciliation of beginning and ending reserves for losses and settlement expenses of the Company. Amounts presented are on a net basis, with a reconciliation of beginning and ending reserves to the gross amounts presented in the consolidated financial statements.

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Gross reserves at beginning of year	\$ 678,774	\$ 661,309	\$ 610,181
Re-valuation due to foreign currency exchange rates	(2,475)	(2,061)	333
Less ceded reserves at beginning of year	23,477	28,253	30,118
Net reserves at beginning of year	657,772	635,117	579,730
Incurred losses and settlement expenses related to:			
Current year	427,838	405,850	406,266
Prior years	(40,941)	(35,114)	(20,792)
Total incurred losses and settlement expenses	386,897	370,736	385,474
Paid losses and settlement expenses related to:			
Current year	172,652	154,958	162,905
Prior years	200,236	193,123	167,182
Total paid losses and settlement expenses	372,888	348,081	330,087
Net reserves at end of year	671,781	657,772	635,117
Plus ceded reserves at end of year	20,664	23,477	28,253
Re-valuation due to foreign currency exchange rates	(1,913)	(2,475)	(2,061)
Gross reserves at end of year	\$ 690,532	\$ 678,774	\$ 661,309

Development on prior years' reserves resulting solely from changes in the allocation of bulk reserves between the current and prior accident years does not have an impact on earnings. This is due to the fact that such development is simply a mathematical by-product of the mechanical process used to reallocate bulk reserves to the various accident years. Earnings are only impacted by changes in the total amount of carried reserves.

The following table presents the reported amounts of favorable development experienced on prior years' reserves and the portion of the reported development amounts that resulted solely from changes in the allocation of bulk reserves between the current and prior accident years (no impact on earnings). The result is an approximation of the implied amounts of favorable development that had an impact on earnings.

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Reported amount of favorable development experienced on prior years' reserves	\$ (40,941)	\$ (35,114)	\$ (20,792)
Adjustment for favorable (adverse) development included in the reported development amount that had no impact on earnings	5,592	(618)	2,151
Approximation of the implied amount of favorable development that had an impact on earnings	\$ (35,349)	\$ (35,732)	\$ (18,641)

There is an inherent amount of uncertainty involved in the establishment of insurance liabilities. This uncertainty is greatest in the current and more recent accident years because a smaller percentage of the expected ultimate claims have been reported, adjusted and settled compared to more mature accident years. For this reason, carried reserves for these accident years reflect prudently conservative assumptions. As the carried reserves for these accident years run off, the overall expectation is that, more often than not, favorable development will occur. However, there is also the possibility that the ultimate settlement of liabilities associated with these accident years will show adverse development, and such adverse development could be substantial.

During the third quarter of 2016, management implemented a new reserving methodology for the determination of direct bulk reserves in the property and casualty insurance segment. The new methodology, which is referred to as the accident year ultimate estimate approach, better conforms to industry practices and will provide increased transparency of the drivers of the property and casualty insurance segment's performance. In connection with this change in reserving methodology, there was a reallocation of IBNR loss and allocated settlement expense reserves from prior accident years to the current accident year in multiple lines of business. This change resulted in the movement of approximately \$5.6 million of reserves from prior accident years to the current accident year that is reported as favorable development; however, this development is "mechanical in nature", and did not have an impact on earnings because the total amount of carried reserves did not change.

Changes in reserve estimates are reflected in net income in the year such changes are recorded. Following is an analysis of the reserve development the Company has experienced during the past three years. Care should be exercised when attempting to analyze the financial impact of the reported development amounts because, as noted above, 1) the overall expectation is that, more often than not, favorable development will occur as the prior accident years' reserves run off, and 2) development on prior years' reserves resulting solely from changes in the allocation of bulk reserves between the current and prior accident years does not have any impact on earnings.

2016 Development

For the property and casualty insurance segment, the December 31, 2016 estimate of loss and settlement expense reserves for accident years 2015 and prior decreased \$30.0 million from the estimate at December 31, 2015. This decrease represents 6.2 percent of the December 31, 2015 gross carried reserves and is primarily attributed to a significant amount of favorable reserve development experienced in the workers' compensation and other liability lines of business. The favorable development in the workers' compensation line of business was generated from a change in assumptions due to better than expected loss frequency for accident year 2015 and loss severity for the most recent accident years. The favorable development in the other liability line of business was generated from a change in assumptions due to better than expected loss severity.

For the reinsurance segment, the December 31, 2016 estimate of loss and settlement expense reserves for accident years 2015 and prior decreased \$10.9 million from the estimate at December 31, 2015. This decrease represents 5.5 percent of the December 31, 2015 gross carried reserves and is primarily attributed to favorable development in the 2015 accident year in the HORAD pro rata line of business, and an increase in the amount of negative bulk IBNR loss reserve carried on prior years' reserves in the MRB book of business.

During 2016, the expected loss ratios utilized for prior contract years remained unchanged, except for ocean marine pro rata business. The expected loss ratios associated with this contract type were decreased in contract years 2012, 2014 and 2015 from the ratios utilized during 2015. Additionally, the expected loss ratio for contract year 2013 was increased slightly relative to the 2015 value. These changes were made in response to reserving information supplied by the ceding company, a large writer of ocean marine pro rata business.

2015 Development

For the property and casualty insurance segment, the December 31, 2015 estimate of loss and settlement expense reserves for accident years 2014 and prior decreased \$13.8 million from the estimate at December 31, 2014. This decrease represented 3.0 percent of the December 31, 2014 gross carried reserves and was primarily attributed to better than expected outcomes on claims reported in prior years and favorable development on prior years' settlement expenses. No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2015; however, the accident year allocation factors applied to IBNR loss reserves, bulk case loss reserves and the defense and cost containment portion of settlement expense reserves were revised at December 31, 2015 as part of the annual review. This change resulted in the movement of \$423,000 of reserves from prior accident years to the current accident year, and hence, was reported as favorable development on prior years' reserves. Development on prior years' reserves resulting solely from changes in the allocation of bulk reserves between the current and prior accident years does not have an impact on earnings.

For the reinsurance segment, the December 31, 2015 estimate of loss and settlement expense reserves for accident years 2014 and prior decreased \$21.3 million from the estimate at December 31, 2014. This decrease represented 10.8 percent of the December 31, 2014 gross carried reserves and was attributed to several factors, including adjustments made in the offshore energy and liability proportional account, a reduction in carried IBNR loss reserves that could no longer be justified and a negative bulk IBNR loss reserve established for the MRB book of business. No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2015; however, the accident year allocation factors applied to IBNR loss reserves were revised during 2015. This change resulted in the movement of \$1.0 million of reserves from the current accident year to prior accident years, and hence, was reported as adverse development on prior years' reserves. Development on prior years' reserves resulting solely from changes in the allocation of bulk reserves between the current and prior accident years does not have an impact on earnings.

2014 Development

For the property and casualty insurance segment, the December 31, 2014 estimate of loss and settlement expense reserves for accident years 2013 and prior decreased \$8.1 million from the estimate at December 31, 2013. This decrease represented 1.9 percent of the December 31, 2013 gross carried reserves and was primarily attributed to better than expected outcomes on claims reported in prior years and favorable development on prior years' settlement expense reserves. No changes were made in the key actuarial assumptions utilized to estimate loss and settlement expense reserves during 2014; however, the accident year allocation factors applied to IBNR loss reserves, bulk case loss reserves and the defense and cost containment portion of settlement expense reserves were revised at December 31, 2014 as part of the annual review. This change resulted in the movement of \$2.2 million of reserves from the prior accident years to the current accident year, and hence, was reported as favorable development on prior years' reserves. Development on prior years' reserves resulting solely from changes in the allocation of bulk reserves between the current and prior accident years does not have an impact on earnings.

For the reinsurance segment, the December 31, 2014 estimate of loss and settlement expense reserves for accident years 2013 and prior decreased \$12.7 million from the estimate at December 31, 2013. This decrease represented 6.9 percent of the December 31, 2013 gross carried reserves and was largely attributed to reported losses being lower than what was expected as of December 31, 2014 for accident years 2012 and prior, and a reduction of IBNR loss reserves on older accident years because the amount previously carried was no longer indicated in the actuarial analysis.

Following is information about reported incurred and paid claims development as of December 31, 2016, net of reinsurance, as well as cumulative claim frequency and the amount of IBNR loss reserves carried. The information displayed for assumed reinsurance is restated to reflect all foreign currency denominated transactions on the basis of current (December 31, 2016) exchange rates. The number of reported claims (cumulative claim frequency) for the Company's direct insurance business represents the total number of claims reported by the participants in the pooling agreement, and is determined on the basis of each unique combination of claimant, specific policy coverage, and type of loss. This is in contrast to all other reported amounts that are stated at the aggregate 30 percent pool participation percentage of the Company's property and casualty insurance subsidiaries. The cumulative claim frequency for the Company's assumed reinsurance business is not readily available. Consistent with industry practices, bordereauxs on pro rata accounts often exclude claim frequency information, and if it is included, the level of detail provided by the ceding companies can vary significantly. Excess of loss contracts customarily report total losses subject to the treaty without detailed loss listings.

(\$ in thousands)

Commercial auto liability insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016		
	Supplementary unaudited information											Audited	Audited	Cumulative number of reported claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	Audited	
2007	\$ 29,391	\$ 32,270	\$ 33,085	\$ 32,264	\$ 30,850	\$ 30,513	\$ 30,263	\$ 30,120	\$ 30,054	\$ 30,059	\$	46	12,289	
2008		29,898	30,082	29,433	27,968	26,886	26,923	26,878	26,741	26,768		2	11,511	
2009			28,973	27,923	26,667	25,370	24,986	24,874	24,730	24,655		14	10,481	
2010				30,377	27,480	26,478	26,401	26,252	26,479	26,166		(1)	11,391	
2011					32,775	29,790	31,098	31,961	31,914	31,635		30	11,763	
2012						32,768	34,235	37,098	37,681	37,693		(308)	11,940	
2013							37,265	40,382	42,086	42,336		(454)	13,628	
2014								50,342	49,998	51,455		2,008	15,029	
2015									53,883	57,824		4,608	16,378	
2016										59,468		11,487	15,598	
											Total	\$388,059		

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	Total	
	\$ 6,180	\$ 14,231	\$ 21,600	\$ 25,928	\$ 28,241	\$ 29,239	\$ 29,993	\$ 29,989	\$ 29,998	\$ 30,005	\$ 30,005		
2008		6,551	13,437	19,204	23,144	25,215	26,306	26,527	26,648	26,750		26,750	
2009			6,952	12,957	17,359	21,532	24,001	24,495	24,593	24,608		24,608	
2010				7,025	13,278	19,274	23,547	24,674	25,558	26,039		26,039	
2011					6,801	14,875	22,206	26,598	29,121	30,293		30,293	
2012						8,830	19,398	26,023	32,636	35,406		35,406	
2013							8,729	19,975	29,997	36,232		36,232	
2014								12,069	25,746	37,433		37,433	
2015									13,336	27,424		27,424	
2016										13,583		13,583	
											Total	\$287,773	
												All outstanding liabilities before 2007, net of reinsurance	(34)
												Liability for losses and settlement expenses, net of reinsurance	\$100,252

(\$ in thousands)

Commercial property insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016		
	Supplementary unaudited information											Audited	Audited	Cumulative number of reported claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	1	
2007	\$ 38,293	\$ 35,166	\$ 34,070	\$ 33,877	\$ 33,858	\$ 33,896	\$ 33,892	\$ 33,928	\$ 33,811	\$ 33,815	\$	\$	1	11,933
2008		48,559	42,870	42,645	42,422	42,562	42,649	42,784	42,765	42,707			(50)	15,795
2009			39,511	36,003	35,985	35,881	35,622	35,926	36,056	36,020			(446)	14,635
2010				40,422	38,650	38,770	39,071	39,154	39,379	39,428			(3)	16,267
2011					58,930	57,614	57,271	57,629	57,703	58,375			95	19,493
2012						41,535	44,157	45,313	46,273	46,566			(116)	16,039
2013							50,266	50,976	52,511	53,070			(27)	15,982
2014								60,018	60,990	60,662			(35)	16,702
2015									55,508	56,798			(289)	14,253
2016										59,708			339	13,636
										Total	\$487,149			

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	Total
	\$ 24,873	\$ 32,797	\$ 33,404	\$ 33,656	\$ 33,809	\$ 33,857	\$ 33,878	\$ 33,914	\$ 33,800	\$ 33,813	\$ 33,813	
2008		31,514	40,603	41,868	41,991	42,071	42,607	42,691	42,755	42,755	42,755	
2009			25,321	32,602	34,624	35,422	35,803	35,803	35,849	35,893	35,893	
2010				28,032	35,730	36,931	37,926	38,901	39,314	39,318	39,318	
2011					41,524	53,226	54,803	56,249	57,065	57,607	57,607	
2012						32,879	41,862	43,628	44,543	46,270	46,270	
2013							36,555	47,683	50,460	51,457	51,457	
2014								43,022	55,679	58,045	58,045	
2015									37,208	50,068	50,068	
2016										41,652	41,652	
									Total	\$456,878	\$456,878	
									All outstanding liabilities before 2007, net of reinsurance	100	100	
									Liability for losses and settlement expenses, net of reinsurance	\$ 30,371	\$ 30,371	

(\$ in thousands)

Workers' compensation insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016	
	Supplementary unaudited information											Audited	Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	Cumulative number of reported claims
2007	\$ 43,285	\$ 45,832	\$ 44,747	\$ 44,888	\$ 44,981	\$ 44,373	\$ 44,372	\$ 44,325	\$ 44,353	\$ 43,599	\$	845	22,312
2008		49,577	46,240	44,113	43,156	43,766	43,338	43,301	43,737	42,943		1,179	21,614
2009			46,130	43,335	44,098	44,041	44,093	43,590	43,724	42,774		998	19,233
2010				46,328	49,336	50,057	49,906	49,851	50,069	49,145		1,383	19,611
2011					47,836	46,724	44,709	44,506	44,427	43,695		1,649	19,562
2012						51,099	50,094	47,756	46,928	45,088		2,156	19,357
2013							52,141	51,637	48,946	46,102		2,639	19,814
2014								51,515	50,973	47,472		2,680	19,390
2015									54,960	48,919		3,485	18,983
2016										57,832		17,228	17,764
										Total	\$467,569		

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	
	\$ 11,592	\$ 24,164	\$ 30,600	\$ 34,061	\$ 36,338	\$ 37,818	\$ 38,916	\$ 39,628	\$ 40,251	\$ 40,643		
2008		12,432	25,214	31,110	34,302	36,024	37,270	37,938	38,654	39,099		
2009			11,879	25,157	31,802	35,363	37,409	38,329	39,167	39,583		
2010				14,237	28,074	35,029	39,001	41,437	42,651	43,614		
2011					13,291	26,291	32,237	35,295	37,027	38,437		
2012						14,015	28,109	33,943	37,307	39,456		
2013							14,917	29,219	35,061	37,907		
2014								14,692	28,894	35,883		
2015									14,956	29,023		
2016										15,473		
									Total	\$359,118		
									All outstanding liabilities before 2007, net of reinsurance	28,331		
									Liability for losses and settlement expenses, net of reinsurance	\$136,782		

(\$ in thousands)

Other liability insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016		
	Supplementary unaudited information											Audited	Audited	Cumulative number of reported claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	2016	
2007	\$ 47,426	\$ 40,441	\$ 35,944	\$ 36,535	\$ 36,148	\$ 36,185	\$ 36,725	\$ 36,399	\$ 36,194	\$ 36,011	\$	632	10,442	
2008		46,327	40,005	38,877	34,689	38,755	37,005	36,305	35,528	35,491		1,056	10,941	
2009			44,497	39,908	37,650	34,263	35,614	32,827	32,384	32,521		1,277	9,826	
2010				41,624	36,213	34,655	38,829	36,137	34,655	34,556		1,273	10,129	
2011				44,490	44,490	42,982	35,125	35,177	33,649	32,452		1,700	9,969	
2012					42,661	42,081	42,081	41,139	40,275	37,093		1,450	10,010	
2013					47,974	47,974	43,837	42,544	42,187			6,957	10,504	
2014					61,382	61,382	54,403	52,601				6,614	10,691	
2015					54,221	54,221	47,553					15,533	10,074	
2016							59,052					24,345	8,612	
							Total	\$409,517						

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016
2007	\$ 3,505	\$ 9,966	\$ 17,971	\$ 23,893	\$ 28,383	\$ 30,234	\$ 31,605	\$ 33,182	\$ 34,096	\$ 34,725		
2008		4,299	10,443	16,525	24,139	28,476	31,270	32,514	32,863	33,162		
2009			3,294	10,707	16,718	22,276	26,255	28,172	29,722	30,176		
2010				3,403	8,315	15,041	21,732	27,612	29,688	30,711		
2011				4,730	4,730	10,572	17,308	22,154	25,647	28,228		
2012					4,720	4,720	12,851	19,661	25,095	29,651		
2013					4,414	4,414	11,894	21,122	27,642			
2014						5,630	17,267	27,506				
2015						4,331	11,588					
2016							6,403					
							Total	\$259,792				
							All outstanding liabilities before 2007, net of reinsurance	14,056				
							Liability for losses and settlement expenses, net of reinsurance	\$ 163,781				

(\$ in thousands)

Personal auto liability insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016		
	Supplementary unaudited information											Audited	Audited	Cumulative number of reported claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	2016	
2007	\$ 8,616	\$ 8,337	\$ 8,107	\$ 7,923	\$ 7,866	\$ 7,839	\$ 7,814	\$ 7,794	\$ 7,782	\$ 7,793	\$ 7,793	\$ 21	6,737	
2008		9,024	8,221	8,121	8,098	8,094	7,909	7,876	7,833	7,862	7,862	51	6,781	
2009			10,168	9,653	9,452	9,386	9,353	9,382	9,339	9,325	9,325	24	7,523	
2010				9,815	9,851	9,736	9,698	9,700	9,656	9,676	9,676	31	7,429	
2011					9,741	9,388	9,331	9,432	9,460	9,311	9,311	(97)	8,050	
2012						10,917	10,756	11,023	10,731	10,537	10,537	(30)	7,871	
2013							10,492	10,384	10,376	10,085	10,085	13	7,232	
2014								10,573	9,631	9,331	9,331	112	6,304	
2015									9,119	8,638	8,638	213	5,642	
2016										7,404	7,404	997	4,443	
											Total	\$ 89,962		

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited		
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016		
2007	\$ 3,243	\$ 5,355	\$ 6,696	\$ 7,134	\$ 7,497	\$ 7,697	\$ 7,756	\$ 7,772	\$ 7,772	\$ 7,772	\$ 7,772	\$ 7,772		
2008		3,096	5,798	6,743	7,291	7,558	7,794	7,810	7,809	7,805	7,805	7,805		
2009			3,564	6,393	7,966	8,905	9,049	9,194	9,204	9,278	9,278	9,278		
2010				3,988	6,666	8,250	9,108	9,401	9,562	9,632	9,632	9,632		
2011					3,950	6,842	8,129	8,883	9,038	9,153	9,153	9,153		
2012						4,779	7,439	9,091	9,871	10,244	10,244	10,244		
2013							4,377	7,521	8,985	9,648	9,648	9,648		
2014								3,970	6,392	7,755	7,755	7,755		
2015									3,800	6,229	6,229	6,229		
2016										3,505	3,505	3,505		
											Total	\$ 81,021		
												All outstanding liabilities before 2007, net of reinsurance	59	
													Liability for losses and settlement expenses, net of reinsurance	\$ 9,000

(\$ in thousands)

Homeowners insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016		
	Supplementary unaudited information											Audited	Audited	Cumulative number of reported claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	Audited	
2007	\$ 14,283	\$ 12,525	\$ 12,332	\$ 12,333	\$ 12,317	\$ 12,295	\$ 12,322	\$ 12,314	\$ 12,322	\$ 12,312	\$	(6)	9,208	
2008	22,736	22,736	20,222	19,894	19,924	19,905	19,886	19,886	19,901	19,908		—	12,964	
2009	18,109	18,109	16,606	16,467	16,379	16,352	16,394	16,465	16,465	16,464		—	11,475	
2010	17,875	17,875	17,523	17,074	17,074	17,053	17,093	17,129	17,129	17,146		(16)	12,132	
2011	24,530	24,530	23,389	23,389	22,975	22,975	23,309	23,448	23,448	23,415		45	14,257	
2012	16,057	16,057	16,496	16,496	16,836	16,836	16,929	16,892	16,892	16,892		(9)	10,108	
2013	14,844	14,844	14,844	14,833	14,685	14,784	14,833	14,685	14,784	14,784		60	8,683	
2014	13,228	13,228	13,328	13,328	13,447	13,447	13,328	13,328	13,447	13,447		39	7,416	
2015	11,233	11,233	11,153	11,153	11,153	11,153	11,233	11,153	11,153	11,153		37	5,907	
2016	11,801	11,801	11,801	11,801	11,801	11,801	11,801	11,801	11,801	11,801		(38)	6,853	
											Total		\$ 157,322	

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016		
2007	\$ 9,164	\$ 11,605	\$ 12,067	\$ 12,126	\$ 12,133	\$ 12,158	\$ 12,219	\$ 12,220	\$ 12,221	\$ 12,221	\$ 12,221		
2008	15,642	15,642	19,385	19,550	19,787	19,891	19,902	19,903	19,902	19,902	19,908		
2009	12,645	12,645	15,885	16,135	16,246	16,288	16,315	16,421	16,421	16,421	16,464		
2010	13,457	13,457	16,633	16,909	17,011	17,011	17,128	17,128	17,128	17,128	17,130		
2011	19,828	19,828	22,421	22,421	22,737	22,737	23,136	23,403	23,403	23,370	23,370		
2012	13,759	13,759	16,283	16,283	16,793	16,793	16,793	16,793	16,793	16,793	16,859		
2013	11,735	11,735	14,285	14,285	14,621	14,621	14,621	14,621	14,621	14,621	14,681		
2014	11,065	11,065	13,025	13,025	13,215	13,215	13,215	13,215	13,215	13,215	13,215		
2015	8,650	8,650	8,650	8,650	8,650	8,650	8,650	8,650	8,650	8,650	10,456		
2016	10,573	10,573	10,573	10,573	10,573	10,573	10,573	10,573	10,573	10,573	10,573		
											Total		\$ 154,877
													—
													\$ 2,445

All outstanding liabilities before 2007, net of reinsurance

Liability for losses and settlement expenses, net of reinsurance

(\$ in thousands)

Auto physical damage insurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016		
	Supplementary unaudited information											Audited	Audited	Cumulative number of reported claims
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	2016	
2007	\$ 17,177	\$ 15,198	\$ 15,034	\$ 15,051	\$ 15,033	\$ 15,022	\$ 15,014	\$ 15,010	\$ 15,004	\$ 14,993	\$	(9)	25,973	
2008		19,589	17,743	17,598	17,584	17,578	17,567	17,562	17,558	17,540		(15)	28,635	
2009			18,077	16,744	16,720	16,639	16,593	16,605	16,602	16,587		(15)	29,419	
2010				19,249	18,657	18,538	18,549	18,527	18,532	18,488		(35)	31,513	
2011					21,965	21,003	20,919	20,917	20,915	20,877		(25)	34,393	
2012						21,389	21,342	21,263	21,233	21,161		(54)	31,098	
2013							22,847	22,553	22,486	22,371		(52)	31,040	
2014								24,897	24,115	23,904		(98)	31,571	
2015									27,950	26,612		(47)	30,633	
2016										28,070		(1,294)	29,060	
										Total	\$ 210,603			

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	2016
2007	\$ 14,202	\$ 15,111	\$ 15,019	\$ 15,043	\$ 15,029	\$ 15,019	\$ 15,012	\$ 15,008	\$ 15,004	\$ 15,002		
2008		16,491	17,662	17,577	17,570	17,577	17,564	17,560	17,557	17,555		
2009			15,566	16,661	16,687	16,636	16,592	16,603	16,602	16,601		
2010				17,113	18,557	18,529	18,540	18,523	18,528	18,521		
2011					19,849	20,984	20,912	20,904	20,912	20,900		
2012						19,719	21,328	21,256	21,227	21,216		
2013							20,774	22,512	22,463	22,417		
2014								22,743	24,110	23,987		
2015									24,483	26,538		
2016										26,871		
									Total	\$ 209,608		
									All outstanding liabilities before 2007, net of reinsurance		3	
									Liability for losses and settlement expenses, net of reinsurance		\$	998

(\$ in thousands)

Assumed pro rata reinsurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016	
	Supplementary unaudited information											Audited	Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	Cumulative number of reported claims
2007	\$ 26,407	\$ 19,758	\$ 18,245	\$ 18,323	\$ 18,152	\$ 17,959	\$ 17,867	\$ 17,849	\$ 17,758	\$ 17,773	\$	268	
2008		29,698	25,004	23,684	24,053	23,560	23,690	23,500	23,654	23,712		321	
2009			23,625	19,009	18,100	17,306	17,143	16,970	16,907	16,899		295	
2010				19,357	16,773	16,151	15,501	15,322	15,114	15,065		150	
2011				29,890	29,567	29,156	28,399	27,808	27,792	27,792		230	
2012				21,735	20,865	20,422	17,785	17,231				505	
2013				23,022	29,554	26,902	26,325					2,764	
2014				30,931	27,215	27,500						2,089	
2015				38,142	34,953							5,292	
2016				35,519								17,637	
				Total	\$ 242,769								Unavailable

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	
2007	\$ 6,397	\$ 13,247	\$ 14,976	\$ 16,004	\$ 16,789	\$ 16,899	\$ 17,007	\$ 17,222	\$ 17,273	\$ 17,338		
2008		9,154	17,973	20,168	21,367	21,872	22,288	22,539	22,842	22,984		
2009			6,071	12,821	14,387	15,195	15,720	15,980	16,158	16,346		
2010				4,995	11,774	13,692	14,083	14,693	14,742	14,783		
2011				10,139	22,575	26,190	26,893	27,268	27,339	27,339		
2012				4,378	12,433	14,639	15,834	16,178				
2013				3,834	12,291	17,455	20,564					
2014				5,980	15,907	20,297						
2015				9,526	21,794							
2016				9,613								
				Total	\$ 187,236							
				All outstanding liabilities before 2007, net of reinsurance	2,926							
				Liability for losses and settlement expenses, net of reinsurance	\$ 58,459							

(\$ in thousands)

Assumed excess of loss reinsurance

Accident year	Incurred losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,											As of December 31, 2016	
	Supplementary unaudited information											Audited	Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	IBNR reserves carried	Cumulative number of reported claims
2007	\$ 31,246	\$ 25,899	\$ 26,567	\$ 23,064	\$ 22,825	\$ 22,735	\$ 22,588	\$ 22,112	\$ 22,036	\$ 22,084	\$ 1,135		
2008		43,846	39,823	41,319	40,054	38,911	39,499	37,413	36,956	36,821	1,490		
2009			38,849	30,505	29,941	30,470	30,121	28,187	27,867	27,096	1,872		
2010				47,367	40,923	40,735	40,223	39,592	40,348	39,544	2,761		
2011					71,897	61,504	60,672	59,088	58,825	58,444	3,254		
2012						58,734	55,971	54,397	53,152	52,800	4,598		
2013							52,143	47,088	44,536	44,391	4,219		
2014								65,009	58,476	59,827	6,611		
2015									59,686	54,522	10,167		
2016										66,336	23,457		
									Total	\$461,865		Unavailable	

Cumulative paid losses and allocated settlement expenses, net of reinsurance, for the years ended December 31,

Accident year	Supplementary unaudited information											Audited
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016	
	\$ 5,853	\$ 13,257	\$ 15,750	\$ 16,513	\$ 17,599	\$ 18,157	\$ 18,464	\$ 18,725	\$ 19,328	\$ 19,708		
2007												
2008		14,250	25,464	28,652	30,585	31,214	32,529	32,679	33,110	33,554		
2009			8,554	15,867	18,765	20,968	21,837	22,186	22,809	22,987		
2010				9,281	24,713	27,985	30,778	32,620	33,629	35,306		
2011					25,188	42,007	47,722	50,367	52,362	53,657		
2012						21,318	36,224	40,592	43,580	45,115		
2013							11,676	27,327	32,973	37,232		
2014								22,114	38,921	45,604		
2015									13,376	30,171		
2016										18,280		
									Total	\$341,614		
									All outstanding liabilities before 2007, net of reinsurance	19,142		
									Liability for losses and settlement expenses, net of reinsurance	\$ 139,393		

The following table sets forth a reconciliation of the incurred and paid claims development tables to the liability for losses and settlement expenses:

(\$ in thousands)	December 31, 2016
Net outstanding liabilities for losses and allocated settlement expenses:	
Commercial auto liability insurance	\$ 100,252
Commercial property insurance	30,371
Workers' compensation insurance	136,782
Other liability insurance	163,781
Personal auto liability insurance	9,000
Homeowners insurance	2,445
Auto physical damage insurance	998
Assumed pro rata reinsurance	58,459
Assumed excess of loss reinsurance	139,393
Other lines of insurance	1,967
Liability for losses and allocated settlement expenses, net of reinsurance	643,448
Ceded reserves for losses and allocated settlement expenses:	
Commercial auto liability insurance	526
Commercial property insurance	3,608
Workers' compensation insurance	8,265
Other liability insurance	2,547
Personal auto liability insurance	1,511
Homeowners insurance	41
Auto physical damage insurance	21
Assumed pro rata reinsurance	2,242
Assumed excess of loss reinsurance	1,880
Other lines of insurance	23
Total ceded reserves for losses and allocated settlement expenses	20,664
Unallocated settlement expenses	26,420
Gross reserve for losses and settlement expenses	\$ 690,532

Average annual percentage payout of incurred claims by age, net of reinsurance

Years	Supplementary unaudited information									
	1	2	3	4	5	6	7	8	9	10
Commercial auto liability insurance	23.5%	25.8%	21.8 %	15.5%	7.5 %	3.3%	1.4%	0.2%	0.2 %	0.0%
Commercial property insurance	70.6%	20.9%	3.6 %	1.7%	1.6 %	0.7%	0.1%	0.1%	(0.2)%	0.0%
Workers' compensation insurance	29.5%	29.8%	14.0 %	7.5%	4.6 %	2.8%	2.0%	1.4%	1.2 %	0.9%
Other liability insurance	11.0%	18.6%	19.7 %	17.1%	12.8 %	6.6%	3.8%	2.3%	1.7 %	1.7%
Personal auto liability insurance	42.5%	29.0%	15.1 %	7.7%	3.0 %	2.0%	0.5%	0.3%	(0.1)%	0.0%
Homeowners insurance	80.3%	16.8%	1.8 %	0.9%	0.5 %	0.1%	0.3%	0.1%	0.0 %	0.0%
Auto physical damage insurance	93.9%	6.8%	(0.3)%	0.0%	(0.1)%	0.0%	0.0%	0.0%	0.0 %	0.0%
Assumed pro rata reinsurance	29.6%	39.5%	12.8 %	5.6%	2.8 %	0.9%	0.8%	1.2%	0.5 %	0.4%
Assumed excess of loss reinsurance	31.9%	31.2%	10.1 %	6.2%	3.5 %	2.4%	2.1%	1.0%	2.0 %	1.7%

5. ASBESTOS AND ENVIRONMENTAL CLAIMS

The Company has exposure to asbestos and environmental related claims associated with the insurance business written by the parties to the pooling agreement and the reinsurance business assumed from Employers Mutual by the reinsurance subsidiary. Asbestos and environmental losses paid by the Company have averaged \$2.0 million per year over the past five years. Reserves for asbestos and environmental related claims for direct insurance and assumed reinsurance business totaled \$13.3 million and \$11.5 million (\$13.0 million and \$11.2 million net of reinsurance) at December 31, 2016 and 2015, respectively.

Estimating loss and settlement expense reserves for asbestos and environmental claims is very difficult due to the many uncertainties surrounding these types of claims. These uncertainties exist because the assignment of responsibility varies widely by state and claims often emerge long after a policy has expired, which makes assignment of damages to the appropriate party and to the time period covered by a particular policy difficult. In establishing reserves for these types of claims, management monitors the relevant facts concerning each claim, the current status of the legal environment, social and political conditions, and claim history and trends within the Company and the industry.

At present, the pool participants are defending approximately 1,856 asbestos bodily injury lawsuits, some of which involve multiple plaintiffs. Most of the lawsuits are subject to express reservation of rights based upon the lack of an injury within the applicable policy periods, because many asbestos lawsuits do not specifically allege dates of asbestos exposure or dates of injury. The pool participants' policyholders named as defendants in these asbestos lawsuits are typically peripheral defendants who have little or no exposure and are often dismissed from asbestos litigation with nominal or no payment (i.e., small contractors, supply companies, and a furnace manufacturer).

Prior to 2008, actual losses paid for asbestos-related claims had been minimal due to the plaintiffs' failure to identify an exposure to any asbestos-containing products associated with the pool participants' current and former policyholders. However, paid losses and settlement expenses have increased significantly since 2008 as a result of claims attributed to one former policyholder. During the period 2009 through 2016, the Company's share of paid losses and settlement expenses attributed to this former policyholder, a furnace manufacturer, was \$11.2 million (mostly settlement expenses). A coverage-in-place agreement was executed with this former policyholder in 2009 and a national coordinating counsel was retained to address the multi-state litigation issues. The asbestos exposure associated with this former policyholder has increased in recent years, and this trend may possibly continue into the future with increased per plaintiff settlements. Approximately 728 asbestos exposure claims associated with this former policyholder remain open.

While the Company does not have a significant amount of exposure to asbestos claims, management has been strengthening the reserves carried for these exposures each year to the amount believed to be management's best estimate. In 2016, the loss and settlement expense reserves for asbestos claims were strengthened approximately \$3.5 million.

6. STATUTORY INFORMATION AND DIVIDEND RESTRICTIONS

The Company's insurance subsidiaries are required to file financial statements with state regulatory authorities. The accounting principles used to prepare these statutory financial statements follow prescribed or permitted accounting practices that differ from GAAP. Prescribed statutory accounting principles include state laws, regulations and general administrative rules issued by the state of domicile, as well as a variety of publications and manuals of the National Association of Insurance Commissioners (NAIC). Permitted accounting practices encompass all accounting practices not prescribed, but allowed by the state of domicile. The Company's insurance subsidiaries had no permitted accounting practices during 2016, 2015 or 2014.

Statutory surplus of the Company's insurance subsidiaries was \$526.8 million and \$485.2 million at December 31, 2016 and 2015, respectively. Statutory net income of the Company's insurance subsidiaries was \$48.3 million, \$48.8 million and \$32.2 million for 2016, 2015 and 2014, respectively.

The NAIC utilizes a risk-based capital model to help state regulators assess the capital adequacy of insurance companies and identify insurers that are in, or are perceived as approaching, financial difficulty. This model establishes minimum capital needs based on the risks applicable to the operations of the individual insurer. The risk-based capital requirements for property and casualty insurance companies measure three major areas of risk: asset risk, credit risk and underwriting risk. Companies having less statutory surplus than required by the risk-based capital requirements are subject to varying degrees of regulatory scrutiny and intervention, depending on the severity of the inadequacy. At December 31, 2016, the Company's insurance subsidiaries had total adjusted statutory capital of \$526.8 million, which exceeds the minimum risk-based capital requirement of \$87.3 million.

The amount of dividends available for distribution to the Company by its insurance subsidiaries is limited by law to a percentage of the statutory unassigned surplus of each of the subsidiaries as of the previous December 31, as determined in accordance with accounting practices prescribed by insurance regulatory authorities of the state of domicile of each subsidiary. Subject to this limitation, the maximum dividend that may be paid within a 12 month period without prior approval of the insurance regulatory authorities is generally restricted to the greater of 10 percent of statutory surplus as regards policyholders as of the preceding December 31, or net income of the preceding calendar year on a statutory basis, not greater than earned statutory surplus. At December 31, 2016, \$52.7 million was available for distribution to the Company in 2017 without prior approval.

7. SEGMENT INFORMATION

The Company's operations consist of a property and casualty insurance segment and a reinsurance segment. The property and casualty insurance segment writes both commercial and personal lines of insurance, with a focus on medium-sized commercial accounts. The reinsurance segment provides reinsurance for other insurers and reinsurers. The segments are managed separately due to differences in the insurance products sold and the business environments in which they operate. Management evaluates the performance of its insurance segments using financial measurements based on Statutory Accounting Principles (SAP) instead of GAAP. Such measures include premiums written, premiums earned, statutory underwriting profit (loss), and investment results, as well as loss and loss adjustment expense ratios, trade underwriting expense ratios, and combined ratios. The GAAP accounting policies of the segments are described in note 1, Summary of Significant Accounting Policies.

Summarized financial information for the Company's segments is as follows:

Year ended December 31, 2016	Property and casualty insurance	Reinsurance	Parent company	Consolidated
(\$ in thousands)				
Premiums earned	\$ 456,467	\$ 135,941	\$ —	\$ 592,408
Underwriting profit (loss):				
SAP underwriting profit (loss)	4,276	11,377	—	15,653
GAAP adjustments	(934)	(1,023)	—	(1,957)
GAAP underwriting profit (loss)	3,342	10,354	—	13,696
Net investment income (loss)	33,886	13,591	13	47,490
Net realized investment gains (losses)	4,082	(8)	—	4,074
Other income	594	417	—	1,011
Interest expense	337	—	—	337
Other expenses	721	—	2,006	2,727
Income (loss) before income tax expense (benefit)	\$ 40,846	\$ 24,354	\$ (1,993)	\$ 63,207
Assets	\$ 1,122,037	\$ 455,493	\$ 554,164	\$ 2,131,694
Eliminations	—	—	(540,249)	(540,249)
Reclassifications	—	(1,932)	(700)	(2,632)
Total assets	\$ 1,122,037	\$ 453,561	\$ 13,215	\$ 1,588,813
Year ended December 31, 2015				
(\$ in thousands)	Property and casualty insurance	Reinsurance	Parent company	Consolidated
Premiums earned	\$ 447,197	\$ 123,069	\$ —	\$ 570,266
Underwriting profit (loss):				
SAP underwriting profit (loss)	2,494	13,228	—	15,722
GAAP adjustments	5,460	41	—	5,501
GAAP underwriting profit (loss)	7,954	13,269	—	21,223
Net investment income (loss)	32,668	12,923	(9)	45,582
Net realized investment gains (losses)	4,163	1,990	—	6,153
Other income	771	954	—	1,725
Interest expense	337	—	—	337
Other expenses	748	—	1,942	2,690
Income (loss) before income tax expense (benefit)	\$ 44,471	\$ 29,136	\$ (1,951)	\$ 71,656
Assets	\$ 1,092,820	\$ 437,575	\$ 525,042	\$ 2,055,437
Eliminations	—	—	(514,309)	(514,309)
Reclassifications	—	(5,173)	—	(5,173)
Total assets	\$ 1,092,820	\$ 432,402	\$ 10,733	\$ 1,535,955

Year ended December 31, 2014				
(\$ in thousands)	Property and casualty insurance	Reinsurance	Parent company	Consolidated
Premiums earned	\$ 422,381	\$ 118,341	\$ —	\$ 540,722
Underwriting profit (loss):				
SAP underwriting profit (loss)	(13,955)	1,718	—	(12,237)
GAAP adjustments	1,646	467	—	2,113
GAAP underwriting profit (loss)	(12,309)	2,185	—	(10,124)
Net investment income (loss)	33,509	12,968	(12)	46,465
Net realized investment gains (losses)	2,938	1,411	—	4,349
Other income	695	2,236	—	2,931
Interest expense	337	—	—	337
Other expenses	793	—	1,584	2,377
Income (loss) before income tax expense (benefit)	<u>\$ 23,703</u>	<u>\$ 18,800</u>	<u>\$ (1,596)</u>	<u>\$ 40,907</u>

The following table displays the net premiums earned for the property and casualty insurance segment and the reinsurance segment for the three years ended December 31, 2016, by line of insurance.

(\$ in thousands)	Year ended December 31,		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
<u>Property and casualty insurance segment</u>			
Commercial lines:			
Automobile	\$ 110,941	\$ 105,904	\$ 96,908
Property	105,012	104,303	97,155
Workers' compensation	96,517	92,828	88,356
Liability	96,630	92,665	86,108
Other	8,374	8,079	7,416
Total commercial lines	<u>417,474</u>	<u>403,779</u>	<u>375,943</u>
Personal lines	38,993	43,418	46,438
Total property and casualty insurance	<u>\$ 456,467</u>	<u>\$ 447,197</u>	<u>\$ 422,381</u>
<u>Reinsurance segment</u>			
Pro rata reinsurance	\$ 56,317	\$ 47,421	\$ 41,883
Excess of loss reinsurance	79,624	75,648	76,458
Total reinsurance	<u>\$ 135,941</u>	<u>\$ 123,069</u>	<u>\$ 118,341</u>
Consolidated	<u>\$ 592,408</u>	<u>\$ 570,266</u>	<u>\$ 540,722</u>

8. DISCLOSURES ABOUT THE FAIR VALUES OF FINANCIAL INSTRUMENTS

The carrying amounts and the estimated fair values of the Company's financial instruments as of December 31, 2016 and 2015 are summarized in the tables below.

<u>December 31, 2016</u>	Carrying amounts	Estimated fair values
(\$ in thousands)		
Assets:		
Fixed maturity securities available-for-sale:		
U.S. treasury	\$ 7,830	\$ 7,830
U.S. government-sponsored agencies	239,197	239,197
Obligations of states and political subdivisions	335,757	335,757
Commercial mortgage-backed	37,572	37,572
Residential mortgage-backed	96,434	96,434
Other asset-backed	26,393	26,393
Corporate	456,516	456,516
Total fixed maturity securities available-for-sale	1,199,699	1,199,699
Equity securities available-for-sale:		
Common stocks:		
Financial services	35,122	35,122
Information technology	30,542	30,542
Healthcare	24,707	24,707
Consumer staples	19,100	19,100
Consumer discretionary	22,321	22,321
Energy	19,071	19,071
Industrials	24,245	24,245
Other	18,384	18,384
Non-redeemable preferred stocks	20,347	20,347
Total equity securities available-for-sale	213,839	213,839
Short-term investments	39,670	39,670
Liabilities:		
Surplus notes	25,000	11,228

December 31, 2015

(\$ in thousands)

	Carrying amounts	Estimated fair values
Assets:		
Fixed maturity securities available-for-sale:		
U.S. treasury	\$ 12,589	\$ 12,589
U.S. government-sponsored agencies	202,666	202,666
Obligations of states and political subdivisions	344,359	344,359
Commercial mortgage-backed	46,108	46,108
Residential mortgage-backed	88,543	88,543
Other asset-backed	17,844	17,844
Corporate	448,916	448,916
Total fixed maturity securities available-for-sale	<u>1,161,025</u>	<u>1,161,025</u>
Equity securities available-for-sale:		
Common stocks:		
Financial services	33,955	33,955
Information technology	28,102	28,102
Healthcare	25,894	25,894
Consumer staples	18,200	18,200
Consumer discretionary	18,923	18,923
Energy	21,068	21,068
Industrials	20,416	20,416
Other	20,683	20,683
Non-redeemable preferred stocks	19,002	19,002
Total equity securities available-for-sale	<u>206,243</u>	<u>206,243</u>
Short-term investments	38,599	38,599
Liabilities:		
Surplus notes	25,000	10,823

The estimated fair values of fixed maturity and equity securities is based on quoted market prices, where available. In cases where quoted market prices are not available, fair values are based on a variety of valuation techniques depending on the type of security.

Short-term investments generally include money market funds, U.S. Treasury bills and commercial paper. Short-term investments are carried at fair value, which approximates cost, due to the highly liquid nature of the securities. Short-term securities are classified as Level 1 fair value measurements when the fair values can be validated by recent trades. When recent trades are not available, fair value is deemed to be the cost basis and the securities are classified as Level 2 fair value measurements.

The estimated fair value of the surplus notes is derived by discounting future expected cash flows at a rate deemed appropriate. The discount rate was set at the average of current yields-to-maturity on several insurance company surplus notes that are traded in observable markets, adjusted upward by 50 basis points to reflect illiquidity and perceived risk premium differences. Other assumptions include a 25-year term (the surplus notes have no stated maturity date) and an interest rate that continues at the current 1.35 percent interest rate. The rate is typically adjusted every five years and is based upon the then-current Federal Home Loan Bank borrowing rate for 5-year funds available to Employers Mutual.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The following fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value.

- Level 1 - Unadjusted quoted prices for identical assets or liabilities in active markets that the Company has the ability to access.
- Level 2 - Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; or valuations based on models where the significant inputs are observable (e.g., interest rates, yield curves, prepayment speeds, default rates, loss severities, etc.) or can be corroborated by observable market data.
- Level 3 - Prices or valuation techniques that require significant unobservable inputs because observable inputs are not available. The unobservable inputs may reflect the Company's own judgments about the assumptions that market participants would use.

The Company uses an independent pricing source to obtain the estimated fair values of a majority of its securities, subject to an internal validation. The fair values are based on quoted market prices, where available. This is typically the case for equity securities and money market funds, which are accordingly classified as Level 1 fair value measurements. In cases where quoted market prices are not available, fair values are based on a variety of valuation techniques depending on the type of security. Fixed maturity securities, non-redeemable preferred stocks and various short-term investments in the Company's portfolio may not trade on a daily basis; however, observable inputs are utilized in their valuations, and these securities are therefore classified as Level 2 fair value measurements. Following is a brief description of the various pricing techniques used by the independent pricing source for different asset classes.

- U.S. Treasury securities (including bonds, notes, and bills) are priced according to a number of live data sources, including active market makers and inter-dealer brokers. Prices from these sources are reviewed based on the sources' historical accuracy for individual issues and maturity ranges.
- U.S. government-sponsored agencies and corporate securities (including fixed-rate corporate bonds and medium-term notes) are priced by determining a bullet (non-call) spread scale for each issuer for maturities going out to forty years. These spreads represent credit risk and are obtained from the new issue market, secondary trading, and dealer quotes. An option adjusted spread model is incorporated to adjust spreads of issues that have early redemption features. The final spread is then added to the U.S. Treasury curve.
- Obligations of states and political subdivisions are priced by tracking and analyzing actively quoted issues and reported trades, material event notices and benchmark yields. Municipal bonds with similar characteristics are grouped together into market sectors, and internal yield curves are constructed daily for these sectors. Individual bond evaluations are extrapolated from these sectors, with the ability to make individual spread adjustments for attributes such as discounts, premiums, alternative minimum tax, and/or whether or not the bond is callable.
- Mortgage-backed and asset-backed securities are first reviewed for the appropriate pricing speed (if prepayable), spread, yield and volatility. The securities are priced with models using spreads and other information solicited from market buy- and sell-side sources, including primary and secondary dealers, portfolio managers, and research analysts. To determine a tranche's price, first the benchmark yield is determined and adjusted for collateral performance, tranche level attributes and market conditions. Then the cash flow for each tranche is generated (using consensus prepayment speed assumptions including, as appropriate, a prepayment projection based on historical statistics of the underlying collateral). The tranche-level yield is used to discount the cash flows and generate the price. Depending on the characteristics of the tranche, a volatility-driven, multi-dimensional single cash flow stream model or an option-adjusted spread model may be used. When cash flows or other security structure or market information is not available, broker quotes may be used.

On a quarterly basis, the Company receives from its independent pricing service a list of fixed maturity securities, if any, that were priced solely from broker quotes. For these securities, fair value may be determined using the broker quotes, or by the Company using similar pricing techniques as the Company's independent pricing service. Depending on the level of observable inputs, these securities would be classified as Level 2 or Level 3 fair value measurements. At December 31, 2016 and 2015, the Company had no securities priced solely from broker quotes.

A small number of the Company's securities are not priced by the independent pricing service. Two of these are equity securities (one at December 31, 2015) that are reported as Level 3 fair value measurements since no reliable observable inputs are used in their valuations. The largest of these equity security holdings is in a privately placed non-redeemable convertible preferred stock investment in a technology company that Employers Mutual intends to work closely with in its data analytics activities. Due to the recent purchase of this security in November, 2016, this security is currently carried at its acquisition cost, which is presumed to be equivalent to fair value. The other equity security, a much smaller holding, continues to be reported at the fair value obtained from the Securities Valuation Office (SVO) of the NAIC. The SVO establishes a per share price for this security based on an annual review of that company's financial statements, typically performed during the second quarter. The other securities not priced by the Company's independent pricing service at December 31, 2016 include nine fixed maturity securities (seven at December 31, 2015). Two of these fixed maturity securities, classified as Level 3 fair value measurements, are corporate securities that convey premium tax benefits and are not publicly traded. The fair values for these securities are based on discounted cash flow analyses. The other fixed maturity securities are classified as Level 2 fair value measurements. The fair values for these fixed maturity securities were obtained from either the SVO, the Company's investment custodian, or the Company's investment department using similar pricing techniques as the Company's independent pricing service.

Presented in the tables below are the estimated fair values of the Company's financial instruments as of December 31, 2016 and 2015.

December 31, 2016

(\$ in thousands)	Total	Fair value measurements using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial instruments reported at fair value on recurring basis:				
Assets:				
Fixed maturity securities available-for-sale:				
U.S. treasury	\$ 7,830	\$ —	\$ 7,830	\$ —
U.S. government-sponsored agencies	239,197	—	239,197	—
Obligations of states and political subdivisions	335,757	—	335,757	—
Commercial mortgage-backed	37,572	—	37,572	—
Residential mortgage-backed	96,434	—	96,434	—
Other asset-backed	26,393	—	26,393	—
Corporate	456,516	—	455,534	982
Total fixed maturity securities available-for-sale	1,199,699	—	1,198,717	982
Equity securities available-for-sale:				
Common stocks:				
Financial services	35,122	35,119	—	3
Information technology	30,542	30,542	—	—
Healthcare	24,707	24,707	—	—
Consumer staples	19,100	19,100	—	—
Consumer discretionary	22,321	22,321	—	—
Energy	19,071	19,071	—	—
Industrials	24,245	24,245	—	—
Other	18,384	18,384	—	—
Non-redeemable preferred stocks	20,347	11,074	7,273	2,000
Total equity securities available-for-sale	213,839	204,563	7,273	2,003
Short-term investments	39,670	39,670	—	—
Financial instruments not reported at fair value:				
Liabilities:				
Surplus notes	11,228	—	—	11,228

December 31, 2015

(\$ in thousands)	Total	Fair value measurements using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial instruments reported at fair value on recurring basis:				
Assets:				
Fixed maturity securities available-for-sale:				
U.S. treasury	\$ 12,589	\$ —	\$ 12,589	\$ —
U.S. government-sponsored agencies	202,666	—	202,666	—
Obligations of states and political subdivisions	344,359	—	344,359	—
Commercial mortgage-backed	46,108	—	46,108	—
Residential mortgage-backed	88,543	—	88,543	—
Other asset-backed	17,844	—	17,844	—
Corporate	448,916	—	447,587	1,329
Total fixed maturity securities available-for-sale	1,161,025	—	1,159,696	1,329
Equity securities available-for-sale:				
Common stocks:				
Financial services	33,955	33,952	—	3
Information technology	28,102	28,102	—	—
Healthcare	25,894	25,894	—	—
Consumer staples	18,200	18,200	—	—
Consumer discretionary	18,923	18,923	—	—
Energy	21,068	21,068	—	—
Industrials	20,416	20,416	—	—
Other	20,683	20,683	—	—
Non-redeemable preferred stocks	19,002	11,706	7,296	—
Total equity securities available-for-sale	206,243	198,944	7,296	3
Short-term investments	38,599	38,599	—	—
Financial instruments not reported at fair value:				
Liabilities:				
Surplus notes	10,823	—	—	10,823

Presented in the table below is a reconciliation of the assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) for the years ended December 31, 2016 and 2015. Any unrealized gains or losses on these securities are recognized in other comprehensive income. Any gains or losses from settlements, disposals or impairments of these securities are reported as realized investment gains or losses in net income.

(\$ in thousands)	Fair value measurements using significant unobservable (Level 3) inputs			Total
	Fixed maturity securities available-for-sale, corporate	Equity securities available-for-sale, financial services	Equity securities available-for-sale, non-redeemable preferred stocks	
Balance at December 31, 2014	\$ 1,662	\$ 3	\$ —	\$ 1,665
Settlements	(327)	—	—	(327)
Unrealized losses included in other comprehensive income (loss)	(6)	—	—	(6)
Balance at December 31, 2015	1,329	3	—	1,332
Purchases	—	—	2,000	2,000
Settlements	(345)	—	—	(345)
Unrealized losses included in other comprehensive income (loss)	(2)	—	—	(2)
Balance at December 31, 2016	\$ 982	\$ 3	\$ 2,000	\$ 2,985

There were no transfers into or out of Levels 1 or 2 during 2016 or 2015. It is the Company's policy to recognize transfers between levels at the beginning of the reporting period.

9. INVESTMENTS

Investments of the Company's insurance subsidiaries are subject to the insurance laws of the state of their incorporation. These laws prescribe the kind, quality and concentration of investments that may be made by insurance companies. In general, these laws permit investments, within specified limits and subject to certain qualifications, in federal, state and municipal obligations, corporate bonds, preferred and common stocks and real estate mortgages. The Company believes that it is in compliance with these laws.

The amortized cost and estimated fair value of securities available-for-sale as of December 31, 2016 and 2015 are as follows. All securities are classified as available-for-sale and are carried at fair value.

<u>December 31, 2016</u>	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair values
(\$ in thousands)				
Securities available-for-sale:				
Fixed maturity securities:				
U.S. treasury	\$ 7,841	\$ —	\$ 11	\$ 7,830
U.S. government-sponsored agencies	249,495	311	10,609	239,197
Obligations of states and political subdivisions	319,663	17,034	940	335,757
Commercial mortgage-backed	37,964	741	1,133	37,572
Residential mortgage-backed	102,307	1,435	7,308	96,434
Other asset-backed	26,592	732	931	26,393
Corporate	445,663	12,232	1,379	456,516
Total fixed maturity securities	<u>1,189,525</u>	<u>32,485</u>	<u>22,311</u>	<u>1,199,699</u>
Equity securities:				
Common stocks:				
Financial services	22,922	12,410	210	35,122
Information technology	19,832	10,739	29	30,542
Healthcare	16,092	8,700	85	24,707
Consumer staples	13,438	5,787	125	19,100
Consumer discretionary	14,812	7,672	163	22,321
Energy	14,276	4,873	78	19,071
Industrials	13,005	11,258	18	24,245
Other	13,071	5,345	32	18,384
Non-redeemable preferred stocks	20,031	483	167	20,347
Total equity securities	<u>147,479</u>	<u>67,267</u>	<u>907</u>	<u>213,839</u>
Total securities available-for-sale	<u>\$ 1,337,004</u>	<u>\$ 99,752</u>	<u>\$ 23,218</u>	<u>\$ 1,413,538</u>

December 31, 2015

(\$ in thousands)

	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair values
Securities available-for-sale:				
Fixed maturity securities:				
U.S. treasury	\$ 12,566	\$ 23	\$ —	\$ 12,589
U.S. government-sponsored agencies	202,486	1,817	1,637	202,666
Obligations of states and political subdivisions	319,940	24,419	—	344,359
Commercial mortgage-backed	44,433	1,692	17	46,108
Residential mortgage-backed	94,279	1,059	6,795	88,543
Other asset-backed	17,000	883	39	17,844
Corporate	439,513	12,992	3,589	448,916
Total fixed maturity securities	<u>1,130,217</u>	<u>42,885</u>	<u>12,077</u>	<u>1,161,025</u>
Equity securities:				
Common stocks:				
Financial services	24,557	9,731	333	33,955
Information technology	19,427	8,807	132	28,102
Healthcare	15,599	10,359	64	25,894
Consumer staples	11,136	7,090	26	18,200
Consumer discretionary	10,270	8,658	5	18,923
Energy	16,384	5,972	1,288	21,068
Industrials	11,525	8,902	11	20,416
Other	17,246	3,672	235	20,683
Non-redeemable preferred stocks	18,032	1,168	198	19,002
Total equity securities	<u>144,176</u>	<u>64,359</u>	<u>2,292</u>	<u>206,243</u>
Total securities available-for-sale	<u>\$ 1,274,393</u>	<u>\$ 107,244</u>	<u>\$ 14,369</u>	<u>\$ 1,367,268</u>

The following tables set forth the estimated fair values and gross unrealized losses associated with investment securities that were in an unrealized loss position as of December 31, 2016 and 2015, listed by length of time the securities were in an unrealized loss position.

December 31, 2016	Less than twelve months		Twelve months or longer		Total	
	Fair values	Unrealized losses	Fair values	Unrealized losses	Fair values	Unrealized losses
(\$ in thousands)						
Fixed maturity securities:						
U.S. treasury	\$ 7,830	\$ 11	\$ —	\$ —	\$ 7,830	\$ 11
U.S. government-sponsored agencies	202,900	10,609	—	—	202,900	10,609
Obligations of states and political subdivisions	43,777	940	—	—	43,777	940
Commercial mortgage-backed	21,695	1,133	—	—	21,695	1,133
Residential mortgage-backed	26,217	1,232	23,625	6,076	49,842	7,308
Other asset-backed	19,091	931	—	—	19,091	931
Corporate	82,657	1,273	8,625	106	91,282	1,379
Total fixed maturity securities	404,167	16,129	32,250	6,182	436,417	22,311
Equity securities:						
Common stocks:						
Financial services	1,462	12	908	198	2,370	210
Information technology	1,947	29	—	—	1,947	29
Healthcare	3,585	85	—	—	3,585	85
Consumer staples	2,427	125	—	—	2,427	125
Consumer discretionary	1,637	163	—	—	1,637	163
Energy	1,621	33	1,188	45	2,809	78
Industrials	779	18	—	—	779	18
Other	1,472	32	—	—	1,472	32
Non-redeemable preferred stocks	3,356	44	1,877	123	5,233	167
Total equity securities	18,286	541	3,973	366	22,259	907
Total temporarily impaired securities	\$ 422,453	\$ 16,670	\$ 36,223	\$ 6,548	\$ 458,676	\$ 23,218

December 31, 2015	Less than twelve months		Twelve months or longer		Total	
	Fair values	Unrealized losses	Fair values	Unrealized losses	Fair values	Unrealized losses
(\$ in thousands)						
Fixed maturity securities:						
U.S. government-sponsored agencies	\$ 78,800	\$ 1,228	\$ 34,079	\$ 409	\$ 112,879	\$ 1,637
Commercial mortgage-backed	6,807	17	—	—	6,807	17
Residential mortgage-backed	22,028	1,694	22,781	5,101	44,809	6,795
Other asset-backed	6,013	39	—	—	6,013	39
Corporate	101,088	2,683	14,212	906	115,300	3,589
Total fixed maturity securities	214,736	5,661	71,072	6,416	285,808	12,077
Equity securities:						
Common stocks:						
Financial services	6,387	333	—	—	6,387	333
Information technology	1,316	132	—	—	1,316	132
Healthcare	3,199	64	—	—	3,199	64
Consumer staples	1,244	26	—	—	1,244	26
Consumer discretionary	176	5	—	—	176	5
Energy	8,233	1,272	116	16	8,349	1,288
Industrials	1,263	11	—	—	1,263	11
Other	4,064	235	—	—	4,064	235
Non-redeemable preferred stocks	2,450	53	1,855	145	4,305	198
Total equity securities	28,332	2,131	1,971	161	30,303	2,292
Total temporarily impaired securities	\$ 243,068	\$ 7,792	\$ 73,043	\$ 6,577	\$ 316,111	\$ 14,369

The fair values of fixed maturity securities declined during 2016 primarily due to an increase in interest rates. Most of the securities that are in an unrealized loss position are considered investment grade by credit rating agencies. Because management does not intend to sell these securities, does not believe it will be required to sell these securities before recovery, and believes it will collect the amounts due on these securities, it was determined that these securities were not “other-than-temporarily” impaired at December 31, 2016.

No individual equity security accounted for a material amount of unrealized losses. Because the Company has the ability and intent to hold these securities for a reasonable amount of time to allow for recovery, it was determined that these securities were not “other-than-temporarily” impaired at December 31, 2016.

All of the Company’s preferred stock holdings that are in an unrealized loss position are perpetual preferred stocks. The Company evaluates these perpetual preferred stocks with unrealized losses for “other-than-temporary” impairment similar to fixed maturity securities since they have debt-like characteristics such as periodic cash flows in the form of dividends and call features, are rated by rating agencies and are priced like other long-term callable fixed maturity securities. There was no evidence of any credit deterioration in the issuers of the preferred stocks and the Company does not intend to sell these securities before recovery, nor does it believe it will be required to sell these securities before recovery; therefore, it was determined that these securities were not “other-than-temporarily” impaired at December 31, 2016.

The amortized cost and estimated fair values of fixed maturity securities at December 31, 2016, by contractual maturity, are shown below. Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations, with or without call or prepayment penalties.

(\$ in thousands)	Amortized cost	Estimated fair value
Securities available-for-sale:		
Due in one year or less	\$ 45,253	\$ 45,945
Due after one year through five years	153,990	160,471
Due after five years through ten years	339,635	344,243
Due after ten years	507,687	512,355
Securities not due at a single maturity date	142,960	136,685
Totals	<u>\$ 1,189,525</u>	<u>\$ 1,199,699</u>

A summary of realized investment gains and (losses) is as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Fixed maturity securities available-for-sale:			
Gross realized investment gains	\$ 2,054	\$ 725	\$ 979
Gross realized investment losses	(2,829)	(251)	(92)
"Other-than-temporary" impairments	—	—	(1)
Equity securities available-for-sale:			
Gross realized investment gains	15,078	12,741	8,913
Gross realized investment losses	(2,675)	(4,110)	(1,727)
"Other-than-temporary" impairments	(1,055)	(1,481)	(877)
Other long-term investments, net	(6,499)	(1,471)	(2,846)
Totals	<u>\$ 4,074</u>	<u>\$ 6,153</u>	<u>\$ 4,349</u>

Gains and losses realized on the disposition of investments are included in net income. The cost of investments sold is determined on the specific identification method using the highest cost basis first. The Company did not have any outstanding cumulative credit losses on fixed maturity securities that have been recognized in earnings from "other-than-temporary" impairments during any of the reported periods. The amounts reported as "other-than-temporary" impairments on equity securities do not include any individually significant items. The net realized investment losses recognized on other long-term investments primarily represent changes in the carrying value of a limited partnership that is used solely to support an equity tail-risk hedging strategy, but for 2016 also includes an "other-than-temporary" impairment loss of \$209,000 on a new investment that conveys investment tax credits.

A summary of net investment income is as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Interest on fixed maturity securities	\$ 41,499	\$ 42,261	\$ 41,932
Dividends on equity securities	6,922	5,617	6,007
Income on reverse repurchase agreements	236	117	—
Interest on short-term investments	121	2	—
Return on long-term investments	514	(461)	297
Total investment income	49,292	47,536	48,236
Securities litigation income	111	32	107
Investment expenses	(1,913)	(1,986)	(1,878)
Net investment income	\$ 47,490	\$ 45,582	\$ 46,465

A summary of net changes in unrealized holding gains (losses) on securities available-for-sale is as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Fixed maturity securities	\$ (20,634)	\$ (16,685)	\$ 29,081
Deferred income tax expense (benefit)	(7,222)	(5,840)	10,179
Total fixed maturity securities	(13,412)	(10,845)	18,902
Equity securities	4,293	(10,997)	17,051
Deferred income tax expense (benefit)	1,502	(3,849)	5,967
Total equity securities	2,791	(7,148)	11,084
Total available-for-sale securities	\$ (10,621)	\$ (17,993)	\$ 29,986

10. INCOME TAXES

Temporary differences between the consolidated financial statement carrying amount and tax basis of assets and liabilities that give rise to significant portions of the deferred income tax asset (liability) at December 31, 2016 and 2015 are as follows:

(\$ in thousands)	December 31,	
	2016	2015
Loss reserve discounting	\$ 13,442	\$ 13,929
Unearned premium reserve limitation	16,497	16,310
Other policyholders' funds payable	4,574	3,052
Other, net	2,561	1,730
Total deferred income tax asset	37,074	35,021
Net unrealized holding gains on investment securities	(26,786)	(32,506)
Deferred policy acquisition costs	(14,328)	(14,252)
Retirement benefits	(3,510)	(3,606)
Other, net	(3,771)	(3,686)
Total deferred income tax liability	(48,395)	(54,050)
Net deferred income tax liability	\$ (11,321)	\$ (19,029)

Based upon anticipated future taxable income and consideration of all other available evidence, management believes that it is “more likely than not” that the Company’s deferred income tax assets will be realized.

The actual income tax expense for the years ended December 31, 2016, 2015 and 2014 differed from the “expected” income tax expense for those years (computed by applying the United States federal corporate tax rate of 35 percent to income before income tax expense) as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Computed "expected" income tax expense	\$ 22,123	\$ 25,079	\$ 14,318
Increases (decreases) in tax resulting from:			
Tax-exempt interest income	(2,803)	(2,805)	(3,285)
Dividends received deduction	(1,429)	(1,136)	(828)
Proration of tax-exempt interest and dividends received deduction	635	591	617
Investment tax credits	(1,546)	—	—
Other, net	24	(235)	93
Total income tax expense	\$ 17,004	\$ 21,494	\$ 10,915

Comprehensive income tax expense included in the consolidated financial statements for the years ended December 31, 2016, 2015 and 2014 is as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Income tax expense (benefit) on:			
Operations	\$ 17,004	\$ 21,494	\$ 10,915
Change in unrealized holding gains on investment securities	(5,720)	(9,689)	16,146
Change in funded status of retirement benefit plans:			
Pension plans	414	(1,748)	(2,619)
Postretirement benefit plans	(1,345)	(1,071)	(1,330)
Comprehensive income tax expense	\$ 10,353	\$ 8,986	\$ 23,112

The Company had no provision for uncertain income tax positions at December 31, 2016 or 2015. The Company recognized \$1,000 of interest income related to U.S. federal income taxes during 2014. The Company recognized no interest expense or other penalties related to U.S. federal or state income taxes during 2016, 2015 or 2014. It is the Company’s accounting policy to reflect income tax penalties as other expense, and interest as interest expense.

The Company files a U.S. federal income tax return, along with various state income tax returns. The Company is no longer subject to U.S. federal and state income tax examinations by tax authorities for years before 2013.

11. SURPLUS NOTES

The Company’s property and casualty insurance subsidiaries have \$25.0 million of surplus notes issued to Employers Mutual. Effective February 1, 2013, the interest rate on the surplus notes was reduced to 1.35 percent. Reviews of the interest rate are conducted by the Inter-Company Committees of the boards of directors of the Company and Employers Mutual every five years, with the next review due in 2018. Payments of interest and repayments of principal can only be made out of the applicable subsidiary’s statutory surplus and are subject to prior approval by the insurance commissioner of the respective states of domicile. The surplus notes are subordinate and junior in right of payment to all obligations or liabilities of the applicable insurance subsidiaries. Total interest expense on these surplus notes was \$337,000 in 2016, 2015 and 2014. At December 31, 2016, the Company’s property and casualty insurance subsidiaries had received approval for the payment of the 2016 interest expense on the surplus notes.

12. EMPLOYEE RETIREMENT PLANS

Employers Mutual has various employee benefit plans, including two defined benefit pension plans and two postretirement benefit plans that provide retiree healthcare and life insurance benefits.

Employers Mutual's pension plans include a qualified defined benefit pension plan and a non-qualified defined benefit supplemental pension plan. The qualified defined benefit plan covers substantially all of its employees. This plan is funded by employer contributions and provides benefits under two different formulas, depending on an employee's age and date of service. Benefits generally vest after three years of service or the attainment of 55 years of age. It is Employers Mutual's funding policy to make contributions sufficient to be in compliance with minimum regulatory funding requirements plus additional amounts as determined by management.

Employers Mutual's non-qualified defined benefit supplemental pension plan provides retirement benefits for a select group of management and highly-compensated employees. This plan enables select employees to receive retirement benefits without the limit on compensation imposed on qualified defined benefit pension plans by the Internal Revenue Service (IRS) and to recognize compensation that has been deferred in the determination of retirement benefits. The plan is unfunded and benefits generally vest after three years of service.

Employers Mutual also offers postretirement benefit plans which provide certain health care and life insurance benefits for retired employees. Substantially all of its employees may become eligible for those benefits if they reach normal retirement age and have attained the required length of service while working for Employers Mutual. Employers Mutual has a Health Reimbursement Arrangement (HRA) that is available to participants. Under the HRA, Employers Mutual reimburses participants, up to a pre-determined maximum, for amounts expended to enroll in publicly available health care plans and/or pay for qualifying out-of-pocket health care costs. The obligations of the HRA are based on the total amount of reimbursements expected to be made by Employers Mutual over the lives of the participants, rather than the total amount of medical benefits expected to be paid over the participants' lives. Therefore, the obligations of the HRA are not impacted by changes in the cost of health care. The life insurance plan is noncontributory. The benefits provided under both plans are subject to change.

Employers Mutual maintains a Voluntary Employee Beneficiary Association (VEBA) trust that has historically been used to accumulate funds for the payment of postretirement health care and life insurance benefits. Contributions to the VEBA trust have been used to fund the projected postretirement benefit obligation, as well as pay benefits. Given the overfunded position of the postretirement benefit plans, contributions to the VEBA trust are not anticipated for the foreseeable future.

The following table sets forth the funded status of Employers Mutual's pension and postretirement benefit plans as of December 31, 2016 and 2015, based upon measurement dates of December 31, 2016 and 2015, respectively.

(\$ in thousands)	Pension plans		Postretirement benefit plans	
	2016	2015	2016	2015
Change in projected benefit obligation:				
Benefit obligation at beginning of year	\$ 269,904	\$ 267,129	\$ 51,449	\$ 54,503
Service cost	14,432	13,962	1,273	1,411
Interest cost	10,161	9,311	2,215	2,148
Actuarial (gain) loss	5,361	(1,661)	357	(5,895)
Benefits paid	(15,664)	(18,837)	(2,377)	(2,185)
Medicare subsidy reimbursements	—	—	553	—
Plan amendments	—	—	2,181	1,467
Projected benefit obligation at end of year	<u>284,194</u>	<u>269,904</u>	<u>55,651</u>	<u>51,449</u>
Change in plan assets:				
Fair value of plan assets at beginning of year	283,231	297,848	66,320	69,290
Actual return on plan assets	23,081	(591)	3,866	(785)
Employer contributions	10,267	4,811	—	—
Benefits paid	(15,664)	(18,837)	(2,377)	(2,185)
Fair value of plan assets at end of year	<u>300,915</u>	<u>283,231</u>	<u>67,809</u>	<u>66,320</u>
Funded status	<u>\$ 16,721</u>	<u>\$ 13,327</u>	<u>\$ 12,158</u>	<u>\$ 14,871</u>

The following tables set forth the amounts recognized in the Company's financial statements as a result of the property and casualty insurance subsidiaries' aggregate 30 percent participation in the pooling agreement and, prior to 2016, amounts allocated to the reinsurance subsidiary.

Amounts recognized in the Company's consolidated balance sheets:

(\$ in thousands)	Pension plans		Postretirement benefit plans	
	2016	2015	2016	2015
Assets:				
Prepaid pension and postretirement benefits	\$ 9,065	\$ 8,132	\$ 3,249	\$ 4,001
Liability:				
Pension and postretirement benefits	(4,097)	(4,299)	—	—
Net amount recognized	<u>\$ 4,968</u>	<u>\$ 3,833</u>	<u>\$ 3,249</u>	<u>\$ 4,001</u>

Amounts recognized in the Company's consolidated balance sheets under the caption "accumulated other comprehensive income", before deferred income taxes:

(\$ in thousands)	Pension plans		Postretirement benefit plans	
	2016	2015	2016	2015
Net actuarial loss	\$ (18,927)	\$ (20,101)	\$ (6,147)	\$ (6,523)
Prior service (cost) credit	(6)	(15)	19,441	23,662
Net amount recognized	<u>\$ (18,933)</u>	<u>\$ (20,116)</u>	<u>\$ 13,294</u>	<u>\$ 17,139</u>

During 2017, the Company will amortize \$1.1 million of net actuarial loss and \$6,000 of prior service cost associated with the pension plans into net periodic benefit cost. In addition, the Company will amortize \$381,000 of net actuarial loss and \$3.2 million of prior service credit associated with the postretirement benefit plans into net periodic postretirement benefit income in 2017.

Amounts recognized in the Company's consolidated statements of comprehensive income, before deferred income taxes:

(\$ in thousands)	Pension plans		Postretirement benefit plans	
	2016	2015	2016	2015
Net actuarial gain (loss)	\$ 1,174	\$ (5,004)	\$ 376	\$ 735
Prior service (cost) credit	9	10	(4,221)	(3,796)
Net amount recognized	\$ 1,183	\$ (4,994)	\$ (3,845)	\$ (3,061)

The following table sets forth the projected benefit obligation, accumulated benefit obligation and fair value of plan assets of Employers Mutual's non-qualified pension plan. The amounts related to the qualified pension plan are not included since the plan assets exceeded the accumulated benefit obligation.

(\$ in thousands)	Year ended December 31,	
	2016	2015
Projected benefit obligation	\$ 13,656	\$ 13,505
Accumulated benefit obligation	12,182	12,405
Fair value of plan assets	—	—

The components of net periodic benefit cost (income) for Employers Mutual's pension and postretirement benefit plans is as follows:

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Pension plans:			
Service cost	\$ 14,432	\$ 13,962	\$ 12,863
Interest cost	10,161	9,311	9,664
Expected return on plan assets	(19,361)	(20,298)	(20,733)
Amortization of net actuarial loss	4,311	2,710	366
Amortization of prior service cost	31	31	31
Net periodic pension benefit cost	\$ 9,574	\$ 5,716	\$ 2,191
Postretirement benefit plans:			
Service cost	\$ 1,273	\$ 1,411	\$ 1,260
Interest cost	2,215	2,148	2,254
Expected return on plan assets	(4,224)	(4,416)	(4,396)
Amortization of net actuarial loss	1,494	1,745	1,651
Amortization of prior service credit	(11,338)	(11,466)	(11,466)
Net periodic postretirement benefit income	\$ (10,580)	\$ (10,578)	\$ (10,697)

The net periodic postretirement benefit income recognized on Employers Mutual's postretirement benefit plans is due to a plan amendment that was announced in the fourth quarter of 2013. This plan amendment generated a large prior service credit that is being amortized into net periodic benefit cost over a period of 10 years.

Net periodic pension benefit cost allocated to the Company amounted to \$2.9 million, \$1.8 million and \$680,000 for the years ended December 31, 2016, 2015 and 2014, respectively. Net periodic postretirement benefit income allocated to the Company for the years ended December 31, 2016, 2015 and 2014 amounted to \$3.0 million, \$3.0 million, and \$3.1 million, respectively.

The weighted-average assumptions used to measure the benefit obligations are as follows:

	Year ended December 31,	
	2016	2015
Pension plans:		
Discount rate	4.07%	3.90%
Rate of compensation increase:		
Qualified pension plan	5.07%	5.07%
Non-qualified pension plan	4.53%	4.56%
Postretirement benefit plans:		
Discount rate	4.21%	4.42%

The weighted-average assumptions used to measure the net periodic benefit costs are as follows:

	Year ended December 31,		
	2016	2015	2014
Pension plans:			
Discount rate	3.90%	3.57%	4.17%
Expected long-term rate of return on plan assets	7.00%	7.00%	7.25%
Rate of compensation increase:			
Qualified pension plan	5.07%	4.73%	4.73%
Non-qualified pension plan	4.56%	4.68%	4.68%
Postretirement benefit plans:			
Discount rate	4.42%	4.04%	4.71%
Expected long-term rate of return on plan assets	6.50%	6.50%	6.75%

The expected long-term rates of return on plan assets were developed considering actual historical results, current and expected market conditions, plan asset mix and management's investment strategy.

The following benefit payments, which reflect expected future service, are expected to be paid from the plans over the next ten years:

(\$ in thousands)	Postretirement benefits	
	Pension benefits	
2017	\$ 19,120	\$ 2,959
2018	20,282	3,197
2019	21,615	3,352
2020	22,434	3,441
2021	20,233	3,497
2022 - 2026	116,612	17,909

The Company manages its VEBA trust assets internally. Assets contained in the VEBA trust to fund Employers Mutual's postretirement benefit obligations are currently invested in universal life insurance policies (issued by EMC National Life Company, an affiliate of Employers Mutual), mutual funds and an exchange-traded fund (ETF). The mutual funds are fixed income, international equity and domestic equity funds. The ETF is an emerging markets fund.

See note 8 for a discussion on fair value measurement. Following is a brief description of the various pricing techniques used for the asset classes of Employers Mutual's VEBA trust.

- Money Market Fund: Valued at amortized cost, which approximates fair value. Under this method, investments purchased at a discount or premium are valued by accreting or amortizing the difference between the original purchase price and maturity value of the issue over the period to maturity. The net asset value of each share held by the trust at year-end was \$1.00.
- Mutual Funds: Valued at the net asset value of shares held by the trust at year-end. For purposes of calculating the net asset value, portfolio securities and other assets for which market quotes are readily available are valued at fair value. Fair value is generally determined on the basis of last reported sales prices, or if no sales are reported, based on quotes obtained from a quotation reporting system, established market makers, or independent pricing services.
- ETF: Valued at the closing price from the applicable exchange.
- Life Insurance Contract: Valued at the cash surrender value, which approximates fair value.

The fair values of the assets held in Employers Mutual's VEBA trust are as follows:

<u>December 31, 2016</u>		Fair value measurements using		
(\$ in thousands)	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Money market fund	\$ 1,485	\$ 1,485	\$ —	\$ —
Emerging markets ETF	3,743	3,743	—	—
Mutual funds	47,916	47,916	—	—
Life insurance contracts	14,159	—	—	14,159
Cash	506	506	—	—
Total benefit plan assets	<u>\$ 67,809</u>	<u>\$ 53,650</u>	<u>\$ —</u>	<u>\$ 14,159</u>

<u>December 31, 2015</u>		Fair value measurements using		
(\$ in thousands)	Total	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Money market fund	\$ 2,709	\$ 2,709	\$ —	\$ —
Emerging markets ETF	3,422	3,422	—	—
Mutual funds	46,397	46,397	—	—
Life insurance contracts	13,792	—	—	13,792
Total benefit plan assets	<u>\$ 66,320</u>	<u>\$ 52,528</u>	<u>\$ —</u>	<u>\$ 13,792</u>

Presented below is a reconciliation of the assets measured at fair value using significant unobservable inputs (Level 3) for the years ended December 31, 2016 and 2015.

(\$ in thousands)	Fair value measurements using significant unobservable (Level 3) inputs	
	Life insurance contracts	
	2016	2015
Balance at beginning of year	\$ 13,792	\$ 13,408
Actual return on plan assets:		
Increase in cash surrender value of life insurance contracts	367	384
Balance at end of year	\$ 14,159	\$ 13,792

Employers Mutual uses Global Portfolio Strategies, Inc. to advise on the asset allocation strategy for its qualified pension plan. The asset allocation strategy and process of Global Portfolio Strategies, Inc. uses a diversified allocation of equity, debt and real estate exposures that is customized to the plan's payment risk and return targets.

Global Portfolio Strategies, Inc. reviews the plan's assets and liabilities in relation to expectations of long-term market performance and liability development to determine the appropriate asset allocation. The data for the contributions and emerging liabilities is provided from the plan's actuarial valuation, while the current asset and monthly benefit payment data is provided by the plan record keeper.

Following is a brief description of the pricing techniques used for the asset classes of Employers Mutual's qualified pension plan.

- Pooled Separate Accounts: Each of the funds held by the Plan is in a pooled or commingled investment vehicle that is maintained by the fund sponsor, each with many investors. The Plan asset is represented by a "unit of account" and a per unit value, whose value is the accumulated value of the underlying investments less liabilities. The sponsor of the fund specifies the source(s) used for the underlying investment asset prices and the protocol used to value each fund.

In accordance with ASU 2015-07, a fair value hierarchy table is not included here since all of the Plan's investments are measured at fair value using the net asset value per share (or its equivalent) practical expedient, which are not classified in the fair value hierarchy. Presented below are the fair values of assets held in Employers Mutual's defined benefit retirement plan:

(\$ in thousands)	December 31,	
	2016	2015
Pooled separate accounts	\$ 300,915	\$ 283,231
Total benefit plan assets	\$ 300,915	\$ 283,231

Employers Mutual plans to contribute approximately \$9.0 million to the pension plan in 2017. No contributions are expected to be made to the VEBA trust in 2017.

The Company participates in other benefit plans sponsored by Employers Mutual, including its 401(k) Plan, Board and Executive Non-Qualified Excess Plans and Defined Contribution Supplemental Executive Retirement Plan. The Company's share of expenses for these plans amounted to \$2.7 million, \$2.5 million and \$1.7 million in 2016, 2015 and 2014, respectively. Note that the amount for 2016 includes an allocation of retirement benefit expenses to the Company's reinsurance subsidiary (portion of the service cost components of the qualified and non-qualified pension plans and the postretirement benefits plans). In prior years the Company's reinsurance subsidiary was allocated a portion of all activities of these plans (including the balance sheet amounts) which are included in the relevant tables and disclosures contained in this footnote.

13. STOCK-BASED COMPENSATION

The Company has no stock-based compensation plans of its own; however, Employers Mutual has several stock plans which utilize the common stock of the Company. Employers Mutual can provide the common stock required under its plans by: 1) using shares of common stock that it currently owns; 2) purchasing common stock in the open market; or 3) directly purchasing common stock from the Company at the current fair value. Employers Mutual's current practice is to purchase common stock from the Company for use in all of its stock plans (including its non-employee director stock purchase plan and its employee stock purchase plan).

Stock Plans

Employers Mutual currently maintains two separate stock plans for the benefit of officers and key employees of Employers Mutual and its subsidiaries. A total of 2,250,000 shares of the Company's common stock have been reserved for issuance under the 2003 Employers Mutual Casualty Company Incentive Stock Option Plan (2003 Plan) and a total of 3,000,000 shares have been reserved for issuance under the 2007 Employers Mutual Casualty Company Stock Incentive Plan (2007 Plan). During 2016, the compensation committee of Employers Mutual and the Corporate Governance and Nominating Committee of the Company approved the issuance of restricted stock awards to the non-employee directors of the Company under the 2007 Plan.

The 2003 Plan permitted the issuance of incentive stock options only, while the 2007 Plan permits the issuance of performance shares, performance units, and other stock-based awards, in addition to qualified (incentive) and non-qualified stock options, stock appreciation rights, restricted stock and restricted stock units. Both plans provide for a ten-year time limit for granting awards. No additional options can be granted under the 2003 Plan due to the expiration of the term of the plan. Options granted under the plans generally have a vesting period of five years, with options becoming exercisable in equal annual cumulative increments commencing on the first anniversary of the option grant. Option prices cannot be less than the fair value of the common stock on the date of grant. Restricted stock awards granted under the 2007 Plan generally have a vesting period of four years, with shares vesting in equal annual cumulative increments commencing on the first anniversary of the grant. With the exception of death or permanent disability, any unvested shares of restricted stock are forfeited on termination of employment, including retirement. Holders of unvested shares of restricted stock receive compensation income equal to the amount of any dividends declared on the common stock. During 2016, 2,000 shares of restricted stock were granted to non-employee directors of the Company. These shares of restricted stock vest over a period of three years, or upon a director reaching 75 years of age while an active director.

The Senior Executive Compensation Committee of Employers Mutual's Board of Directors grants the awards and is the administrator of the plans. The Company's Compensation Committee must consider and approve all awards granted to the Company's executive officers. Awards granted to directors are approved by the Company's Corporate Governance and Nominating Committee.

The Company recognized compensation expense from these plans of \$788,000 (\$512,000 net of tax), \$500,000 (\$325,000 net of tax) and \$357,000 (\$233,000 net of tax) in 2016, 2015 and 2014, respectively. Due to the historically small number of forfeitures, the Company has elected to recognize the reduction to compensation expense from forfeitures as they occur.

A summary of the stock option activity under Employers Mutual's stock plans for 2016, 2015 and 2014 is as follows:

	Year ended December 31,					
	2016		2015		2014	
	Number of options	Weighted-average exercise price	Number of options	Weighted-average exercise price	Number of options	Weighted-average exercise price
Outstanding, beginning of year	1,006,171	\$ 14.92	1,351,802	\$ 14.89	1,702,938	\$ 14.78
Exercised	(321,312)	15.31	(323,486)	14.86	(300,479)	14.24
Expired	(34,947)	16.32	(20,850)	14.11	(34,421)	15.01
Forfeited	(900)	13.99	(1,295)	14.68	(16,236)	15.29
Outstanding, end of year	<u>649,012</u>	\$ 14.65	<u>1,006,171</u>	\$ 14.92	<u>1,351,802</u>	\$ 14.89
Exercisable, end of year	<u>593,224</u>	\$ 14.72	<u>824,365</u>	\$ 14.95	<u>963,831</u>	\$ 14.94

At December 31, 2016, the Company's portion of the unrecognized compensation cost associated with option awards issued under Employers Mutual's stock plans that are not currently vested was \$7,000, with a 0.17 year weighted-average period over which the compensation expense is expected to be recognized.

The average of the high and low trading prices of the Company's stock on the date of grant is used to determine the fair value of the restricted stock awards. At December 31, 2016, the Company's portion of the unrecognized compensation cost associated with restricted stock awards issued under the 2007 Plan that are not currently vested was \$1.1 million with a 2.33 year weighted-average period over which the compensation expense is expected to be recognized. A summary of restricted stock activity under 2007 Plan for 2016, 2015 and 2014 is as follows:

	Year ended December 31,					
	2016		2015		2014	
	Number of awards	Weighted-average grant-date fair value	Number of awards	Weighted-average grant-date fair value	Number of awards	Weighted-average grant-date fair value
Non-vested, beginning of year	216,944	\$ 20.40	155,864	\$ 19.21	85,002	\$ 17.27
Granted	118,588	24.56	117,146	21.36	94,146	20.49
Vested	(69,057)	19.98	(40,941)	18.99	(21,223)	17.27
Forfeited	(32,194)	22.73	(15,125)	19.35	(2,061)	17.74
Non-vested, end of year	234,281	\$ 22.31	216,944	\$ 20.40	155,864	\$ 19.21

The Company's portion of the total intrinsic value of options exercised under Employers Mutual's stock plans was \$1.1 million, \$770,000 and \$606,000 in 2016, 2015 and 2014, respectively. Under the terms of the pooling and quota share agreements, these amounts were paid to Employers Mutual. The Company receives the full fair value, as of the exercise date, for all shares issued in connection with option exercises. The Company also receives the full fair value, as of the grant date, for all shares issued in connection with the grant of restricted stock awards. The Company's portion of the total fair value of restricted stock awards that vested was \$414,000, \$233,000 and \$110,000 in 2016, 2015 and 2014, respectively. Additional information relating to options outstanding and options vested (exercisable) at December 31, 2016 is as follows:

(\$ in thousands, except share and per share amounts)	December 31, 2016			
	Number of options	Weighted-average exercise price	Aggregate intrinsic value	Weighted-average remaining term
Options outstanding	649,012	\$ 14.65	\$ 9,691	3.33
Options exercisable	593,224	\$ 14.72	\$ 8,821	3.16

The 2003 Plan does not generally generate income tax deductions for the Company because only incentive stock options could be issued under the plan. The Company has recorded a deferred income tax benefit for a portion of the compensation expense associated with the March 2008 grant and for all subsequent grants (all made under the 2007 Plan) because non-qualified options and restricted stock awards were issued. The Company's portion of the current income tax deduction realized from exercises of non-qualified stock options was \$284,000, \$121,000 and \$152,000 in 2016, 2015 and 2014, respectively. These actual deductions are generally in excess of the deferred tax benefits recorded in conjunction with the compensation expense (referred to as excess tax benefits), which reduce income tax expense (prior to 2016 were recorded to additional paid in capital). The income tax benefit that results from disqualifying dispositions of stock purchased through the exercise of incentive stock options is deemed immaterial.

Employee Stock Purchase Plan

On May 30, 2008, the Company registered 750,000 shares of the Company's common stock for use in the Employers Mutual Casualty Company 2008 Employee Stock Purchase Plan. All employees are eligible to participate in the plan. An employee may participate in the plan by delivering, during the first twenty days of the calendar month preceding the first day of an election period, a payroll deduction authorization to the plan administrator; or making a cash contribution (employees designated as "Insiders" are required to give six months advance notice prior to participating in the plan). Participants pay 85 percent of the fair market value of the stock on the date of purchase. The plan is administered by the Board of Directors of Employers Mutual, which has the right to amend or terminate the plan at any time; however, no such amendment or termination shall adversely affect the rights and privileges of participants. Expenses allocated to the Company in connection with this plan totaled \$78,000, \$59,000 and \$35,000 in 2016, 2015 and 2014, respectively.

During 2016, shares were purchased under the plan at prices ranging from \$21.78 to \$23.42. Activity under the plan was as follows:

	Year ended December 31,		
	2016	2015	2014
Shares available for purchase, beginning of year	414,883	471,459	508,749
Shares purchased under the plan	(65,479)	(56,576)	(37,290)
Shares available for purchase, end of year	349,404	414,883	471,459

Non-Employee Director Stock Purchase Plan

On March 14, 2013, the Company registered 300,000 shares of the Company's common stock for issuance under the 2013 Employers Mutual Casualty Company Non-Employee Director Stock Purchase Plan. All non-employee directors of Employers Mutual and its subsidiaries and affiliates, as well as non-employee directors of the Company, are eligible to participate in the plan. Each eligible director can purchase shares of common stock at 75 percent of the fair value of the stock on the exercise date in an amount equal to a minimum of 25 percent and a maximum of 100 percent of their annual cash retainer. The plan will continue through the period of the 2023 annual meetings. The plan is administered by the Corporate Governance and Nominating Committee of the Board of Directors of Employers Mutual. The Board may amend or terminate the plan at any time; however, no such amendment or termination shall adversely affect the rights and privileges of the participants. Expenses allocated to the Company in connection with this plan totaled \$84,000, \$62,000 and \$49,000 in 2016, 2015 and 2014, respectively.

During 2016, shares were purchased under the plan at prices ranging from \$18.26 to \$20.99. Activity under the plan was as follows:

	Year ended December 31,		
	2016	2015	2014
Shares available for purchase, beginning of year	264,446	279,809	294,248
Shares purchased under the plan	(14,603)	(15,363)	(14,439)
Shares available for purchase, end of year	249,843	264,446	279,809

Dividend Reinvestment Plan

The Company maintains a dividend reinvestment and common stock purchase plan (the "Plan") which provides stockholders with the option of reinvesting cash dividends in additional shares of the Company's common stock. Participants can also purchase additional shares of common stock without incurring broker commissions by making optional cash contributions to the plan, and sell shares of common stock through the plan.

Employers Mutual did not participate in this plan in 2016, 2015 or 2014. Activity under the plan was as follows:

	Year ended December 31,		
	2016	2015	2014
Shares available for purchase, beginning of year	976,697	982,227	988,436
Shares purchased under the plan	(5,475)	(5,530)	(6,209)
Shares available for purchase, end of year	971,222	976,697	982,227
Lowest purchase price	\$ 22.09	\$ 21.02	\$ 18.69
Highest purchase price	\$ 30.50	\$ 26.43	\$ 23.59

14. ACCUMULATED OTHER COMPREHENSIVE INCOME

The Company has available-for-sale securities and receives an allocation of the actuarial losses and net prior service credits associated with Employers Mutual's pension and postretirement benefit plans, both of which generate accumulated other comprehensive income (loss) amounts. The following table reconciles, by component, the beginning and ending balances of accumulated other comprehensive income, net of tax.

(\$ in thousands)	Accumulated other comprehensive income by component		
	Unrealized gains (losses) on available-for-sale securities	Unrecognized pension and postretirement benefit obligations	Total
Balance at December 31, 2014	\$ 78,362	\$ 3,300	\$ 81,662
Other comprehensive loss before reclassifications	(13,037)	(3,949)	(16,986)
Amounts reclassified from accumulated other comprehensive income	(4,956)	(1,287)	(6,243)
Other comprehensive loss	(17,993)	(5,236)	(23,229)
Balance at December 31, 2015	60,369	(1,936)	58,433
Other comprehensive loss before reclassifications	(3,885)	(881)	(4,766)
Amounts reclassified from accumulated other comprehensive income	(6,736)	(850)	(7,586)
Other comprehensive loss	(10,621)	(1,731)	(12,352)
Balance at December 31, 2016	\$ 49,748	\$ (3,667)	\$ 46,081

The following tables display amounts reclassified out of accumulated other comprehensive income and into net income during the three years ended December 31, 2016.

(\$ in thousands)	Amounts reclassified from accumulated other comprehensive income	Affected line item in the consolidated statements of income
	Year ended December 31, 2016	
Accumulated other comprehensive income components		
Unrealized gains on investments:		
Reclassification adjustment for realized investment gains included in net income	\$ 10,364	Net realized investment gains
Deferred income tax expense	(3,628)	Income tax expense, current
Net reclassification adjustment	6,736	
Unrecognized pension and postretirement benefit obligations:		
Reclassification adjustment for amounts amortized into net periodic pension and postretirement benefit income:		
Net actuarial loss	(2,383)	(1)
Prior service credit	3,690	(1)
Total before tax	1,307	
Deferred income tax expense	(457)	Income tax expense, current
Net reclassification adjustment	850	
Total reclassification adjustment	\$ 7,586	

- (1) These reclassified components of accumulated other comprehensive income are included in the computation of net periodic pension and postretirement benefit income (see note 12, Employee Retirement Plans, for additional details).

(\$ in thousands)	Amounts reclassified from accumulated other comprehensive income	Affected line item in the consolidated statements of income
	Year ended December 31, 2015	
<u>Accumulated other comprehensive income components</u>		
Unrealized gains on investments:		
Reclassification adjustment for realized investment gains included in net income	\$ 7,624	Net realized investment gains
Deferred income tax expense	(2,668)	Income tax expense, current
Net reclassification adjustment	<u>4,956</u>	
Unrecognized pension and postretirement benefit obligations:		
Reclassification adjustment for amounts amortized into net periodic pension and postretirement benefit income:		
Net actuarial loss	(1,327)	(1)
Prior service credit	3,307	(1)
Total before tax	<u>1,980</u>	
Deferred income tax expense	(693)	Income tax expense, current
Net reclassification adjustment	<u>1,287</u>	
Total reclassification adjustment	<u>\$ 6,243</u>	

- (1) These reclassified components of accumulated other comprehensive income are included in the computation of net periodic pension and postretirement benefit income (see note 12, Employee Retirement Plans, for additional details).

(\$ in thousands)	Amounts reclassified from accumulated other comprehensive income	Affected line item in the consolidated statements of income
	Year ended December 31, 2014	
<u>Accumulated other comprehensive income components</u>		
Unrealized gains on investments:		
Reclassification adjustment for realized investment gains included in net income	\$ 7,195	Net realized investment gains
Deferred income tax expense	(2,518)	Income tax expense, current
Net reclassification adjustment	<u>4,677</u>	
Unrecognized pension and postretirement benefit obligations:		
Reclassification adjustment for amounts amortized into net periodic pension and postretirement benefit income:		
Net actuarial loss	(578)	(1)
Prior service credit	3,307	(1)
Total before tax	<u>2,729</u>	
Deferred income tax expense	(955)	Income tax expense, current
Net reclassification adjustment	<u>1,774</u>	
Total reclassification adjustment	<u>\$ 6,451</u>	

(1) These reclassified components of accumulated other comprehensive income are included in the computation of net periodic pension and postretirement benefit income (see note 12, Employee Retirement Plans, for additional details).

15. STOCK REPURCHASE PROGRAMS

Stock Repurchase Plans

On November 3, 2011, the Company's Board of Directors authorized a \$15.0 million stock repurchase program. This program does not have an expiration date. The timing and terms of the purchases are determined by management based on board approved parameters and market conditions, and are conducted in accordance with the applicable rules of the Securities and Exchange Commission. Common stock repurchased under this program will be retired by the Company. The Company repurchased 17,300 shares of its common stock at an average cost of \$22.14 during 2016. No other purchases have been made under this program.

Stock Purchase Plan

During the second quarter of 2005, Employers Mutual initiated a \$15.0 million stock purchase program under which Employers Mutual may purchase shares of the Company's common stock in the open market. This purchase program does not have an expiration date; however, this program is currently dormant and will remain so while the Company's repurchase program is in effect. The timing and terms of the purchases are determined by management based on market conditions and are conducted in accordance with the applicable rules of the Securities and Exchange Commission. No purchases were made during 2016, 2015 and 2014. As of December 31, 2016, \$4.5 million remained available under this plan for additional purchases.

16. LEASES, COMMITMENTS AND CONTINGENT LIABILITIES

One of the Company's property and casualty insurance subsidiaries leases office facilities in Bismarck, North Dakota with lease terms expiring in 2024. Employers Mutual has entered into various leases for branch and service office facilities with lease terms expiring through 2026. All of these lease costs are included as expenses under the pooling agreement. The following table reflects the Company's share of lease commitments as of December 31, 2016.

(\$ in thousands)	Payments due by period				
	Total	Less than 1 year	1 - 3 years	4 - 5 years	More than 5 years
<u>Lease commitments</u>					
Real estate operating leases	\$ 2,572	\$ 391	\$ 844	\$ 665	\$ 672

The participants in the pooling agreement are subject to guaranty fund assessments by states in which they write business. Guaranty fund assessments are used by states to pay policyholder liabilities of insolvent insurers domiciled in those states. Many states allow assessments to be recovered through premium tax offsets. The Company has accrued estimated guaranty fund assessments of \$851,000 and \$912,000 as of December 31, 2016 and 2015, respectively. Premium tax offsets of \$1.0 million and \$1.1 million, which are related to prior guarantee fund payments and current assessments, have been accrued as of December 31, 2016 and 2015, respectively. The guaranty fund assessments are expected to be paid over the next two years and the premium tax offsets are expected to be realized within ten years of the payments. The participants in the pooling agreement are also subject to second-injury fund assessments, which are designed to encourage employers to employ workers with pre-existing disabilities. The Company has accrued estimated second-injury fund assessments of \$1.9 million and \$1.9 million as of December 31, 2016 and 2015, respectively. The second-injury fund assessment accruals are based on projected loss payments. The periods over which the assessments will be paid is not known.

The participants in the pooling agreement have purchased annuities from life insurance companies, under which the claimant is payee, to fund future payments that are fixed pursuant to specific claim settlement provisions. The Company's share of case loss reserves eliminated by the purchase of those annuities was \$110,000 at December 31, 2016. The Company had a contingent liability for the aggregate guaranteed amount of the annuities of \$183,000 at December 31, 2016 should the issuers of those annuities fail to perform. The probability of a material loss due to failure of performance by the issuers of these annuities is considered remote.

The Company and Employers Mutual and its other subsidiaries are parties to numerous lawsuits arising in the normal course of the insurance business. The Company believes that the resolution of these lawsuits will not have a material adverse effect on its financial condition or its results of operations. The companies involved have established reserves which are believed adequate to cover any potential liabilities arising out of all such pending or threatened proceedings.

17. UNAUDITED INTERIM FINANCIAL INFORMATION

(\$ in thousands, except per share amounts)	Three months ended,			
	March 31	June 30	September 30	December 31
<u>2016</u>				
Total revenues	\$ 153,871	\$ 160,336	\$ 162,378	\$ 168,398
Income before income tax expense	\$ 20,877	\$ 8,087	\$ 5,047	\$ 29,196
Income tax expense	6,223	1,959	918	7,904
Net income	\$ 14,654	\$ 6,128	\$ 4,129	\$ 21,292
Net income per common share - basic and diluted ¹	\$ 0.70	\$ 0.29	\$ 0.20	\$ 1.01

(\$ in thousands, except per share amounts)	Three months ended,			
	March 31	June 30	September 30	December 31
<u>2015</u>				
Total revenues	\$ 152,335	\$ 158,808	\$ 165,104	\$ 147,479
Income before income tax expense	\$ 29,937	\$ 11,875	\$ 15,921	\$ 13,923
Income tax expense	9,607	3,127	4,732	4,028
Net income	\$ 20,330	\$ 8,748	\$ 11,189	\$ 9,895
Net income per common share - basic and diluted ¹	\$ 1.00	\$ 0.42	\$ 0.54	\$ 0.48

¹ Since the weighted-average number of shares outstanding for the quarters are calculated independently of the weighted-average number of shares outstanding for the year, quarterly net income per share may not total to annual net income per share.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES

Schedule I – Summary of Investments-
Other than Investment in Related Parties

December 31, 2016

(\$ in thousands)

<u>Type of investment</u>	<u>Cost</u>	<u>Fair value</u>	<u>Amount at which shown in the balance sheet</u>
Securities available-for-sale:			
Fixed maturity securities:			
U.S. treasury	\$ 7,841	\$ 7,830	\$ 7,830
U.S. government-sponsored agencies	249,495	239,197	239,197
Obligations of states and political subdivisions	319,663	335,757	335,757
Commercial mortgage-backed	37,964	37,572	37,572
Residential mortgage-backed	102,307	96,434	96,434
Other asset-backed	26,592	26,393	26,393
Corporate	445,663	456,516	456,516
Total fixed maturity securities	<u>1,189,525</u>	<u>1,199,699</u>	<u>1,199,699</u>
Equity securities:			
Common stocks:			
Financial services	22,922	35,122	35,122
Information technology	19,832	30,542	30,542
Healthcare	16,092	24,707	24,707
Consumer staples	13,438	19,100	19,100
Consumer discretionary	14,812	22,321	22,321
Energy	14,276	19,071	19,071
Industrials	13,005	24,245	24,245
Other	13,071	18,384	18,384
Non-redeemable preferred stocks	20,031	20,347	20,347
Total equity securities	<u>147,479</u>	<u>213,839</u>	<u>213,839</u>
Other long-term investments	12,506	12,506	12,506
Short-term investments	39,670	39,670	39,670
Total investments	<u>\$ 1,389,180</u>	<u>\$ 1,465,714</u>	<u>\$ 1,465,714</u>

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
Schedule II – Condensed Financial Information of Registrant
Condensed Balance Sheets

(\$ in thousands, except share and per share amounts)	December 31,	
	2016	2015
ASSETS		
Investments:		
Common stock of subsidiaries (equity method)	\$ 540,249	\$ 514,309
Equity securities available-for-sale, at fair value (cost \$2,000 and \$0)	2,000	—
Short-term investments	10,874	9,761
Total investments	553,123	524,070
Cash	184	136
Accrued investment income	3	—
Prepaid assets	154	95
Accounts receivable	—	58
Income taxes recoverable	700	683
Total assets	\$ 554,164	\$ 525,042
LIABILITIES		
Accounts payable	\$ 46	\$ 87
Amounts due affiliate to settle inter-company transaction balances	740	17
Deferred income taxes	36	—
Total liabilities	822	104
STOCKHOLDERS' EQUITY		
Common stock, \$1 par value, authorized 30,000,000 shares; issued and outstanding, 21,222,535 shares in 2016 and 20,780,439 shares in 2015	21,223	20,781
Additional paid-in capital	119,054	108,747
Accumulated other comprehensive income	46,081	58,433
Retained earnings	366,984	336,977
Total stockholders' equity	553,342	524,938
Total liabilities and stockholders' equity	\$ 554,164	\$ 525,042

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
Schedule II – Condensed Financial Information of Registrant, Continued
Condensed Statements of Income

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
REVENUES			
Dividends received from subsidiaries	\$ 9,707	\$ 9,180	\$ 378
Investment income (loss)	13	(9)	(12)
Total revenues	9,720	9,171	366
Operating expenses (affiliated \$1,139, \$1,074 and \$777)	2,006	1,942	1,584
Income (loss) before income tax benefit and equity in undistributed net income of subsidiaries	7,714	7,229	(1,218)
Income tax benefit	(698)	(682)	(558)
Income (loss) before equity in undistributed net income of subsidiaries	8,412	7,911	(660)
Equity in undistributed net income of subsidiaries	37,791	42,251	30,652
Net income	<u>\$ 46,203</u>	<u>\$ 50,162</u>	<u>\$ 29,992</u>

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
Schedule II – Condensed Financial Information of Registrant, Continued
Condensed Statements of Comprehensive Income

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Net income	\$ 46,203	\$ 50,162	\$ 29,992
OTHER COMPREHENSIVE INCOME (LOSS)			
Unrealized holding gains (losses) on investment securities, net of deferred income taxes	(3,885)	(13,037)	34,663
Reclassification adjustment for realized investment gains included in net income, net of income taxes	(6,736)	(4,956)	(4,677)
Reclassification adjustment for amounts amortized into net periodic pension and postretirement benefit income, net of deferred income taxes:			
Net actuarial loss	1,549	863	375
Prior service credit	(2,399)	(2,150)	(2,149)
Total reclassification adjustment associated with affiliate's pension and postretirement benefit plans	(850)	(1,287)	(1,774)
Change in funded status of affiliate's pension and postretirement benefit plans, net of deferred income taxes:			
Net actuarial loss	(542)	(3,637)	(5,525)
Prior service cost	(339)	(312)	(35)
Total change in funded status of affiliate's pension and postretirement benefit plans	(881)	(3,949)	(5,560)
Other comprehensive income (loss)	(12,352)	(23,229)	22,652
Total comprehensive income	\$ 33,851	\$ 26,933	\$ 52,644

All balances labeled with "affiliate" above are the result of related party transactions with Employers Mutual. All other comprehensive income (loss) balances presented above are from the Registrant's subsidiaries.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
Schedule II – Condensed Financial Information of Registrant, Continued
Condensed Statements of Cash Flows

(\$ in thousands)	Year ended December 31,		
	2016	2015	2014
Net cash provided by (used in) operating activities	\$ 9,170	\$ 7,893	\$ (738)
Cash flows from investing activities			
Capital contributions to subsidiaries	(500)	—	—
Purchases of equity securities available-for-sale	(2,000)	—	—
Net (purchases) disposals of short-term investments	(1,113)	(3,030)	5,956
Net cash (used in) provided by investing activities	(3,613)	(3,030)	5,956
Cash flows from financing activities			
Issuance of common stock through affiliate's stock plans	11,070	9,078	7,392
Excess tax benefit associated with affiliate's stock plans	—	95	103
Repurchase of common stock	(383)	—	—
Dividends paid to stockholders (affiliated \$(9,182), \$(8,162) and \$(7,377))	(16,196)	(14,174)	(12,588)
Net cash used in financing activities	(5,509)	(5,001)	(5,093)
Net increase (decrease) in cash	48	(138)	125
Cash at the beginning of the year	136	274	149
Cash at the end of the year	\$ 184	\$ 136	\$ 274
Income taxes recovered	\$ 716	\$ 559	\$ 481
Interest paid	\$ —	\$ —	\$ —

All affiliated balances presented above are the result of related party transactions with Employers Mutual.

EMC INSURANCE GROUP INC. AND SUBSIDIARIES
Schedule III – Supplementary Insurance Information
For Years Ended December 31, 2016, 2015 and 2014

(\$ in thousands)

<u>Segment</u>	Deferred policy acquisition costs	Loss and settlement expense reserves	Unearned premiums	Premium revenue	Net investment income	Losses and settlement expenses incurred	Amortization of deferred policy acquisition costs	Other underwriting expenses	Premiums written
Year ended December 31, 2016									
Property and casualty insurance	\$ 36,295	\$ 486,387	\$ 220,697	\$ 456,467	\$ 33,886	\$ 294,369	\$ 78,493	\$ 66,463	\$ 463,673
Reinsurance	4,644	204,145	24,188	135,941	13,591	92,528	29,910	3,149	131,030
Parent company	—	—	—	—	13	—	—	—	—
Consolidated	<u>\$ 40,939</u>	<u>\$ 690,532</u>	<u>\$ 244,885</u>	<u>\$ 592,408</u>	<u>\$ 47,490</u>	<u>\$ 386,897</u>	<u>\$ 108,403</u>	<u>\$ 69,612</u>	<u>\$ 594,703</u>
Year ended December 31, 2015									
Property and casualty insurance	\$ 35,219	\$ 480,413	\$ 212,652	\$ 447,197	\$ 32,668	\$ 291,883	\$ 75,701	\$ 63,954	\$ 454,434
Reinsurance	5,501	198,361	26,783	123,069	12,923	78,853	26,483	4,464	124,504
Parent company	—	—	—	—	(9)	—	—	—	—
Consolidated	<u>\$ 40,720</u>	<u>\$ 678,774</u>	<u>\$ 239,435</u>	<u>\$ 570,266</u>	<u>\$ 45,582</u>	<u>\$ 370,736</u>	<u>\$ 102,184</u>	<u>\$ 68,418</u>	<u>\$ 578,938</u>
Year ended December 31, 2014									
Property and casualty insurance	\$ 33,855	\$ 463,458	\$ 204,357	\$ 422,381	\$ 33,509	\$ 298,033	\$ 72,768	\$ 54,385	\$ 433,707
Reinsurance	5,488	197,851	27,736	118,341	12,968	87,441	26,274	2,441	118,903
Parent company	—	—	—	—	(12)	—	—	—	—
Consolidated	<u>\$ 39,343</u>	<u>\$ 661,309</u>	<u>\$ 232,093</u>	<u>\$ 540,722</u>	<u>\$ 46,465</u>	<u>\$ 385,474</u>	<u>\$ 99,042</u>	<u>\$ 56,826</u>	<u>\$ 552,610</u>

EMC INSURANCE GROUP INC. AND SUBSIDIARIES

Schedule IV – Reinsurance

For Years Ended December 31, 2016, 2015 and 2014

(\$ in thousands)	<u>Gross amount</u>	<u>Ceded to other companies</u>	<u>Assumed from other companies</u>	<u>Net amount</u>	<u>Percentage of amount assumed to net</u>
Year ended December 31, 2016					
Consolidated earned premiums	\$ 382,300	\$ 426,946	\$ 637,054	\$ 592,408	107.5%
Year ended December 31, 2015					
Consolidated earned premiums	\$ 366,752	\$ 407,531	\$ 611,045	\$ 570,266	107.2%
Year ended December 31, 2014					
Consolidated earned premiums	\$ 372,658	\$ 423,602	\$ 591,666	\$ 540,722	109.4%

EMC INSURANCE GROUP INC. AND SUBSIDIARIES

Schedule VI – Supplemental Information Concerning
Property-Casualty Insurance Operations

For Years Ended December 31, 2016, 2015 and 2014

	Deferred policy acquisition costs	Reserves for losses and settlement expenses	Discount, if any, deducted from reserves	Unearned premiums	Earned premiums	Net investment income
Year ended December 31, 2016	\$ 40,939	\$ 690,532	\$ —	\$ 244,885	\$ 592,408	\$ 47,477
Year ended December 31, 2015	\$ 40,720	\$ 678,774	\$ —	\$ 239,435	\$ 570,266	\$ 45,591
Year ended December 31, 2014	\$ 39,343	\$ 661,309	\$ —	\$ 232,093	\$ 540,722	\$ 46,477

	Losses and settlement expenses incurred related to		Amortization of deferred policy acquisition costs	Paid losses and settlement expenses	Premiums written
	Current year	Prior years			
Year ended December 31, 2016	\$ 427,838	\$ (40,941)	\$ 108,403	\$ 372,888	\$ 594,703
Year ended December 31, 2015	\$ 405,850	\$ (35,114)	\$ 102,184	\$ 348,081	\$ 578,938
Year ended December 31, 2014	\$ 406,266	\$ (20,792)	\$ 99,042	\$ 330,087	\$ 552,610

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

The Company, under the supervision and with the participation of its management, including the Chief Executive Officer and the Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's "disclosure controls and procedures" (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures are effective in timely making known to them material information relating to the Company and the Company's consolidated subsidiaries required to be disclosed in the Company's reports filed or submitted under the Exchange Act.

The report called for by Item 308(a) of Regulation S-K is included in "Management's Report on Internal Control Over Financial Reporting," under Part II, Item 8 of this report.

The attestation report called for by Item 308(b) of Regulation S-K is included in "Report of Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting," under Part II, Item 8 of this report.

There were no changes in the Company's internal control over financial reporting that occurred during the fourth quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 10 regarding the Company's executive officers is included in "Executive Officers of the Company" under Part I, Item 1 of this report.

The information required by Item 10 regarding the audit committee financial expert and the members of the Company's Audit Committee of the Board of Directors is incorporated by reference from the information under the caption "Corporate Governance - Information about the Board of Directors and its Committees" in the Company's Proxy Statement for the Annual Meeting of Stockholders to be held on May 25, 2017.

The information required by Item 10 regarding the Company's directors is incorporated by reference from the information under the captions "Election of Directors" and "Corporate Governance - Information about the Board of Directors and its Committees" in the Company's Proxy Statement for the Annual Meeting of Stockholders to be held on May 25, 2017.

The information required by Item 10 regarding compliance with Section 16(a) of the Exchange Act is incorporated by reference from the information under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's Proxy Statement for the Annual Meeting of Stockholders to be held on May 25, 2017.

The Company has adopted a code of ethics that applies to the Company's principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. The code of ethics is posted on the Investors section of the Company's internet website found at www.emcins.com. In the event that the Company makes any amendments to, or grants any waivers from, a provision of the ethics policy that requires disclosure under applicable Securities and Exchange Commission rules, the Company intends to disclose such amendments or waivers and the reasons therefore on its website.

ITEM 11. EXECUTIVE COMPENSATION

See the information under the captions “Executive Compensation,” “Compensation Committee Report” and “Compensation Committee Interlocks and Insider Participation” in the Company’s Proxy Statement in connection with its Annual Meeting of Stockholders to be held on May 25, 2017, which information is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

See the information under the captions “Security Ownership of Certain Beneficial Owners” and “Security Ownership of Management and Directors” in the Company’s Proxy Statement in connection with its Annual Meeting of Stockholders to be held on May 25, 2017, which information is incorporated herein by reference.

Information regarding securities authorized for issuance under equity compensation plans appears in Part II, Item 5 of this report.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

See the information under the captions “Certain Relationships and Related Persons Transactions” and “Corporate Governance - Independence of Directors” in the Company’s Proxy Statement in connection with its Annual Meeting of Stockholders to be held on May 25, 2017, which information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

See the information under the caption “Independent Registered Public Accounting Firm’s Fees” in the Company’s Proxy Statement in connection with its Annual Meeting of Stockholders to be held on May 25, 2017, which information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) List of Financial Statements and Schedules

1. Financial Statements

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2. Schedules

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All other schedules have been omitted for the reason that the items required by such schedules are not present in the consolidated financial statements, are covered in the notes to the consolidated financial statements or are not significant in amount.

3. Exhibits required by Item 601

3. Articles of incorporation and by-laws:

- 3.1 Restated Articles of Incorporation of the Company (incorporated by reference to Exhibit 3.1 filed with the Company's Form 8-K filed on May 7, 2015 under Item 5.03)
- 3.2 By-Laws of the Company, as amended (incorporated by reference to Exhibit 3.2 filed with the Company's Form 8-K filed on May 30, 2013 under Item 5.03)

10. Material contracts

- 10.1.1 EMC Insurance Companies reinsurance pooling agreements between Employers Mutual Casualty Company and certain of its affiliated companies, as amended (incorporated by reference to Exhibit 10.1.1 filed with the Company's Form 10-Q for the quarterly period ended March 31, 2016)
- 10.1.2 100% Quota Share Reinsurance Retrocessional Agreement between Employers Mutual Casualty Company and EMC Reinsurance Company (incorporated by reference to Exhibit 10.1.2 filed with the Company's Form 10-K for the year ended December 31, 2015)
- 10.1.3 Excess of Loss Reinsurance Agreement between EMC Reinsurance Company and Employers Mutual Casualty Company, as amended (incorporated by reference to Exhibit 10.1.3 filed with the Company's Form 8-K filed on January 22, 2014 under Item 1.01)

10.1.4	Aggregate Catastrophe Excess of Loss and Per Occurrence Catastrophe Excess of Loss Reinsurance Contract between Employers Mutual Casualty Company and EMC Reinsurance Company (incorporated by reference to Exhibit 10.1.4 filed with the Company's Form 8-K filed on February 19, 2016 under Item 1.01)
10.1.5	Semi-Annual Aggregate Catastrophe Excess of Loss Reinsurance Contract between Employers Mutual Casualty Company and Dakota Fire Insurance Company, EMCASCO Insurance Company and Illinois EMCASCO Insurance Company (incorporated by reference to Exhibit 10.1.5 filed with the Company's Form 8-K filed on February 19, 2016 under Item 1.01)
10.2.1	Summary of compensation for the Company's non-employee directors (incorporated by reference to Exhibit 10.2.2 filed with the Company's Form 10-Q for the quarterly period ended March 31, 2016)*
10.2.2	Employers Mutual Casualty Company Executive Annual Bonus Plan (incorporated by reference to Exhibit 10.2.3 filed with the Company's Form 8-K filed on May 20, 2016 under Item 5.07)*
10.2.3	Executive Contingent Salary Plan – EMC Reinsurance Company (incorporated by reference to Exhibit 10.2.4 filed with the Company's Form 8-K filed on December 29, 2014 under Item 5.02)*
10.2.4	Employers Mutual Casualty Company Senior Executive Long Term Incentive Plan (incorporated by reference to Exhibit 10.2.5 filed with the Company's Form 8-K filed on December 29, 2014 under Item 5.02)*
10.2.5	EMC Reinsurance Company Executive Long Term Incentive Plan (incorporated by reference to Exhibit 10.2.6 filed with the Company's Form 8-K filed on December 29, 2014 under Item 5.02)*
10.2.6	Employers Mutual Casualty Company Executive Long term Incentive Plan (incorporated by reference to Exhibit 10.2.7 filed with the Company's Form 8-K filed on May 20, 2016 under item 5.07)*
10.2.7	Senior Executive Compensation Bonus Program (incorporated by reference to Exhibit 10.2.3 filed with the Company's Form 8-K filed on December 29, 2014 under item 5.02)*
10.3.1	Deferred Bonus Compensation Plan (incorporated by reference to Exhibit 10.3.1 filed with the Company's Form 10-K for the year ended December 31, 2015)*
10.3.2	Employers Mutual Casualty Company Board and Executive Non-Qualified Excess Plan, as amended and restated (incorporated by reference to Exhibit 10.3.2 filed with the Company's Form 10-K for the calendar year ended December 31, 2013)*
10.3.3	Employers Mutual Casualty Company Board and Executive Non-Qualified Excess Plan II (incorporated by reference to Exhibit 10.3.3 filed with the Company's Form 10-K for the calendar year ended December 31, 2012)*
10.3.4	Employers Mutual Casualty Company Non-Employee Directors' Post-Service Benefits Plan, as amended and restated (incorporated by reference to Exhibit 10.3.4 filed with the Company's Form 8-K filed on November 18, 2013 under Item 1.01)*
10.3.5	Employers Mutual Casualty Company Supplemental Retirement Plan (incorporated by reference to Exhibit 10.3.5 filed with the Company's Form 10-K for the calendar year ended December 31, 2013)*
10.3.6	Employers Mutual Casualty Company Defined Contribution Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.3.7 filed with the Company's Form 10-K for the calendar year December 31, 2014)*
10.4.1	Employers Mutual Casualty Company Amended and Restated 2008 Employee Stock Purchase Plan, as amended (incorporated by reference to Exhibit 10.4.1 filed with the Company's Form 8-K filed on May 27, 2016 under Item 8.01)*
10.4.2	2013 Employers Mutual Casualty Company Non-Employee Director Stock Purchase Plan (incorporated by reference to Registration No. 333-187250)*
10.4.3	2003 Employers Mutual Casualty Company Incentive Stock Option Plan (incorporated by reference to Registration No. 333-103722 and 333-128315)*
10.4.4	2007 Employers Mutual Casualty Company Stock Incentive Plan (incorporated by reference to Registration No. 333-143457)*
10.4.5	EMC Insurance Group Inc. Amended and Restated Dividend Reinvestment and Common Stock Purchase Plan (incorporated by reference to Registration No. 333-187622)

10.5.1	Surplus Note – EMCASCO Insurance Company (incorporated by reference to Exhibit 10.5.1 filed with the Company’s Form 10-Q for the quarterly period ended March 31, 2013)
10.5.2	Surplus Note – Illinois EMCASCO Insurance Company (incorporated by reference to Exhibit 10.5.2 filed with the Company’s Form 10-Q for the quarterly period ended March 31, 2013)
10.5.3	Surplus Note – Dakota Fire Insurance Company (incorporated by reference to Exhibit 10.5.3 filed with the Company’s Form 10-Q for the quarterly period ended March 31, 2013)
10.5.4	Inter-Company Loan Agreement
10.6.1	Investment Management Agreement (incorporated by reference to Exhibit 10.6.1 filed with the Company’s Form 10-K for the calendar year ended December 31, 2012)
10.6.2	Services Agreement between Employers Mutual Casualty Company and EMC Insurance Group Inc. (incorporated by reference to Exhibit 10.6.2 filed with the Company’s Form 10-K for the calendar year ended December 31, 2012)
10.6.3	Services Agreement between Employers Mutual Casualty Company and EMC Underwriters, LLC (incorporated by reference to Exhibit 10.6.3 filed with the Company’s Form 10-K for the calendar year ended December 31, 2012)
10.6.4	Agreement for Payment of Taxes between Employers Mutual Casualty Company and EMC Insurance Group Inc. and its subsidiaries individually
21.	Subsidiaries of the Registrant
23.	Consent of Independent Registered Public Accounting Firm, with respect to Forms S-8 (Registration Nos. 333-187250, 333-103722, 333-128315, 333-143457 and 333-151299) and Form S-3 (Registration No. 333-187622)
24.	Power of Attorney
31.1	Certification of President, Chief Executive Officer and Treasurer as required by Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Senior Vice President and Chief Financial Officer as required by Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of President, Chief Executive Officer and Treasurer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Senior Vice President and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
*	Indicates management contract or compensatory plan or arrangement.

ITEM 16. FORM 10-K SUMMARY

None.

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, on March 6, 2017.

EMC INSURANCE GROUP INC.

/s/ Bruce G. Kelley

Bruce G. Kelley

President, Chief Executive Officer and Treasurer
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on March 6, 2017.

/s/ Bruce G. Kelley

Bruce G. Kelley

President, Chief Executive Officer, Treasurer
and Director
(Principal Executive Officer)

/s/ Mark E. Reese

Mark E. Reese

Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

/s/ Mark E. Reese

Stephen A. Crane*

Chairman of the Board

/s/ Mark E. Reese

Jonathan R. Fletcher*

Director

/s/ Mark E. Reese

Robert L. Howe*

Director

/s/ Mark E. Reese

Gretchen H. Tegeler*

Director

* by power of attorney

GLOSSARY

Assumed Reinsurance - When one or more insurers, in exchange for a share of the premium, accepts responsibility to indemnify risk underwritten by another as reinsurance. See “Reinsurance.”

Catastrophe and Storm Losses - Losses from the occurrence of an earthquake, hurricane, explosion, flood, hail storm or other similar event which results in substantial loss.

Ceded Reinsurance - The transfer of all or part of the risk of insurance loss from an insurer to another as reinsurance. See “Reinsurance.”

Combined Ratio - A measure of property/casualty underwriting results. It is the ratio of claims, settlement and underwriting expenses to insurance premiums. When the combined ratio is under 100%, underwriting results are generally profitable; when the ratio is over 100%, underwriting results are generally unprofitable. Underwriting results do not include net investment income, which may make a significant contribution to overall profitability.

Deferred Policy Acquisition Costs - The capitalization of commissions, premium taxes and other expenses related to the production of insurance business. These costs are deferred and amortized in proportion to related premium revenue.

Excess of Loss Reinsurance - Coverage for the portion of losses which exceed predetermined retention limits.

Generally Accepted Accounting Principles (GAAP) - The set of practices and procedures that provides the framework for financial statement measurement and presentation. Financial statements in this report were prepared in accordance with U.S. GAAP.

Incurred But Not Reported (IBNR) – An estimate of liability for losses that have occurred but not yet been reported to the insurer. For reinsurance business IBNR may also include anticipated increases in reserves for claims that have previously been reported.

Incurred Losses and Settlement Expenses - Claims and settlement expenses paid or unpaid for which the Company has become liable for during a given reporting period.

Loss Reserve Development - A measure of how the latest estimate of an insurance company’s claim obligations compares to an earlier projection. This is also referred to as the increase or decrease in the provision for insured events of prior years.

Net Investment Income - Dividends and interest earned during a specified period from cash and invested assets, reduced by related investment expenses.

Net Investment Yield - Net investment income divided by average invested assets.

Other-Than-Temporary Investment Impairment Loss – A realized investment loss that is recognized when an investment’s fair value declines below its carrying value and the decline is deemed to be other-than-temporary.

Pooling Agreement - A joint underwriting operation in which the participants assume a predetermined and fixed interest in the premiums, losses, expenses and profits of insurance business.

Premiums - Amounts paid by policyholders to purchase insurance coverages.

Premiums Earned - The recognition of the portion of premiums written directly related to the expired portion of an insurance policy for a given reporting period.

Net Premiums Written - Premiums written during a given reporting period, net of assumed and ceded reinsurance, which correlate directly to the insurance coverage provided.

Unearned Premium - The portion of premiums written which would be returned to a policyholder upon cancellation.

Premiums Written - The cost of insurance coverage. Premiums written refer to premiums for all policies sold during a specified accounting period.

Quota Share Reinsurance Agreement – A form of reinsurance in which the reinsurer assumes a stated percentage of all premiums, losses and related expenses in a given class of business.

Realized Investment Gains/Losses - The amount of net gains/losses realized when an investment is sold at a price higher or lower than its original cost or carrying amount. Also the amount of loss recognized when an investment's carrying value is reduced to fair value due to an other-than-temporary impairment in the fair value of that investment.

Reinsurance - The contractual arrangement by which one or more insurers, called reinsurers, in exchange for premium payments, agree to assume all or part of a risk originally undertaken by another insurer. Reinsurance "spreads risk" among insurance enterprises, allowing individual companies to reduce exposure to losses and provide additional capacity to write insurance.

Reserves - The provision for the estimated future cost of all unpaid claims. The total includes known claims as well as amounts for claims that have occurred but have not been reported to the insurer (IBNR).

Return on Equity (ROE) - Net income divided by average stockholders' equity.

Risk-Based Capital - A model developed by the National Association of Insurance Commissioners which attempts to measure the minimum statutory capital needs of property and casualty insurance companies based upon the risks in a company's mix of products and investment portfolio.

Settlement Expenses - Expenses incurred in the process of investigating and settling claims.

Statutory Accounting - Accounting practices used by insurance companies to prepare financial statements submitted to state regulatory authorities. Statutory accounting differs from GAAP in that it stresses insurance company solvency rather than the matching of revenues and expenses.

Underwriting Gain/Loss - Represents insurance premium income less insurance claims, settlement and underwriting expenses.

Unrealized Holding Gains/Losses on Investments - Represents the difference between the current market value of investments and the basis at the end of a reporting period.

EMCI BOARD OF DIRECTORS

Chairman of the Board

Stephen A. Crane*

71, A, C, E, N (Chair)
Independent Consultant
Retired Chief Executive Officer,
AlphaStar Insurance Group Ltd.

Other Directorship:

First Security Benefit Life Insurance
and Annuity Company of New York

Directors

Jonathan R. Fletcher

43, C (Chair), I, N
Independent Consultant

Other Directorships:

BTC Financial Corporation
Ruan, Inc.
Ruan Transportation Management Systems, Inc.

Robert L. Howe*, CFE, CIE, CGFM, AIR

74, A, C, I (Chair), N
Consultant, Insurance Strategies Consulting, LLC
Retired Deputy Commissioner and Chief Examiner,
Iowa Insurance Division

Other Directorships:

American Equity Investment Life Holding Company
American Equity Investment Life Insurance
Company of New York

Bruce G. Kelley, J.D., CPCU, CLU

63, E (Chair)
President, Chief Executive Officer & Treasurer,
EMC Insurance Group Inc.

Gretchen H. Tegeler*

61, E, A (Chair), I
President, Taxpayers Association of Central Iowa

Independent Directors

Stephen A. Crane

Jonathan R. Fletcher

Robert L. Howe

Gretchen H. Tegeler

Board Committees

- A Audit Committee
- C Compensation Committee
- E Executive Committee
- I Inter-Company Committee
- N Corporate Governance and Nominating Committee

*EMCI's Board-designated Audit Committee financial expert

EMCI OFFICERS

Executive Management

President, Chief Executive Officer & Treasurer

Bruce G. Kelley, J.D., CPCU, CLU

Executive Vice President & Chief Operating Officer

Kevin J. Hovick, CPCU

Executive Vice President for Finance and Analytics

Scott R. Jean, FCAS, MAAA

Executive Vice President for Corporate Development

Mick A. Lovell, CPCU

Senior Vice Presidents

Strategic Analytics

Ian C. Asplund, M.S., FCAS, MAAA, CERA

Branch Operations

Jason R. Bogart, CPCU, ARM

Information Technology

Rodney D. Hanson, CPCU

Assistant Secretary

Robert L. Link, CAM, CM

Human Resources

Elizabeth A. Nigut, J.D.

Internal Audit

Ronald A. Paine, CPA, CIA

Business Development

Larry W. Phillips, CPCU

Chief Financial Officer

Mark E. Reese, CPA

Claims

Lisa A. Simonetta, J.D.

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