

2019

Annual
Report



PROASSURANCE[®]
Treated Fairly

Financial Highlights

(Dollars in thousands)	2019	2018	2017	2016	2015
INCOME STATEMENT HIGHLIGHTS					
Gross premiums written	\$ 967,490	\$ 957,311	\$ 874,876	\$ 835,014	\$ 812,218
Net premiums earned	\$ 847,532	\$ 818,853	\$ 738,531	\$ 733,281	\$ 694,149
Total revenues	\$ 999,834	\$ 886,030	\$ 866,149	\$ 870,214	\$ 772,079
Net losses and loss adjustment expenses	\$ 753,915	\$ 593,210	\$ 469,158	\$ 443,229	\$ 410,711
Net income	\$ 1,004	\$ 47,057	\$ 107,264	\$ 151,081	\$ 116,197
Non-GAAP Operating Income (Loss) ⁽¹⁾	\$ (43,779)	\$ 79,527	\$ 108,538	\$ 129,844	\$ 142,629
BALANCE SHEET HIGHLIGHTS					
Total investments	\$3,390,409	\$ 3,349,382	\$ 3,686,528	\$ 3,925,696	\$ 3,650,130
Total assets ⁽²⁾	\$4,805,599	\$ 4,600,726	\$ 4,929,197	\$ 5,065,181	\$ 4,906,021
Reserve for losses and loss adjustment expenses	\$2,346,526	\$ 2,119,847	\$ 2,048,381	\$ 1,993,428	\$ 2,005,326
Debt ⁽²⁾	\$ 285,821	\$ 287,757	\$ 411,811	\$ 448,202	\$ 347,858
Total liabilities ⁽²⁾	\$3,293,686	\$ 3,077,724	\$ 3,334,402	\$ 3,266,479	\$ 2,947,667

⁽¹⁾ A reconciliation of Net Income to Non-GAAP Operating Income (Loss) is provided in Appendix A to the ProAssurance Form 10-K included with this mailing to shareholders.

⁽²⁾ For all periods presented, Debt is shown net of unamortized debt issuance costs, which, prior to 2016, were reported as a part of other assets.

To Our Fellow
Shareholders,



Edward L. Rand, Jr.
President & Chief Executive Officer

Responding to change is nothing new for ProAssurance. Navigating through periods of turbulence in our business with a clear-eyed, long-term strategy is our hallmark, and we will not deviate from that approach as we face this latest iteration of the insurance cycle.

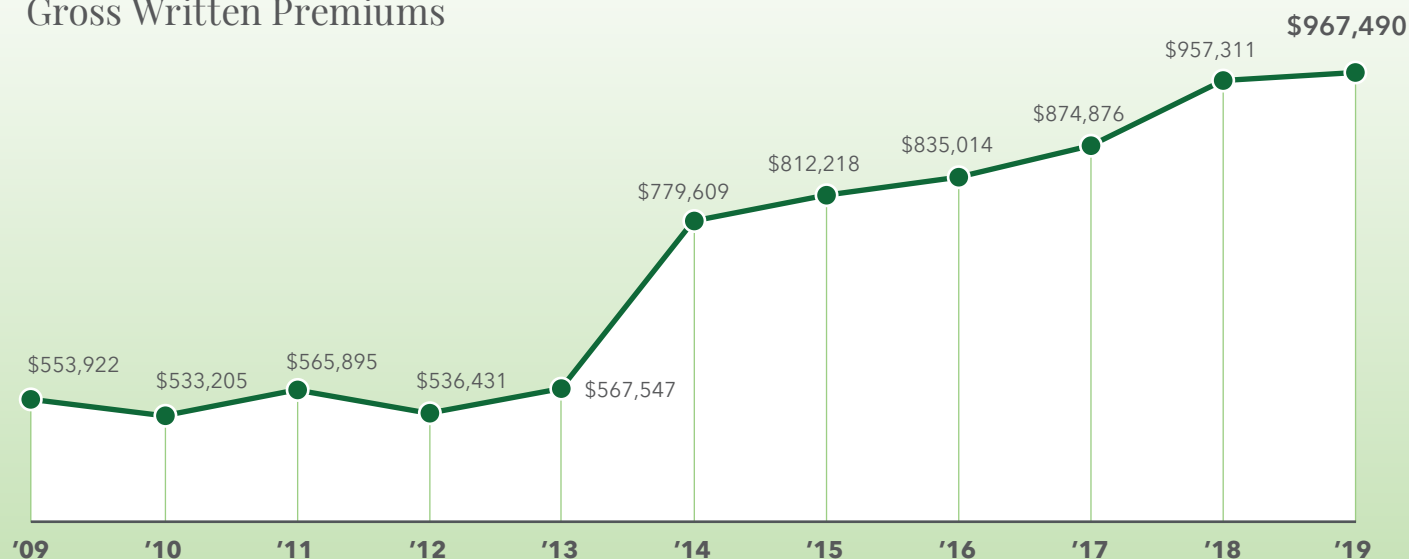
To that end, 2020 will clearly be a year of change for everyone. While this letter will focus primarily on 2019, I want to begin by addressing the COVID-19 pandemic that has left an indelible mark on us all. While it is too early to quantify any potential impact to our financial performance, we have implemented a series of preventative measures at our offices across the country to protect our employees, and we anticipate any effects of the virus to our daily operations will be minimal. We remain fully prepared to continue providing the highest level of service to our customers and distribution

partners as they manage their own exposures to this pandemic. We will disclose any material effects of the COVID-19 virus on our results for 2020 as they become known to us.

Now, on to 2019.

Change can come in many forms, and Stan Starnes' retirement as Chief Executive Officer is foremost among them. On behalf of all of the team members at ProAssurance, as well as our Board of Directors, I want to

Gross Written Premiums



thank Stan for all he has done and continues to do as our Executive Chairman. We are a truly different organization than when Stan took the helm nearly thirteen years ago, and were I to fill every page of this report, I could not list half of his innumerable contributions to the organization. I am humbled and honored to follow in his stead, to lead ProAssurance through the next era. So this year, I have the pleasure and privilege of writing to you for the first time as Chief Executive Officer of ProAssurance.

From our earliest days, we have operated with a strategy both responsive to near-term challenges and proactive to long-term opportunity. We believe that, as a specialist, our deep expertise and commitment to our customers throughout the insurance cycles enable us to outperform our peers over time. 2019 was a year of contrast, in which our disappointment with results was buffered by our confidence in the future.

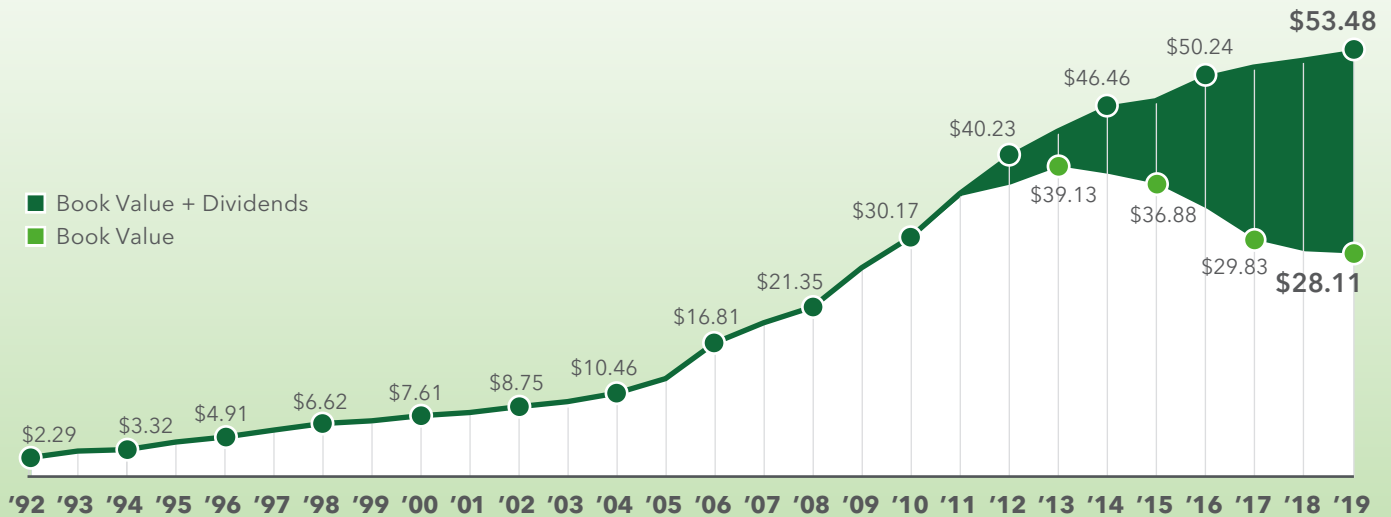
As I said following the fourth quarter, our results for 2019 were unacceptable. The healthcare professional liability loss environment continues to evolve as medicine grows more complex and expensive, and the importance

of disciplined underwriting and appropriate pricing grows every day. These trends have weighed on the performance of our Specialty Property & Casualty segment and the Company as a whole, and I am the first to say that we must do better. I have stated before that this cycle feels different, and we should not expect the market to harden as quickly nor perhaps as drastically as in the early 2000s. We must challenge the mindset that what has worked before will work again, and only companies that are prepared to adapt will succeed.

While the surface features may be different, the underlying landscape is familiar. For over forty years, ProAssurance and its predecessors have successfully navigated the peaks and valleys of the long cycles characteristic of our businesses. We have done so by developing deep expertise in the lines of business in which we specialize, by being patient, and by taking advantage of the right opportunities at the right time.

2019 proved to be a year of transition, beyond a change of Chief Executive Officer. We restructured our executive team, consolidated our Specialty Property

Book Value



Book value has declined as we have returned capital to shareholders through dividends.

& Casualty operations, reduced our participation in Lloyd's of London Syndicate 1729, and, with the planned acquisition of the NORCAL Group announced just a few weeks ago, negotiated the largest single transaction in our Company's history. Each of these strategic actions contribute to the high level of confidence I mentioned above, and I would like to expand upon them in turn.

The changes we made to our executive leadership team allow for expedited responsiveness and expanded accountability in each aspect of our business. In May 2019, Mike Boguski - formerly President of Eastern Alliance Insurance Group, ProAssurance's workers' compensation insurance subsidiary - became President of our Specialty Property & Casualty business. Mike has a long history and track record of operational excellence with a focus on personal accountability. In the time since he took on this new role, he and his team have undertaken a comprehensive review of the Specialty Property & Casualty business strategy in response to our view of the loss trends and changing conditions in healthcare professional liability. This included organizational structure enhancements, consolidation of

operations, expense reduction, recruitment of additional talent, tightening of underwriting criteria, terms and conditions, and price strengthening - all of which are geared toward returning our Specialty Property & Casualty segment to profitability while maintaining the stalwart claims defense and unparalleled risk management expertise on which our policyholders rely.

Meanwhile, Kevin Shook - formerly Executive Vice President of Eastern - was promoted to President of Eastern. It was a seamless transition, as Kevin has been deeply involved in Eastern's success for almost twenty years. Under his leadership, the Workers' Compensation Insurance segment has continued to produce sustainable profitability in a highly competitive marketplace.

Finally, and importantly, I asked Noreen Dishart, our Chief Human Resources Officer, to join our executive leadership team. Our belief in our people is a cornerstone of ProAssurance's strategy, and Noreen is a key driver of our Employer of Choice initiative. She is a direct line between our employees and me with regard to our culture, employee development, and succession

For over forty years, ProAssurance and its predecessors have successfully navigated the peaks and valleys of the long cycles characteristic of our businesses.

strategies, which I believe is essential for the long-term success of any company.

Our Chief Financial Officer, Dana Hendricks, and General Counsel, Jeff Lisenby, will continue in their respective roles and round out the executive leadership team. Dana began her career in the accounting department at PICA, our podiatric subsidiary, in 2001 and moved to Birmingham to become CFO in September 2018. Jeff joined our predecessor, Medical Assurance, in 2001 and has led our corporate legal and compliance functions since that time while progressively taking on additional duties.

This new executive leadership team, and the strategic business decisions that have been made to date, will improve our operating efficiency and effectiveness, expand our commitment to transparency and accountability, and empower our employees in our mission to Protect Others. When we do a great job for our policyholders, we will ultimately do a great job for our shareholders. That relationship is indivisible under the promise of Treated Fairly.

It will take time for the full benefits of these enhancements to flow through to our bottom line, but I believe firmly that our senior executives, along with a team of approximately 950 outstanding employees, will grow the ProAssurance value proposition to new levels.

While everything else I have mentioned was underway in 2019, we were working diligently toward an agreement to acquire NORCAL Group. The NORCAL transaction, which is subject to required policyholder and regulatory approvals, represents a transformational opportunity for our healthcare professional liability business to enhance the geographic footprint and services we can deliver to our customers and distribution partners, while

creating significant long-term value for ProAssurance shareholders. We have worked closely with NORCAL's senior leadership team and Board of Directors throughout this process and negotiations, and I would like to thank them for all their efforts bringing us to this point. We are targeting to close the transaction by the end of 2020, and while we are excited with the progress that has been made to date, there is much more to do to ensure that our successful partnership with NORCAL is the game-changing transaction we all expect. The best efforts of both companies over the next three years will be required to deliver the vast potential value of this deal for ProAssurance and our investors.

We have faced the ups and downs of the insurance cycle many times before, and we understand the challenges and opportunities that accompany the current stage of the cycle. This company looks very different than it did when Alabama's physicians decided they needed their own mutual insurance company - our history of successful M&A has brought almost twenty companies into the ProAssurance family. However, we remain one company, with one unified mission to Protect Others, and every step we take is toward that objective. As we begin 2020, and I begin my first full year serving this company as CEO, I look forward with eager anticipation to the next chapter of the ProAssurance story as we strive daily to deliver the promise of Treated Fairly to our policyholders, employees, and shareholders.

Thank you,



Edward L. Rand, Jr.
President & Chief Executive Officer

Board of Directors

	COMMITTEES				
	INDEPENDENCE	AUDIT	COMPENSATION	EXECUTIVE	NOMINATING & CORPORATE GOVERNANCE
W. Stancil Starnes, Esq. Executive Chairman, ProAssurance	N			C	
Kedrick D. Adkins, Jr. Retired Chief Financial Officer, Mayo Clinic	I	M			
Bruce D. Angiolillo Retired Partner, Simpson Thacher & Bartlett LLP	I	M	M		
Samuel A. Di Piazza, Jr. Chairman, Mayo Clinic Board of Trustees, Retired CEO of PricewaterhouseCoopers	I	C E			
Robert E. Flowers, M.D. Retired Physician	I		C		
Maye Head Frei Chairman, Ram Tool Construction Supply Company	I				M
M. James Gorrie President and Chief Executive Officer, Brasfield & Gorrie	I				M
Ziad R. Haydar, M.D. Independent Healthcare Consultant, Retired Chief Clinical Officer, Ascension Health	I				
Edward L. Rand, Jr. President and Chief Executive Officer, ProAssurance	N			M	
Frank A. Spinosa, D.P.M. Practicing Podiatrist, Past President of the American Podiatric Medical Association	I	M			
Katisha T. Vance, M.D. Practicing Physician	I				M
Thomas A. S. Wilson, Jr., M.D. Retired Physician	I		M	M	C

N Management, Non-Independent
 I Independent
 M Member
 C Chairman
 E Financial Expert

Executive Officers

Michael L. Boguski

President
Specialty P&C

Noreen L. Dishart

Chief Human Resources Officer

Dana S. Hendricks

Executive Vice President
and Chief Financial Officer

Jeffrey P. Lisenby, Esq.

Executive Vice President,
Corporate Secretary and General Counsel

Edward L. Rand, Jr.

President and Chief Executive Officer

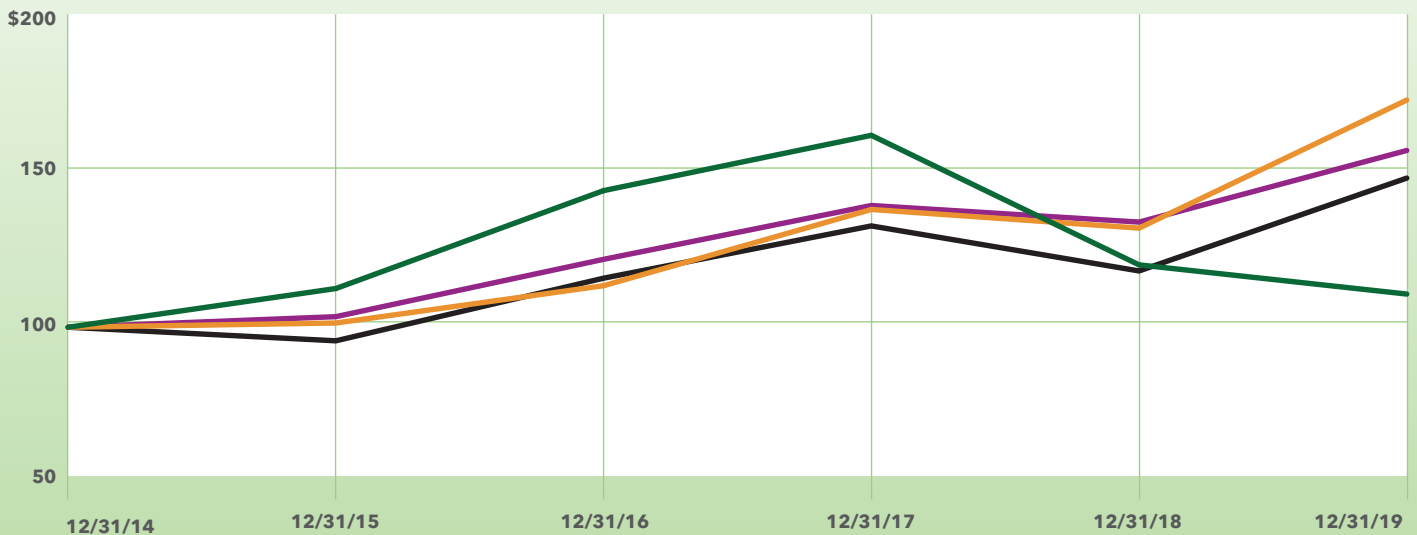
Kevin M. Shook

President
Workers' Compensation Insurance

STOCK PRICE PERFORMANCE

You may use the following information to compare the market value of our Common Stock with other public companies and public companies in the insurance industry. The graph sets forth the cumulative total shareholder return of our stock during the five years ended December 31, 2019, as well as the cumulative total shareholder return of the overall stock market index (the Russell 2000) and a peer group index (the SNL Property & Casualty Insurance Index) for the five years ended December 31, 2019. We have included the Standard & Poor's 500 Index in this graph because we believe it is a more recognizable broad index and yields a more meaningful comparison for investors given our market capitalization and dividend payout ratio.

Total Return Performance



PERIOD ENDING

	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18	12/31/19
— ProAssurance Corporation	100.00	112.59	144.42	162.39	120.28	110.79
— S&P 500 Index	100.00	101.38	113.51	138.29	132.23	173.86
— Russell 2000 Index	100.00	95.59	115.95	132.94	118.30	148.49
— SNL Insurance P&C	100.00	103.44	122.08	139.58	134.19	157.47

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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2019,

or

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

For the transition period from _____ to _____.

Commission file number: 001-16533

ProAssurance Corporation

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

63-1261433

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

100 Brookwood Place, Birmingham, AL

(Address of principal executive offices)

35209

(Zip Code)

(205) 877-4400

(Registrant's telephone number,
including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	PRA	New York Stock Exchange

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

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

Yes No

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

Yes No

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

The aggregate market value of voting stock held by non-affiliates of the registrant at June 30, 2019 was \$1,905,028,296. As of February 14, 2020, the registrant had outstanding approximately 53,793,370 shares of its common stock.

Documents incorporated by reference in this Form 10-K

- (i) The definitive proxy statement for the 2020 Annual Meeting of the Stockholders of ProAssurance Corporation (File No. 001-16533) is incorporated by reference into Part III of this report.

Glossary of Terms and Acronyms

When the following terms and acronyms appear in the text of this report, they have the meanings indicated below.

Term	Meaning
AAD	Annual aggregate deductible
ACA	The Affordable Care Act
ALAE	Allocated loss adjustment expense
AOCI	Accumulated other comprehensive income (loss)
ASU	Accounting Standards Update
BEAT	Base erosion anti-abuse tax
Board	Board of Directors of ProAssurance Corporation
BOLI	Business owned life insurance
CIMA	Cayman Islands Monetary Authority
Council of Lloyd's	The governing body for Lloyd's of London
CODM	Chief Operating Decision Maker
COSO	Committee of Sponsoring Organizations of the Treadway Commission
Commutation	An agreement between a ceding insurer and the reinsurer that provides for the valuation, payment, and complete discharge of all obligations between the parties under a particular reinsurance contract
DDR	Death, disability and retirement
Dodd-Frank Act	The Dodd-Frank Wall Street Reform and Consumer Protection Act
DPAC	Deferred policy acquisition costs
Eastern Re	Eastern Re, LTD, S.P.C.
EBUB	Earned but unbilled premium
EEA	European Economic Area
ERM	Enterprise Risk Management
E&O	Errors and Omissions
FAL	Funds at Lloyd's
FASB	Financial Accounting Standards Board
FHLB	Federal Home Loan Bank
FHLMC	Federal Home Loan Mortgage Corporation
FIO	Federal Insurance Office
FNMA	Federal National Mortgage Association
GAAP	Generally accepted accounting principles in the United States of America
GDPR	General Data Protection Regulation
GILTI	Global intangible low-taxed income
GNMA	Government National Mortgage Association
HCPL	Healthcare professional liability
IBNR	Incurred but not reported
Inova Re	Inova Re, LTD, S.P.C.
IRS	Internal Revenue Service
LAE	Loss adjustment expense
LIBOR	London Interbank Offered Rate
LLC	Limited liability company
Lloyd's	Lloyd's of London market
LP	Limited partnership
Medical technology liability	Medical technology and life sciences products liability

Term	Meaning
Model Holding Co. Law	Model Insurance and Holding Company System Regulatory Act and Regulation
Mortgage Loans	Two ten-year mortgage loans collectively with an original borrowing amount of approximately \$40 million, each entered into by a subsidiary of ProAssurance
NAIC	National Association of Insurance Commissioners
NAV	Net asset value
NFIP	National Flood Insurance Program
NOL	Net operating loss
NRSRO	Nationally recognized statistical rating organization
NYDFS	New York Department of Financial Services
NYSE	New York Stock Exchange
OCI	Other comprehensive income (loss)
ORSA	Risk Management and Own Risk and Solvency Assessment Model Act
OTTI	Other-than-temporary impairment
PCAOB	Public Company Accounting Oversight Board
PDR	Premium deficiency reserve
PICA	ProAssurance Insurance Company of America
ProAssurance Plan	Non-qualified deferred compensation plan
ProAssurance Savings Plan	Defined contribution savings and retirement plan
Revolving Credit Agreement	ProAssurance's \$250 million revolving credit agreement
ROE	Return on equity
ROU	Right-of-use
SAB	Staff Accounting Bulletin, which reflects the SEC staff's views regarding accounting-related disclosure practices
SAP	Statutory accounting principles
SEC	Securities and Exchange Commission
SPA	Special Purpose Arrangement
SPC	Segregated portfolio cell
Specialty P&C	Specialty Property and Casualty
Syndicate 1729	Lloyd's of London Syndicate 1729
Syndicate 6131	Lloyd's of London Syndicate 6131, a Special Purpose Arrangement with Lloyd's of London Syndicate 1729
Syndicate Credit Agreement	Unconditional revolving credit agreement with the Premium Trust Fund of Syndicate 1729
TCJA	Tax Cuts and Jobs Act H.R.1 of 2017
TRIA	Federal Terrorism Risk Insurance Act
U.K.	United Kingdom of Great Britain and Northern Ireland
ULAE	Unallocated loss adjustment expense
VIE	Variable interest entity

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General Information

Throughout this report, references to ProAssurance, “we,” “us,” “our” or the “Company” refer to ProAssurance Corporation and its consolidated subsidiaries. Because ProAssurance is an insurance holding company and certain terms and phrases common to the insurance industry are used in this report that carry special and specific meanings, we encourage you to read the Glossary of Selected Insurance and Related Financial Terms posted on our website on the Investor Relations page (investor.proassurance.com) under Other Information.

Caution Regarding Forward-Looking Statements

Any statements in this Form 10-K that are not historical facts are specifically identified as forward-looking statements. These statements are based upon our estimates and anticipation of future events and are subject to significant risks, assumptions and uncertainties that could cause actual results to vary materially from the expected results described in the forward-looking statements. Forward-looking statements are identified by words such as, but not limited to, “anticipate,” “believe,” “estimate,” “expect,” “hope,” “hopeful,” “intend,” “likely,” “may,” “optimistic,” “possible,” “potential,” “preliminary,” “project,” “should,” “will” and other analogous expressions. There are numerous factors that could cause our actual results to differ materially from those in the forward-looking statements. Thus, sentences and phrases that we use to convey our view of future events and trends are expressly designated as forward-looking statements as are sections of this Form 10-K that are identified as giving our outlook on future business.

Forward-looking statements relating to our business include among other things: statements concerning future liquidity and capital requirements, investment valuation and performance, return on equity, financial ratios, net income, premiums, losses and loss reserve, premium rates and retention of current business, competition and market conditions, the expansion of product lines, the development or acquisition of business in new geographical areas, the pricing or availability of acceptable reinsurance, actions by regulators and rating agencies, court actions, legislative actions, payment or performance of obligations under indebtedness, payment of dividends and other matters.

These forward-looking statements are subject to significant risks, assumptions and uncertainties, including, among other things, the following factors that could affect the actual outcome of future events:

- changes in general economic conditions, including the impact of inflation or deflation and unemployment;
- our ability to maintain our dividend payments;
- regulatory, legislative and judicial actions or decisions that could affect our business plans or operations, including the impact of Brexit;
- the enactment or repeal of tort reforms;
- formation or dissolution of state-sponsored insurance entities providing coverages now offered by ProAssurance which could remove or add sizable numbers of insureds from or to the private insurance market;
- changes in the interest and tax rate environment;
- resolution of uncertain tax matters and changes in tax laws, including the impact of the TCJA;
- changes in laws or government regulations regarding financial markets or market activity that may affect our business;
- changes in the ability of the U.S. government to meet its obligations that may affect the U.S. economy and our business;
- performance of financial markets affecting the fair value of our investments or making it difficult to determine the value of our investments;
- changes in requirements or accounting policies and practices that may be adopted by our regulatory agencies, the FASB, the SEC, the PCAOB or the NYSE that may affect our business;
- changes in laws or government regulations affecting the financial services industry, the property and casualty insurance industry or particular insurance lines underwritten by our subsidiaries;
- the effect on our insureds, particularly the insurance needs of our insureds, and our loss costs, of changes in the healthcare delivery system and/or changes in the U.S. political climate that may affect healthcare policy or our business;
- consolidation of our insureds into or under larger entities which may be insured by competitors, or may not have a risk profile that meets our underwriting criteria or which may not use external providers for insuring or otherwise managing substantial portions of their liability risk;
- the effect of cyclical insurance industry trends on our underwriting, including demand and pricing in the insurance and reinsurance markets in which we operate;

- uncertainties inherent in the estimate of our loss and loss adjustment expense reserve and reinsurance recoverable;
- changes in the availability, cost, quality or collectability of insurance/reinsurance;
- the results of litigation, including pre- or post-trial motions, trials and/or appeals we undertake;
- effects on our claims costs from mass tort litigation that are different from that anticipated by us;
- allegations of bad faith which may arise from our handling of any particular claim, including failure to settle;
- loss or consolidation of independent agents, agencies, brokers or brokerage firms;
- changes in our organization, compensation and benefit plans;
- changes in the business or competitive environment may limit the effectiveness of our business strategy and impact our revenues;
- our ability to retain and recruit senior management and other qualified personnel;
- the availability, integrity and security of our technology infrastructure or that of our third-party providers of technology infrastructure, including any susceptibility to cyber-attacks which might result in a loss of information or operating capability;
- the impact of a catastrophic event, as it relates to both our operations and our insured risks;
- the impact of acts of terrorism and acts of war;
- the effects of terrorism-related insurance legislation and laws;
- guaranty funds and other state assessments;
- our ability to achieve continued growth through expansion into new markets or through acquisitions or business combinations;
- changes to the ratings assigned by rating agencies to our insurance subsidiaries, individually or as a group;
- provisions in our charter documents, Delaware law and state insurance laws may impede attempts to replace or remove management or may impede a takeover;
- state insurance restrictions may prohibit assets held by our insurance subsidiaries, including cash and investment securities, from being used for general corporate purposes;
- taxing authorities can take exception to our tax positions and cause us to incur significant amounts of legal and accounting costs and, if our defense is not successful, additional tax costs, including interest and penalties; and
- expected benefits from completed and proposed acquisitions may not be achieved or may be delayed longer than expected due to business disruption; loss of customers, employees or key agents; increased operating costs or inability to achieve cost savings and synergies; and assumption of greater than expected liabilities, among other reasons.

Additional risks, assumptions and uncertainties that could arise from our membership in the Lloyd's market and our participation in Lloyd's Syndicates include, but are not limited to, the following:

- members of Lloyd's are subject to levies by the Council of Lloyd's based on a percentage of the member's underwriting capacity, currently a maximum of 3%, but can be increased by Lloyd's;
- Syndicate operating results can be affected by decisions made by the Council of Lloyd's which the management of Syndicate 1729 and Syndicate 6131 have little ability to control, such as a decision to not approve the business plan of Syndicate 1729 or Syndicate 6131, or a decision to increase the capital required to continue operations, and by our obligation to pay levies to Lloyd's;
- Lloyd's insurance and reinsurance relationships and distribution channels could be disrupted or Lloyd's trading licenses could be revoked, making it more difficult for a Lloyd's Syndicate to distribute and market its products;
- rating agencies could downgrade their ratings of Lloyd's as a whole; and
- Syndicate 1729 and Syndicate 6131 operations are dependent on a small, specialized management team, and the loss of their services could adversely affect the Syndicate's business. The inability to identify, hire and retain other highly qualified personnel in the future could adversely affect the quality and profitability of Syndicate 1729's or Syndicate 6131's business.

Our results may differ materially from those we expect and discuss in any forward-looking statements. The principal risk factors that may cause these differences are described in "Item 1A, Risk Factors" in this report.

We caution readers not to place undue reliance on any such forward-looking statements, which are based upon conditions existing only as of the date made, and advise readers that these factors could affect our financial performance and could cause actual results for future periods to differ materially from any opinions or statements expressed with respect to future periods in any current statements. Except as required by law or regulations, we do not undertake and specifically decline any obligation to publicly release the result of any revisions that may be made to any forward-looking statements to reflect events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events.

PART I

ITEM 1. BUSINESS

Overview

ProAssurance Corporation is a holding company for property and casualty insurance companies. For the year ended December 31, 2019, our net premiums written totaled \$843 million, and at December 31, 2019 we had total assets of \$4.8 billion and \$1.5 billion of shareholders' equity.

Our Mission

We exist to Protect Others

Our Vision

We will be the best in the world at understanding and providing solutions for the risks our customers encounter as healers, innovators, employers and professionals. Through an integrated family of specialty companies, products and services, we will be a trusted partner enabling those we serve to focus on their vital work. As the employer of choice, we embrace every day as a singular opportunity to reach for extraordinary outcomes, build and deepen superior relationships, and accomplish our mission with infectious enthusiasm and unbending integrity.

Our Values

Integrity, Leadership, Relationships, Enthusiasm

Our wholly owned insurance subsidiaries provide professional liability insurance for healthcare professionals and facilities, professional liability insurance for attorneys and their firms, liability insurance for medical technology and life sciences risks and workers' compensation insurance. We also provide capital to Syndicate 1729 which writes a range of property and casualty insurance and reinsurance lines. In addition, we are the sole (100%) capital provider of an SPA, Syndicate 6131, which focuses on contingency and specialty property business.

Our executive offices are located at 100 Brookwood Place, Birmingham, Alabama 35209 and our telephone number is (205) 877-4400. Our stock trades on the NYSE under the symbol "PRA." Our website is www.proassurance.com, and we maintain a dedicated Investor Relations section on that website (investor.proassurance.com) to provide specialized resources for investors and others seeking to learn more about us.

As part of our disclosure through the Investor Relations section of our website, we publish our annual report on Form 10-K, our quarterly reports on Form 10-Q and our current reports on Form 8-K and all other public SEC filings as soon as reasonably practicable after the report is electronically filed with, or furnished to, the SEC. These SEC filings can be found on our website at investor.proassurance.com/Docs. This section also includes information regarding stock trading by corporate insiders by providing access to SEC Forms 3, 4 and 5 when they are filed with the SEC. In addition to federal filings on our website, we make available other documents that provide important additional information about our financial condition and operations. Documents available on our website include the financial statements we file with state regulators (compiled under SAP as required by regulation), news releases that we issue, a listing of our investment holdings and certain investor presentations. The Governance section of our website provides copies of the charters for our governing committees and many of our governing policies. Printed copies of these documents may be obtained from our Investor Relations department, either by mail at P.O. Box 590009, Birmingham, Alabama 35259-0009, or by telephone at (205) 877-4400 or (800) 282-6242.

Our History

We were incorporated in Delaware in 2001 as the successor to Medical Assurance, Inc. in conjunction with its merger with Professionals Group, Inc. ProAssurance has a history of growth through acquisitions; the most significant and recent of which was the acquisition of Eastern Insurance Holdings, Inc., on January 1, 2014.

We provided the majority of the capital for Syndicate 1729 in November 2013, and Syndicate 1729 began active operations effective January 1, 2014. We provided 100% of the capital for an SPA, Syndicate 6131, in December 2017, and Syndicate 6131 began writing business effective January 1, 2018.

Our Strategy

Our main business objective is to generate attractive total return for our shareholders. The basic components of our strategy for achieving this objective are as follows:

- *Provide specialized healthcare-centric expertise to meet evolving demands in the healthcare marketplace.* Through our focus on healthcare, we provide traditional liability insurance products to healthcare providers. We also leverage our reach, expertise and financial strength to provide innovative and customized products to meet the risk management needs of larger healthcare organizations or groups.

- *Provide superior workers' compensation products and services.* We provide workers' compensation products and services that focus on increasing an organization's productivity while reducing costs. We do this by providing innovative programs and solutions that address the specific needs of our customers and return injured workers to wellness and the dignity of work.
- *Provide superior customer service.* Our mission statement, "We exist to Protect Others," goes hand-in-hand with our corporate brand promise, "Treated Fairly." Our employees demonstrate our core values of integrity, leadership, relationships and enthusiasm every day and are focused on meeting the needs of our customers.
- *Effectively manage capital.* We carefully monitor use of our capital and consider various options for capital deployment, such as business expansion by our existing subsidiaries, opportunities that arise for mergers or acquisitions, share repurchases and payment of dividends.
- *Manage claims effectively.* Our experienced claims teams have industry and insurance expertise that, with our extensive local knowledge, allows us to resolve claims in an effective manner, considering the circumstances of each claim. When practicable, we utilize formalized claims management processes and protocols as a means of reducing claim costs.
- *Pursue profitable underwriting opportunities.* We emphasize profitability, not market share. Key elements of our approach are prudent risk selection using established underwriting guidelines, appropriate pricing, and adjusting our business mix as appropriate to effectively utilize capital and achieve market synergies.
- *Emphasize risk management.* We actively manage our enterprise risk by maintaining strong internal controls. We also emphasize the importance of risk management to our insureds and offer them training in the use of risk reduction tools and techniques.
- *Maintain a conservative investment strategy.* We believe that we follow a conservative investment strategy designed to emphasize the preservation of our capital and provide adequate liquidity for the prompt payment of claims. Our investment portfolio consists primarily of investment-grade, fixed-maturity securities of short-to medium-term duration.
- *Focus on culture and people.* We strive to be the Employer of Choice by attracting, retaining and developing employees who embody our Mission, Vision and Values.
- *Maintain financial stability.* We are committed to maintaining financial strength and adequate capital.

Organization and Segment Information

We operate through multiple insurance organizations and report our operating results in five segments, as follows:

- *Specialty P&C* - This segment includes our professional liability business and medical technology liability business. Professional liability insurance is primarily offered to healthcare providers and institutions and to attorneys and their firms. Medical technology liability insurance is offered to medical technology and life sciences companies that manufacture or distribute products including entities conducting human clinical trials. We also offer custom alternative risk solutions including loss portfolio transfers and captive cell programs for healthcare professional liability insureds. For our alternative market captive cell programs, we cede either all or a portion of the premium to certain SPCs in our Segregated Portfolio Cell Reinsurance segment.
- *Workers' Compensation Insurance* - This segment includes our workers' compensation insurance business which is provided primarily to employers with 1,000 or fewer employees. Our workers' compensation products include guaranteed cost policies, policyholder dividend policies, retrospectively-rated policies, deductible policies and alternative market solutions. Alternative market products include program design, fronting, claims administration, risk management, SPC rental, asset management and SPC management services. Alternative market program premiums are 100% ceded to either SPCs in our Segregated Portfolio Cell Reinsurance segment or, to a limited extent, a captive insurer unaffiliated with ProAssurance.
- *Segregated Portfolio Cell Reinsurance* - This segment includes the operating results (underwriting profit or loss, plus investment results) of SPCs at Inova Re and Eastern Re, our Cayman Islands SPC operations. Each SPC is owned, fully or in part, by an agency, group or association and the operating results of the SPCs are due to the participants of that cell. We participate to a varying degree in the results of selected SPCs and, for the SPCs in which we participate, our participation interest ranges from a low of 20% to a high of 85%. SPC operating results due to external cell participants are reflected as an SPC dividend expense (income) in our Segregated Portfolio Cell Reinsurance segment. The SPCs assume workers' compensation insurance, healthcare professional liability insurance or a combination of the two from our Workers' Compensation Insurance and Specialty P&C segments. In addition, an SPC at Eastern Re assumed an errors and omissions liability policy from a captive insurer unaffiliated with ProAssurance during 2019. We do not participate in the SPC that assumed this policy; therefore, the operating results of this policy are reflected in the SPC dividend expense (income).

- *Lloyd's Syndicates* - This segment includes the operating results from our participation in Lloyd's of London Syndicate 1729 and our 100% participation in Syndicate 6131, which is an SPA that underwrites on a quota share basis with Syndicate 1729. The results of this segment are normally reported on a quarter lag, except when information is available that is material to the current period. Syndicate 1729 underwrites risks over a wide range of property and casualty insurance and reinsurance lines in both the U.S. and international markets while Syndicate 6131 focuses on contingency and specialty property business, also within the U.S. and international markets.
- *Corporate* - This segment includes our investment operations, other than those reported in our Segregated Portfolio Cell Reinsurance and Lloyd's Syndicates segments, interest expense and U.S. income taxes. This segment also includes non-premium revenues generated outside of our insurance entities and corporate expenses.

Gross Premiums Written

Gross premiums written for the years ended December 31, 2019, 2018 and 2017 were comprised as follows:

(\$ in thousands)	Year Ended December 31					
	2019		2018		2017	
Specialty P&C ⁽¹⁾	\$ 577,700	60%	\$ 577,196	60%	\$ 549,323	63%
Workers' Compensation Insurance	278,442	29%	293,230	31%	264,048	30%
Segregated Portfolio Cell Reinsurance ⁽²⁾	87,140	9%	85,086	9%	77,675	9%
Lloyd's Syndicates ⁽³⁾	110,905	11%	88,746	9%	70,224	8%
Inter-segment revenues ⁽²⁾⁽³⁾	(86,697)	(9%)	(86,947)	(9%)	(86,394)	(10%)
Total	<u>\$ 967,490</u>	<u>100%</u>	<u>\$ 957,311</u>	<u>100%</u>	<u>\$ 874,876</u>	<u>100%</u>

⁽¹⁾ Primarily comprised of one-year term policies, but includes premium related to policies with a two-year term of \$26.9 million in 2019, \$22.2 million in 2018 and \$27.4 million in 2017.

⁽²⁾ Premiums in our Segregated Portfolio Cell Reinsurance segment are predominately assumed from either our Workers' Compensation Insurance or Specialty P&C segments. We eliminate this inter-segment revenue.

⁽³⁾ Our written premium includes our participation in Syndicates 1729 and 6131, including casualty premium assumed in 2018 and 2017 by Syndicate 1729 from our Specialty P&C segment through a previous quota share reinsurance agreement. We eliminate this inter-segment revenue. There was no premium assumed by Syndicate 1729 from our Specialty P&C segment during 2019.

Because our investments and other assets are predominately managed at the Corporate level we do not allocate assets to segments for financial reporting purposes. Additional detailed information regarding premium by individual product type within each of our insurance segments is provided in Item 7, Management's Discussion and Analysis, in the Results of Operations section, under the headings "Premiums Written."

Our insurance exposures are primarily within the U.S. As a result of our participation in Lloyd's Syndicates 1729 and 6131, we had net written premium of \$32.8 million in 2019, \$29.3 million in 2018 and \$21.3 million in 2017 associated with insurance exposures outside of the U.S. In addition, we had net written premium of \$8.8 million in 2019 associated with international insurance exposures within our Specialty P&C segment.

Specialty Property and Casualty Segment

Our Specialty P&C segment focuses on professional liability insurance and medical technology liability insurance. Professional liability insurance is primarily offered to healthcare providers and institutions and, to a lesser extent, to attorneys and their firms. Medical technology liability insurance is offered to medical technology and life sciences companies that manufacture or distribute products including entities conducting human clinical trials.

Professional Liability Insurance

Our professional liability business is primarily focused on providing professional liability insurance to healthcare providers. We target the full spectrum of the HCPL market, covering multiple categories of healthcare professionals and healthcare entities, including hospitals and other healthcare facilities. While most of our business is written in the standard market, we also offer professional liability insurance on an excess and surplus lines basis; and we offer alternative risk and self-insurance products on a custom basis.

Our custom alternative risk solutions include complex risk valuation solutions and a loss portfolio transfer program for healthcare entities that, most commonly, are exiting a line of business, changing an insurance approach or simply preferring to transfer risk. Our custom alternative risk solutions also include a turnkey captive solution whereby all or a portion of the healthcare premium written is ceded to certain SPCs of our wholly owned Cayman Islands reinsurance subsidiaries, Inova Re and Eastern Re, which are reported in our Segregated Portfolio Cell Reinsurance segment. The portion not ceded to the SPCs is

retained within our Specialty P&C segment. Our Specialty P&C segment does not currently participate in the cells that assume HCPL premium; therefore, the segment retains no underwriting profit or loss. Total gross premiums written in this segment in our alternative market captive cell program were approximately \$7.8 million, \$5.8 million and \$4.3 million during 2019, 2018 and 2017, respectively.

We utilize independent agencies and brokers as well as an internal sales force to write our HCPL business. For the year ended December 31, 2019, approximately 63% of our HCPL gross premiums written were produced through independent insurance agencies or brokers. The agencies and brokers we use typically sell through healthcare insurance specialists who are able to convey the factors that differentiate our professional liability insurance products. In 2019, our ten largest agents or brokers produced approximately 25% of our HCPL premium; individually, no one agency or broker produced more than 10% of our HCPL premium.

In marketing our professional liability products we emphasize our financial strength, product flexibility and excellent claims, underwriting and risk resource services. We market our insurance products through our direct sales force and through our agents as well as direct mailings and advertising in industry-related publications. We also are involved in professional societies and related organizations and support legislation that will have a positive effect on healthcare and legal liability issues. We maintain regional underwriting centers which permit us to consistently provide a high level of customer service to both small and large accounts.

We maintain claim processing centers where our internal claims personnel investigate and monitor the processing of our professional liability claims. We engage experienced, independent litigation attorneys in each venue to assist with the claims process as we believe this practice aids us in providing a defense that is aggressive, effective and cost-efficient. We evaluate the merit of each claim and determine the appropriate strategy for resolution of the claim, either seeking a reasonable good faith settlement appropriate for the circumstances of the claim or aggressively defending the claim. As part of the evaluation and preparation process for HCPL claims, we meet regularly with medical advisory committees in our key markets to examine claims, attempt to identify potentially troubling practice patterns and make recommendations to our staff.

We also provide professional liability coverage to attorneys and their firms in select areas of practice; and this is a less significant portion of our business, accounting for approximately 3% of our 2019 gross premiums written. Our legal professional liability business offers errors and omissions liability insurance policies for law firms engaged in the private practice of law. The program generally insures solo practitioner and smaller firms; over 97% of our insured attorneys are members of a firm employing five or fewer attorneys. The areas of practice of our insured firms include plaintiff, real estate, criminal defense and general corporate law. The program does not insure firms practicing in areas that are considered high hazard such as securities and intellectual property law.

Underwriting decisions for our legal professional liability coverage consider the firm's areas of practice, the experience of the attorneys and the management controls and loss mitigation practices of the applicant. Our legal professional liability line of business operates in 32 states written through independent brokers. Brokers are appointed and must specialize in legal professional liability. The territory of appointed brokers is restricted to a state or a small number of states in order to maintain a level of exclusivity.

Medical Technology and Life Sciences Insurance

Our medical technology liability business offers products-completed operations liability as well as errors and omissions liability insurance policies for medical technology and life sciences companies. These companies manufacture or distribute products that are almost all regulated by the U.S. Food and Drug Administration or similar regulatory authorities in foreign jurisdictions. Products insured include imaging and non-invasive diagnostic medical devices, orthopedic implants, pharmaceuticals, clinical lab instruments, medical instruments and surgical supplies, dental products, and animal pharmaceuticals and medical devices. We also provide coverage for sponsors of clinical trials and contract manufacturers.

Underwriting decisions for our medical technology liability coverages consider the type of risk, the amount of coverage being sought, the expertise and experience of the applicant and the expected volume of product sales. Close to 100% of our medical technology liability business is written through independent brokers. In 2019, our top ten largest brokers generated approximately 40% of our medical technology liability gross written premium, with no one broker representing more than 15%. We do not appoint agents for our medical technology liability business. We strongly defend our medical technology liability claims, with a negotiated settlement being the most frequent means of resolution.

Workers' Compensation Insurance Segment

Our Workers' Compensation Insurance segment offers workers' compensation products in the Mid-Atlantic, Southeast, Midwest, Gulf South and New England regions of the continental U.S. Our workers' compensation business consists of two major business activities:

- Traditional workers' compensation insurance coverages provided to employers, generally those with 1,000 employees or less. Types of policies offered include guaranteed cost policies, policyholder dividend policies, retrospectively-rated policies and deductible policies.
- Alternative market workers' compensation solutions provided to individual companies, groups or associations whereby the workers' compensation premium written is 100% ceded to either the SPCs at Inova Re or Eastern Re, which are reported in our Segregated Portfolio Cell Reinsurance segment, or, to a limited extent, a captive insurer unaffiliated with ProAssurance. Alternative market products include program design, fronting, claims administration, risk management, SPC rental, asset management and SPC management services. Of our total alternative market premiums written, approximately 97% in 2019 and 95% in 2018 was ceded to the SPCs operated through Inova Re or Eastern Re.

All of our workers' compensation products are distributed through a group of appointed independent agents.

We utilize an individual account underwriting strategy for our workers' compensation business that is focused on selecting quality accounts. Our goal is to underwrite a diverse book of business with respect to risk classification, hazard level and geographic location. We target accounts with strong return to wellness and safety programs in primarily low to middle hazard levels such as clerical offices, light manufacturing, healthcare, auto dealers and service industries and maintain a strong risk management unit in order to better serve our customers' needs. Our Eastern Specialty Risk unit focuses on higher hazard risks in select industries and generated approximately \$3.0 million and \$2.7 million of new business in 2019 and 2018, respectively.

We actively seek to reduce our workers' compensation loss costs by placing a concentrated focus on returning injured workers to wellness and the dignity of work as quickly as possible. We emphasize early intervention and aggressive disability management, utilizing in-house and third-party specialists for case management, including medical cost management. Strategic vendor relationships have been established to reduce medical claim costs and include preferred provider, physical therapy, prescription drug and catastrophic medical services.

Segregated Portfolio Cell Reinsurance Segment

Our Segregated Portfolio Cell Reinsurance segment includes the operating results (underwriting profit or loss, plus investment results) of SPCs at Inova Re and Eastern Re, our Cayman Islands SPC operations. Each SPC is owned, fully or in part, by an agency, group or association and the operating results of the SPCs are due to the participants of that cell. We participate to a varying degree in the results of certain SPCs and, for the SPCs in which we participate, our participation interest is as low as 20% and as high as 85% as of December 31, 2019. Each SPC is operated solely for the benefit of its cell participants, and the pool of assets of one SPC are statutorily protected from the creditors of any other SPC. The underwriting results and investment income of the SPCs are shared with the cell participants in accordance with the terms of the cell agreements. SPC underwriting results due to external cell participants are reflected as an SPC dividend expense (income) in our Segregated Portfolio Cell Reinsurance segment. In addition, the Segregated Portfolio Cell Reinsurance segment includes the SPCs' investment results as the investments are solely for the benefit of the cell participants and investment results due to external cell participants are also reflected in the SPC dividend expense (income). The segment operating results reflect our share of the underwriting and investment results of the SPCs in which we participate. The majority of the SPCs assume workers' compensation insurance, healthcare professional liability insurance or a combination of the two from our Workers' Compensation Insurance and Specialty P&C segments. In addition, an SPC at Eastern Re assumed an errors and omissions liability policy from a captive insurer unaffiliated with ProAssurance during 2019. We do not participate in the SPC that assumed this policy; therefore, the operating results of this policy are reflected in the SPC dividend expense (income).

The marketing and distribution of alternative market policies are the same as that of the segment from which the policy was assumed: Workers' Compensation Insurance or Specialty P&C segments.

Lloyd's Syndicates Segment

Our Lloyd's Syndicates segment includes operating results from our participation in Syndicates 1729 and 6131. The results of this segment are normally reported on a quarter lag, except when information is available that is material to the current period. Furthermore, investment results associated with investment assets solely allocated to Lloyd's Syndicate operations and certain U.S. paid administrative expenses are reported concurrently as that information is available on an earlier time frame. We have investments in and obligations to Syndicate 1729 and Syndicate 6131 consisting of a Syndicate Credit Agreement, FAL requirements and our participation in operating results. The Syndicate Credit Agreement was issued for the purpose of providing working capital to Syndicate 1729 with permitted borrowings of £30.0 million. We provide FAL to support underwriting by Syndicate 1729 and Syndicate 6131 which is comprised of investment securities and cash and cash equivalents deposited with Lloyd's with a fair value of approximately \$137.1 million at December 31, 2019. See further

discussion on the Syndicate Credit Agreement and our FAL in Note 3 of the Notes to Consolidated Financial Statements. The underwriting capacity of Syndicate 1729 and Syndicate 6131 and our respective participation in each is discussed in the following paragraphs.

Lloyd's Syndicate 1729

We are the largest sole capital provider to Syndicate 1729 with the remaining capital provided by unrelated third parties, including private names and other corporate members. To reduce our exposure and the associated earnings volatility, we decreased our participation in the operating results of Syndicate 1729 for the 2020 underwriting year from 61% to 29%. Syndicate 1729 covers a range of property and casualty insurance and reinsurance lines, primarily for risks within the U.S. as well as international markets, and for the 2020 underwriting year has a maximum underwriting capacity of £135 million (approximately \$179 million at December 31, 2019), of which £39 million (approximately \$51 million at December 31, 2019) is our allocated underwriting capacity as a corporate member.

Lloyd's Syndicate 6131

We are the sole (100%) capital provider to Syndicate 6131 which focuses on contingency and specialty property business, primarily for risks within the U.S. as well as international markets. As an SPA, Syndicate 6131 is only allowed to underwrite one quota share reinsurance contract with Syndicate 1729. For the 2020 underwriting year, Syndicate 6131 has a maximum underwriting capacity of £12 million (approximately \$16 million at December 31, 2019).

Our Lloyd's Syndicates segment products are distributed principally through retail brokers and coverholders (i.e., only those authorized by our retail brokers to enter into a contract but only in accordance with specified terms), which consist primarily of premium written through open-market channels and delegated underwriting authority arrangements. Our Lloyd's Syndicates write business in the Lloyd's marketplace and have access to international markets across the world.

Corporate Segment

Our Corporate segment includes our investment operations, other than those reported in our Segregated Portfolio Cell Reinsurance and Lloyd's Syndicates segments, interest expense and U.S. income taxes. The segment also includes non-premium revenues generated outside of our insurance entities and corporate expenses. We apply a consistent management strategy to the entire investment portfolio managed at the corporate level. Accordingly, we report those investment results and net realized investment gains and losses within our Corporate segment. Our overall investment strategy is to maximize current income from our investment portfolio while maintaining safety, liquidity, duration targets and portfolio diversification. The portfolio is generally managed by professional third-party asset managers whose results we monitor and evaluate. The asset managers typically have the authority to make investment decisions within the asset classes they are responsible for managing, subject to our investment policy and oversight, including a requirement that available-for-sale securities in a loss position cannot be sold without specific authorization from us. See Note 3 of the Notes to Consolidated Financial Statements for more information on our investments.

Competition

The marketplace for all our lines of business is very competitive. Within the U.S. our competitors are primarily domestic insurance companies and range from large national insurers whose financial strength and resources may be greater than ours to smaller insurance entities that concentrate on a single state and as a result have an extensive knowledge of the local markets. Additionally, there are many providers, domestic and international, of alternative risk management solutions. Syndicate 1729 and Syndicate 6131, which are based in the U.K., face significant competition from other Lloyd's syndicates as well as other international and domestic insurance and reinsurance firms operating in the country of the insured. Competitive distinctions include pricing, size, name recognition, service quality, market commitment, market conditions, breadth and flexibility of coverage, method of sale, financial stability, ratings assigned by rating agencies and regulatory conditions.

The changing healthcare environment within the U.S. during the past few years is providing both increased competitive challenges and opportunities for our largest segment, the Specialty P&C segment. Many physicians now practice as employees of larger healthcare entities. Further, healthcare services are increasingly provided by professionals other than physicians and outside of a traditional hospital or clinic setting. Such trends are widely expected to continue. Larger healthcare entities have customer service and risk management needs that differ from the traditional solo or small physician groups. Larger entities are more likely to combine risks such as workers' compensation and professional liability when purchasing insurance and are also more likely to manage all or a part of their risk through alternative insurance mechanisms. We have addressed these issues by enhancing our existing hospital/physician insurance programs, expanding our coverage of healthcare providers other than physician or hospitals, expanding our coverages to include workers' compensation and product liability, and by enhancing our customer service capabilities, particularly with regard to the needs of larger accounts. We have also increased our focus on offering unique, joint or cooperative insurance programs that are attractive to larger healthcare entities.

The workers' compensation industry is highly competitive in the geographic markets in which we operate. New business opportunities, renewal pricing and retention continue to be a challenge as a result of intense competition, especially from multi-line insurers that are willing to underprice their workers' compensation products to offset other coverages and we expect this trend to continue in 2020. We believe our product offerings allow us to provide flexibility in offering workers' compensation solutions to our customers at a competitive price. In addition, we believe that our claims handling and risk management services are attractive to our customers and provide us with a competitive advantage even when our pricing is higher than our competitors.

For all of our business, we recognize the importance of providing our products at competitive rates, but we do not price our products at rates that will not permit us to meet our long-term profit targets over the life of the insurance cycle. We base our rates on current loss projections, maintaining a long-term focus even when this approach may reduce our top line growth and result in us not meeting profit targets during certain phases of the insurance cycle. We believe that our size, reputation for effective claims management, unique customer service focus, multi-state presence and broad spectrum of coverages offered provides us with competitive advantages, even as the needs of our insureds change.

Rating Agencies

Our claims paying ability is regularly evaluated and rated by three major rating agencies: A.M. Best, Fitch and Moody's. In developing their claims paying ratings, these agencies make an independent evaluation of an insurer's ability to meet its obligations to policyholders. See "Risk Factors" for a table presenting the claims paying ratings of our principal insurance operations.

Our ability to service current debt and potential debt is regularly evaluated and rated by four rating agencies: A.M. Best, S&P, Fitch and Moody's. These financial strength ratings reflect each agency's independent evaluation of our ability to meet our obligation to holders of our debt, if any. While financial strength ratings may be of greater interest to investors than our claims paying ratings, these ratings are not evaluations of our equity securities nor a recommendation to buy, hold or sell our equity securities.

Insurance Regulatory Matters

We are subject to regulation under the insurance and insurance holding company statutes of various jurisdictions, including the domiciliary states of our insurance subsidiaries and other states in which our insurance subsidiaries do business. Our insurance subsidiaries are primarily domiciled in the U.S. Our states of domicile include Alabama, Illinois, Michigan, Pennsylvania and Vermont. Our foreign jurisdictions include our reinsurance operations based in the Cayman Islands, a territory of the U.K., and, through our participation in Lloyd's Syndicates, our insurance and reinsurance operations based in the U.K.

United States

Our insurance subsidiaries are required to file detailed annual statements in their states of domicile, with the NAIC and, in some cases, with the state insurance regulators in each of the states in which they do business. The laws of the various states establish agencies with broad authority to regulate, among other things, licenses to transact business, premium rates for certain types of coverage, trade practices, agent licensing, policy forms, underwriting and claims practices, reserve adequacy, transactions with affiliates and insurer solvency. Such regulations may hamper our ability to meet operating or profitability goals, including preventing us from establishing premium rates for some classes of insureds that adequately reflect the level of risk assumed for those classes. Many states also regulate investment activities on the basis of quality, distribution and other quantitative criteria. States have also enacted legislation, typically based in whole or in part on NAIC model laws, which regulates insurance holding company systems, including acquisitions, the payment of dividends, the terms of affiliate transactions, enterprise risk and solvency management and other related matters.

Applicable state insurance laws, rather than federal bankruptcy laws, apply to the liquidation or reorganization of insurance companies.

Insurance companies are also subject to state and federal legislative and regulatory measures and judicial decisions. These could include new or updated definitions of risk exposure and limitations on business practices.

Insurance Regulation Concerning Change or Acquisition of Control

The insurance regulatory codes in each of the domiciliary states of our operating subsidiaries contain provisions (subject to certain variations) to the effect that the acquisition of "control" of a domestic insurer or of any person that directly or indirectly controls a domestic insurer cannot be consummated without the prior approval of the domiciliary insurance regulator. In general, a presumption of "control" arises from the direct or indirect ownership, control or possession with the power to vote or possession of proxies with respect to 10% (5% in Alabama) or more of the voting securities of a domestic insurer or of a

person that controls a domestic insurer. Because of these regulatory requirements, any party seeking to acquire control of ProAssurance or any other domestic insurance company, whether directly or indirectly, would usually be required to obtain such approvals.

In addition, certain state insurance laws contain provisions that require pre-acquisition notification to state agencies of a change in control of a non-domestic insurance company admitted in that state. While such pre-acquisition notification statutes do not authorize the state agency to disapprove the change of control, such statutes do authorize certain remedies, including the issuance of a cease and desist order with respect to the non-domestic admitted insurers doing business in the state if certain conditions exist, such as undue market concentration.

Insurance Regulation Concerning Cybersecurity

In March 2017, the New York Cybersecurity Regulation took effect for financial institutions, insurers and other companies regulated by the NYDFS. The intent of the regulation is to encourage the protection of consumer information, as well as the technology systems of NYDFS regulated entities. We are currently compliant with the regulation according to the transition periods as defined in the NYDFS Cybersecurity Regulation.

In October 2017, the NAIC adopted the Insurance Data Security Model Law, which created rules for insurers, agents and other licensed entities covering data security and investigation and notification of breach. In May 2018, the European Union implemented the GDPR, designed to protect data privacy of individuals within the European Union and the EEA. We are compliant with the GDPR due to the global nature of our business, including a small amount of international activity in our Specialty P&C segment. In addition, managing agents of Lloyd's syndicates are required to ensure that they meet the requirements of the GDPR and any local data protection regulation based on territories in which they operate. Syndicate 1729 and Syndicate 6131, including their managing agent, are compliant with the GDPR.

Alabama enacted the Alabama Data Breach Notification Act of 2018 effective June 1, 2018, Ohio enacted the Data Protection Act effective November 2, 2018 and South Carolina enacted the South Carolina Department of Insurance Data Security Act effective January 1, 2019. Nevada enacted the Nevada Privacy of Information Collected on the Internet from Consumers Act effective October 1, 2019, amending its previous law which was effective October 1, 2017. New York enacted the Stop Hacks and Improve Electronic Data Security Act (SHIELD Act) on October 23, 2019 which broadened the scope of existing breach notification and data protection laws. Additionally, California's Consumer Privacy Act of 2018 went into effect January 1, 2020 and Michigan's Data Security Act will go into effect January 20, 2021. These state laws require an information security program based on an ongoing risk assessment, overseeing third-party service providers, investigating data breaches and notifying regulators of a cybersecurity event. The GDPR and the California Consumer Privacy Act of 2018 grant individuals the right to request that a company delete or de-identify their personal information. We expect other states, including our states of domicile, to either adopt the NAIC's Insurance Data Security Model Law or enact their own data security regulations. Moreover, we expect to see privacy laws similar to the California Consumer Privacy Act of 2018 and the Nevada Privacy of Information Collected on the Internet from Consumers Act to be enacted in other states, including our states of domicile. We do not expect compliance with the various data security or data privacy acts to have a material impact on our financial condition or results of operations, as they closely resemble the NAIC Model Law, the NYDFS Cybersecurity Regulations and the California Consumer Privacy Act of 2018.

Statutory Accounting and Reporting

Insurance companies are required to file detailed quarterly and annual reports with state insurance regulators in their state of domicile and each of the states in which they do business. Their business and accounts are subject to examination by such regulators at any time. The financial information in these reports is prepared in accordance with SAP. Insurance regulators periodically examine each insurer's adherence to SAP, financial condition and compliance with insurance department rules and regulations.

Regulation of Dividends and Other Payments from Our Operating Subsidiaries

Our U.S. operating subsidiaries are subject to various state statutory and regulatory restrictions that limit the amount of dividends or distributions an insurance company may pay to its shareholders, including our insurance holding company, without prior regulatory approval. Generally, dividends may be paid only out of unassigned earned surplus. In every case, surplus subsequent to the payment of any dividends must be reasonable in relation to an insurance company's outstanding liabilities and must be adequate to meet its financial needs.

State insurance holding company regulations generally require domestic insurers to obtain prior approval of extraordinary dividends. Insurance holding company regulations that govern our principal operating subsidiaries deem a dividend as extraordinary if the combined dividends and distributions to the parent holding company in any twelve-month period exceed prescribed thresholds. Such thresholds are statutorily prescribed by the state of domicile and currently are based on either net

income for the prior fiscal year (reduced by realized capital gains in certain domiciliary states) or a percentage of unassigned surplus at the end of the prior fiscal year, depending upon the wording of the statute.

If insurance regulators determine that payment of a dividend or any other payments within a holding company group, (such as payments under a tax-sharing agreement or payments for employee or other services) would, because of the financial condition of the paying insurance company or otherwise, be a detriment to such insurance company's policyholders, the regulators may prohibit such payments that would otherwise be permitted.

Risk-Based Capital and Risk Assessment

In order to enhance the regulation of insurer solvency, each state of domicile in accordance with an NAIC-defined formula specifies risk-based capital requirements for property and casualty insurance companies. At December 31, 2019, all of ProAssurance's insurance subsidiaries exceeded the minimum required risk-based capital levels.

In late 2010, the NAIC adopted the Model Holding Co. Law. The Model Holding Co. Law, as compared to previous NAIC guidance, increases regulatory oversight of and reporting by insurance holding companies, including reporting related to non-insurance entities, and requires reporting of risks affecting the holding company group. Additionally, in 2012 the NAIC adopted ORSA, which requires insurers to maintain a framework for identifying, assessing, monitoring, managing and reporting on the "material and relevant risks" associated with the insurer's (or insurance group's) current and future business plans. ORSA requires larger insurers, generally those with annual written premium volume greater than \$1 billion as a group or \$500 million as an individual insurer, to file an internal assessment of solvency with insurance regulators annually beginning in 2015. Although no specific capital adequacy standard is currently articulated in ORSA, it is possible that such standard will be developed over time. The Model Holding Co. Law and ORSA will be binding only if adopted by state legislatures and/or state insurance regulatory authorities and actual regulations adopted by any state may differ from that adopted by the NAIC. As of December 31, 2019, all states have adopted the Model Holding Co. Law and 49 states have adopted ORSA. ProAssurance was not required to file an internal assessment of solvency under the ORSA criteria for the years ended December 31, 2019 or 2018.

Also, the NAIC subsequently revised the Model Holding Co. Law to include provisions which allow regulatory supervision of the holding company group through supervisory colleges and which require reporting of risk and solvency assessments for the group. Certain states in which we operate adopted these revisions early, and we began filing our risk and solvency assessment in 2014.

Investment Regulation

Our operating subsidiaries are subject to state laws and regulations that require diversification of investment portfolios and that limit the amount of investments in certain investment categories. Failure to comply with these laws and regulations may cause non-conforming investments to be treated as non-admitted assets for purposes of measuring statutory surplus and, in some instances, would require divestiture of investments. We monitor the practices used by our operating subsidiaries for compliance with applicable state investment regulations and take corrective measures when deficiencies are identified.

Assessment Funds

Admitted insurance companies are required to be members of guaranty associations which administer state guaranty funds. To fund the payment of claims (up to prescribed limits) against insurance companies that become insolvent, these associations levy assessments on all member insurers in a particular state on the basis of the proportionate share of the premiums written by member insurers in the covered lines of business in that state. Maximum assessments permitted by law in any one year generally vary between 1% and 2% of annual premiums written by a member in that state, although state regulations may permit larger assessments if insolvency losses reach specified levels. Some states permit member insurers to recover assessments paid through surcharges on policyholders or through full or partial premium tax offsets, while other states permit recovery of assessments through the rate filing process. In recent years, participation in guaranty funds has not had a material effect on our results of operations.

Certain states in which we write workers' compensation insurance have established administrative and/or second injury funds that levy assessments against insurers that write business in their state. The assessments are generally based on insurer's proportionate share of premiums or losses in a particular state, and the assessment rate can vary from year to year.

Shared Markets

State insurance regulations may force us to participate in mandatory property and casualty shared market mechanisms or pooling arrangements that provide certain insurance coverage to individuals or other entities that are otherwise unable to purchase such coverage in the commercial insurance marketplace. Our operating subsidiaries' participation in such shared markets or pooling mechanisms is not material to our business at this time.

Federal Regulation

The Dodd-Frank Act was enacted in July 2010 and established additional regulatory oversight of financial institutions. To date, the Dodd-Frank Act has not materially affected our business. However, development of regulations is not complete, and there could yet be changes in the regulatory environment that affect the way we conduct our operations or the cost of compliance, or both.

One of the federal government bodies created by the Dodd-Frank Act was the FIO which in December 2013 released a proposal on insurance modernization and improvement of the system of insurance regulation in the U.S. Although the FIO is prohibited from directly regulating the business of insurance, it has authority to represent the U.S. in international insurance matters and has limited power to preempt certain types of state insurance laws. The proposal advocates significantly greater federal involvement in insurance regulation and identifies necessary reforms by the states to preclude further consideration of direct federal regulation. While the proposal does not necessarily imply that the federal government will displace state regulation completely, it does recommend more of a hybrid approach to insurance regulation. In response to the FIO proposal, the NAIC and a number of state legislatures have considered or adopted legislative proposals that alter and, in many cases, increase the authority of state agencies to regulate insurance companies and insurance holding company systems. We cannot predict whether the proposals will be adopted or what impact, if any, subsequently enacted laws might have on our business, financial condition or results of operations.

In June 2017, the U.S. House of Representatives passed the Financial CHOICE Act, which amends or repeals certain regulations in the Dodd-Frank Act, specifically modifying provisions related to insurance regulation. Revisions include the consolidation of two conflicting federal insurance positions into a single position established to advocate for the U.S. insurance industry at domestic and international levels, while preserving the traditional state-based system of insurance regulation. In March 2018, this legislation was passed by the U.S. Senate and signed into law by the President of the U.S. in May 2018.

Although the potential impacts of the Dodd-Frank Act and potential amendments to the Dodd-Frank Act, such as the Financial CHOICE Act, on the U.S. insurance industry are not clear, our business could be affected by changes to the U.S. system of insurance regulation.

In June 2012, Congress passed the Biggert-Waters Bill, which provided for a five-year renewal of the NFIP and, among other things, authorized the Federal Emergency Management Agency to carry out initiatives to determine the capacity of private insurers, reinsurers, and financial markets to assume a greater portion of the flood risk exposure in the U.S. and to assess the capacity of the private reinsurance market to assume some of the program's risk. In August 2017, the President of the U.S. signed an executive order revoking the establishment of a federal flood risk management standard. In November 2017, the U.S. House of Representatives adopted a bill to reauthorize the NFIP for five years and implement several reforms, including provisions designed to spur additional private insurer involvement in covering flood risk, but the U.S. Senate has yet to vote on the measure. Due to the 2017 hurricane season, Congress adopted a short-term extension to fund the NFIP which has subsequently received multiple short-term extensions and currently expires in September 2020. We cannot predict whether the proposals will be adopted or extended or what impact, if any, subsequently enacted laws might have on our business, financial condition or results of operations.

U.S. Department of the Treasury Report

In February 2017, the President of the U.S. issued an executive order that calls for a comprehensive review of laws, treaties, regulations, policies and guidance regulating the U.S. financial system, and requires the Secretary of the Treasury to consult with the heads of the member agencies of the Financial Stability Oversight Council to identify any laws, regulations or requirements that inhibit federal regulation of the financial system in a manner consistent with the core principles identified in the executive order. The Secretary's report on asset management and insurance was issued in October 2017 and recommended activities-based evaluations of systemic risk in the insurance industry rather than an entity-based approach. The report also supported primary regulation of the U.S. insurance industry by the states rather than the federal government. We cannot predict whether any of the recommendations will ultimately become laws, regulations or other requirements applicable to our business.

U.S. Tax Legislation

On December 22, 2017, the President of the U.S. signed the TCJA into law. The TCJA includes significant changes to the U.S. corporate income tax system, including a reduction in the federal corporate rate from 35% to 21% beginning after December 31, 2017, changes to loss reserve discounting factors, limitations on the deductibility of interest expense and executive compensation, and modifications to the taxation of non-U.S. subsidiaries. See further discussion of the impact of the TCJA on our results of operations and financial position provided in Item 7, Management's Discussion and Analysis, in the Critical Accounting Estimates section under the heading "Taxes" or Note 6 of the Notes to Consolidated Financial Statements.

Terrorism Risk Insurance Act

TRIA, initially enacted in 2002 and reauthorized in 2007, 2015 and 2019 ensures the availability of insurance coverage for certain acts of terrorism, as defined in the legislation. The 2019 reauthorization extended the program through 2027. TRIA currently provides that during 2020 and in any year thereafter a loss event must exceed \$200 million to trigger coverage and that the federal government will reimburse 80% of an insurer's losses in excess of the insurer's deductible, up to the maximum annual federal liability of \$100 billion. TRIA requires that we offer terrorism coverage to our commercial policyholders in our workers' compensation line of business, for which we may, when warranted, charge an additional premium. The policyholders may or may not accept such coverage.

International

Cayman Islands

Our SPC business operates through our subsidiaries, Inova Re and Eastern Re, which are organized and licensed as Cayman Islands unrestricted Class B insurance companies. Inova Re and Eastern Re are subject to regulation by the CIMA. Applicable laws and regulations govern the types of policies that Inova Re and Eastern Re can insure or reinsure, the amount of capital they must maintain and the way it can be invested, and the payment of dividends without approval by the CIMA. Inova Re and Eastern Re are required to maintain minimum capital of approximately \$200,000 and must receive approval from the CIMA before they can pay any dividends.

United Kingdom

Syndicate 1729 and Syndicate 6131 are regulated in the U.K. by the Prudential Regulation Authority and the Financial Conduct Authority. All Lloyd's Syndicates must also comply with the bylaws and regulations established by the Council of Lloyd's including submission and approval of an annual business plan and maintenance of stipulated capital levels. Also, the Council of Lloyd's may call or assess a percentage of a member's underwriting capacity (currently a maximum of 3%) as a contribution to Lloyd's Central Fund, which, similar to state guaranty funds in the U.S., meets policyholder obligations if a Lloyd's member is otherwise unable to do so.

The European Union's executive body, the European Commission, has implemented new capital adequacy and risk management regulations called Solvency II that applies to businesses within the European Union. Solvency II became effective January 1, 2016. Both Syndicate 1729 and Syndicate 6131 follow the Solvency II compliance guidelines set out by the Council of Lloyd's.

On January 31, 2020, the U.K. withdrew from the European Union, commonly referred to as "Brexit", and entered a transition period lasting until December 31, 2020. During the transitional period the U.K. and the European Union will negotiate their future relationship and European Union law will continue to apply in and to the U.K. The effects of Brexit will depend in part on any agreements the U.K. makes to retain access to European Union markets either during the transitional period or more permanently. Until the transitional period is over, Lloyd's is permitted to operate without the need for additional licensing or authorization from each individual country. In November 2018, Lloyd's opened a new European insurance company in Brussels in order to maintain access to European Union business. Lloyd's Brussels is Lloyd's first Europe wide operation and brings Lloyd's expertise closer to its customers and partners in Europe. Lloyd's Brussels is also in the process of moving all legacy EEA business to Brussels by the end of 2020 via a Part VII portfolio transfer, which allows insurers and reinsurers to transfer portfolios of insurance business from one legal entity to another, subject to court approval. We cannot predict the nature and extent of the impact that Brexit will have on regulation, interest rates, currency exchange rates and financial markets.

Employees

At December 31, 2019, we had 961 employees, none of whom were represented by a labor union. We consider our employee relations to be good.

Enterprise Risk Management

As a large property and casualty insurance provider, we are exposed to many risks stemming from both our insurance operations and the environments in which we operate. Since certain risks can be correlated with other risks, an event or a series of events can impact multiple areas of the Company simultaneously and have a material effect on the Company's results of operations, financial position and/or liquidity. In response to these exposures we have implemented an ERM program. Our ERM program consists of numerous processes and controls that have been designed by our senior management with oversight by our Board and implemented across our organization. We utilize our ERM program to identify potential risks from all aspects of our operations and to evaluate these risks in a manner that is both prudent and balanced. Our primary objective is to develop a risk appetite that creates and preserves value for all of our stakeholders.

ITEM 1A. RISK FACTORS.

There are a number of factors, many beyond our control, which may cause results to differ significantly from our expectations. Through our ERM program, as previously discussed, we have attempted to identify and understand the nature, caliber and sensitivity of material foreseeable risks, mitigate or avoid those risks and determine a course of action necessary to address such risks. These risk factors fall under the following three categories: Insurance, Financial and Operational. Any factor described in this report could by itself, or together with one or more other factors, have a negative effect on our business, results of operations and/or financial condition. There may be factors not described in this report that could also cause results to differ from our expectations.

Insurance

Insurance market conditions may alter the effectiveness of our current business strategy and impact our revenues.

The property and casualty insurance business is highly competitive. We compete in a fragmented market comprised of many insurers, ranging from smaller single state monoline insurers who have an extensive knowledge of local markets to large national insurers who offer multiple product lines and whose financial strength and resources may be greater than ours. In many instances, coverage we offer is also available through mutual entities whose ROE objectives may be lower than ours. Also, there are many opportunities for self-insurance and for participation in an alternative risk transfer mechanism, such as a captive insurer or a risk retention group.

Competition in the property and casualty insurance business is based on many factors, including premiums charged and other terms and conditions of coverage, services provided, financial ratings assigned by independent rating agencies, claims services, reputation, geographic scope, local presence, agent and client relationships, financial strength and the experience of the insurance company in the line of insurance to be written. Actions of competitors could adversely affect our ability to attract and retain business at current premium levels, impact our market share and reduce the profits that would otherwise arise from operations.

The cyclical nature in the property and casualty insurance industry could have a material adverse effect on our ability to improve or maintain underwriting profits or to grow or maintain premium volume.

The insurance and reinsurance markets have historically been cyclical, characterized by extended periods of intense price competition due to excessive underwriting capacity as well as periods when shortages of capacity permitted more favorable premium levels. An increase in premium levels is often offset by an increasing supply of insurance and reinsurance capacity, either by capital provided by new entrants or by the commitment of additional capital by existing insurers or reinsurers, which may cause prices to decrease. Any of these factors could lead to a significant reduction in premium rates, less favorable policy terms and fewer submissions for our underwriting services. In addition to these considerations, changes in the frequency and severity of losses may affect the cycles of the insurance and reinsurance markets significantly. During soft markets, it could be very difficult for us to grow or maintain premium volume levels without sacrificing underwriting profits. If we are not successful in maintaining rates or achieving rate increases, it may be difficult for us to improve or maintain underwriting profits. Conversely, during hard markets, rising prices may pressure retention levels.

Because we are a property and casualty insurer, our business may suffer as a result of unforeseen catastrophe losses.

As a property and casualty insurer, we are exposed to claims arising out of catastrophes, primarily through our workers' compensation and Lloyd's Syndicate operations. Catastrophes can be caused by various events, including hurricanes, tsunamis, tornadoes, windstorms, earthquakes, hailstorms, explosions, flooding, severe winter weather and fires and may include man-made events, such as terrorist attacks or a widespread financial crisis. The incidence, frequency and severity of catastrophes are inherently unpredictable. While we use historical data and modeling tools to assess our potential exposure to catastrophic losses under various conditions and probability scenarios, such assessments do not necessarily accurately predict future losses or accurately measure our potential exposure. The extent of losses from a catastrophe is a function of both the total amount of insured exposure in the area affected by the event and the severity of the event.

Our loss exposure for a terrorist act meeting the TRIA definition is mitigated by our coverage provided by this program as described in Part I under the heading "Insurance Regulatory Matters." Congress has the ability to alter or repeal the provisions of TRIA at its discretion, and if altered or repealed, our exposure could increase and result in premium increases for those types of coverages. Workers' compensation coverages cannot exclude damages related to an act of terrorism, and if TRIA were repealed or the benefits were substantially reduced, this might affect our ability to offer these coverages at a reasonable rate. In addition, the program currently expires at the end of 2027, and the failure to extend the program could adversely affect our business through increased exposure to a catastrophic level of terrorism losses.

Insurance companies are not permitted to reserve for a catastrophe until it has occurred. Although we purchase reinsurance protection for risks we believe bear a significant level of catastrophe exposure, actual losses resulting from a catastrophic event or events may exceed our reinsurance protection. Furthermore, for significant catastrophic exposure, the inability or unwillingness of the reinsurer to make timely payments under the terms of the reinsurance agreement could impact our liquidity. It is therefore possible that a catastrophic event or multiple catastrophic events could have a material adverse effect on our financial position, results of operations and liquidity.

Our results of operations and financial condition may be affected if actual insured losses differ from our loss reserves or if actual amounts recoverable under reinsurance agreements differ from our estimated recoverables.

We establish reserves as balance sheet liabilities, representing our estimates of amounts needed to resolve reported and unreported losses and pay related loss adjustment expenses. Our largest liability is our reserve for losses and loss adjustment expenses. Due to the size of our reserve for losses and loss adjustment expenses, even a small percentage adjustment to our reserve can have a material effect on our results of operations for the period in which the change is made.

The process of estimating loss reserves is complex. Significant periods of time may elapse between the occurrence of an insured loss, the reporting of the loss by the insured and payment of that loss. Ultimate loss costs, even for claims with similar characteristics, can vary significantly depending upon many factors including but not limited to the nature of the claim, including whether the claim is an individual or a mass tort claim, the personal situation of the claimant or the claimant's family, the outcome of jury trials, the legislative and judicial climate where the insured event occurred, general economic conditions and, for claims involving bodily injury, the trend of healthcare costs. Consequently, the loss cost estimation process requires actuarial skill and the application of judgment and such estimates require periodic revision. As part of the reserving process, we review the known facts surrounding reported claims as well as historical claims data and consider the impact of various factors such as:

- for reported claims, the nature of the claim and the jurisdiction in which the claim occurred;
- trends in paid and incurred loss development;
- trends in claim frequency and severity;
- emerging economic and social trends;
- trends in healthcare costs for claims involving bodily injury;
- inflation and levels of employment; and
- changes in the regulatory, legal and political environment.

This process assumes that past experience, adjusted for the effects of current developments and anticipated trends, is an appropriate, but not necessarily accurate, basis for predicting future events. There is no precise method for evaluating the impact of any specific factor on the adequacy of reserves, and actual results are likely to differ from original estimates. We evaluate our reserves each period and increase or decrease reserves as necessary based on our estimate of future claims payments. An increase to reserves has a negative effect on our results of operations in the period of increase; a reduction to reserves has a positive effect on our results of operations in the period of reduction.

Our loss reserves also may be affected by court decisions that expand liability of our policies after they have been issued. In addition, a significant jury award or series of awards against one or more of our insureds could require us to pay large sums of money in excess of our reserved amounts. Due to uncertainties inherent in the jury system, any case that is litigated to a jury verdict has the potential to incur a loss that has a material adverse effect on our results of operations.

We purchase reinsurance to mitigate the effect of large losses. Our receivable from reinsurers on unpaid losses and loss adjustment expenses represents our estimate of the amount of our reserve for losses that will be recoverable under our reinsurance programs. We base our estimate of funds recoverable upon our expectation of ultimate losses and the portion of those losses that we estimate to be allocable to reinsurers based upon the terms and conditions of our reinsurance agreements. Given the uncertainty of the ultimate amounts of our losses, our estimates of losses and related amounts recoverable may vary significantly from the eventual outcome. Also, for certain of our reinsurance agreements, we estimate premiums ceded to the reinsurer, subject to certain maximums and minimums, based in part on losses reimbursed or to be reimbursed under the agreement. Due to the size of our reinsurance balances, changes to our estimate of the amount of reinsurance that is due to us could have a material effect on our results of operations in the period for which the change is made.

We use analytical models to assist our decision-making in key areas such as pricing and reserving and may be adversely affected if actual results differ materially from the model outputs and related analyses.

We use various modeling techniques and data analytics to analyze and estimate exposures, loss trends and other risks associated with our assets and liabilities. This includes both proprietary and third party modeled outputs and related analyses to assist us in decision-making (e.g., underwriting, pricing, claims, reserving, reinsurance and catastrophe risk) and to maintain a competitive advantage. The modeled outputs and related analyses from both proprietary and third parties are subject to various

assumptions, uncertainties, model design errors and the inherent limitations of any statistical analysis, including those arising from the use of historical internal and industry data and assumptions. Changes in the social, judicial or economic environments in which we operate may make modeled outcomes less reliable or produce new, non-modeled risks. In addition, the effectiveness of any model can be degraded by operational risks including, but not limited to, the improper use of the model. Consequently, actual results may differ materially from our modeled results. If actual losses exceed assumptions that were made when our products were priced or our models fail to appropriately estimate the risks we are exposed to, our business, financial condition, results of operations or liquidity may be adversely affected. Furthermore, our results may be adversely affected if actual losses exceed assumptions that were made when pricing products that also include features such as an option to purchase extended reporting endorsement or "tail" coverage, which are offered at rates that are tied to expiring premiums charged. The profitability and financial condition of the Company substantially depends on the extent to which our actual experience is consistent with assumptions we use in our models and ultimate model outputs.

We are exposed to and may face adverse developments involving mass tort claims arising from coverages provided to our insureds.

Establishing reserves for mass tort claims is subject to uncertainties due to many factors, including expanded theories of liability, geographical location and jurisdiction of the lawsuits. Moreover, it is difficult to estimate our ultimate liability for such claims due to evolving judicial interpretations of various tort theories of liability and defense theories, such as federal preemption and joint and several liability, as well as the application of insurance coverage to these claims.

If market conditions cause reinsurance to be more costly or unavailable, we may be required to bear increased risk or reduce the level of our underwriting commitments.

As part of our overall risk and capacity management strategy, we purchase reinsurance for significant amounts of risk underwritten by our insurance subsidiaries. Market conditions beyond our control determine the availability and cost of the reinsurance. We may be unable to maintain current reinsurance coverage or to obtain other reinsurance coverage in adequate amounts and at favorable rates. If we are unable to renew our expiring coverage or to obtain new reinsurance coverage, either our net exposure to risk would increase or, if we are unwilling to bear an increase in net risk exposures, we would need to reduce the amount of our underwritten risk.

Our claims handling could result in a bad faith claim against us.

We have been sued from time to time for allegedly acting in bad faith during our handling of a claim. The damages claimed in actions for bad faith may include amounts owed by the insured in excess of the policy limits as well as consequential and punitive damages. Awards above policy limits are possible whenever a case is taken to trial. These actions have the potential to have a material and adverse effect on our financial condition and results of operations.

If we are unable to maintain favorable financial strength ratings, it may be more difficult for us to write new business or renew our existing business.

Independent rating agencies assess and rate the claims-paying ability and the financial strength of insurers based upon criteria established by the agencies. Periodically the rating agencies evaluate us to confirm that we continue to meet the criteria of previously assigned ratings. The financial strength ratings assigned by rating agencies to insurance companies represent independent opinions of financial strength and ability to meet policyholder and debt obligations and are not directed toward the protection of equity investors.

Our principal operating subsidiaries hold favorable claims paying ratings with A.M. Best, Fitch and Moody's. Claims-paying ratings are used by agents, brokers and customers as an important means of assessing the financial strength and quality of insurers. If our financial position deteriorates or the rating agencies significantly change the rating criteria that are used to determine ratings, we may not maintain our favorable financial strength ratings from the rating agencies. A downgrade or involuntary withdrawal of any such rating could limit or prevent us from writing desirable business.

The following table presents the claims paying ratings of our core insurance subsidiaries as of February 14, 2020.

	Rating Agency ⁽¹⁾		
	A.M. Best (www.ambest.com)	Fitch (www.fitchratings.com)	Moody's (www.moody's.com)
ProAssurance Indemnity Company, Inc.	A+ (Superior)	A (Strong)	A2
ProAssurance Casualty Company	A+ (Superior)	A (Strong)	A2
ProAssurance Specialty Insurance Company, Inc.	A+ (Superior)	A (Strong)	NR
ProAssurance Insurance Company of America ⁽²⁾	A+ (Superior)	A (Strong)	A2
Noetic Specialty Insurance Company	A+ (Superior)	A (Strong)	NR
Medmarc Casualty Insurance Company	A+ (Superior)	A (Strong)	NR
Lloyd's Syndicate 1729 and Syndicate 6131 ⁽³⁾	A (Excellent)	AA- (Strong)	NR
Eastern Alliance Insurance Company	A+ (Superior)	A (Strong)	A3
Allied Eastern Indemnity Company	A+ (Superior)	A (Strong)	A3
Eastern Advantage Assurance Company	A+ (Superior)	A (Strong)	NR
Inova Re Ltd., SPC	NR	NR	NR
Eastern Re Ltd., SPC	NR	NR	NR

⁽¹⁾ NR indicates that the subsidiary has not been rated by the listed rating agency.

⁽²⁾ Effective December 31, 2019, PACO Assurance Company, Inc. merged into ProAssurance Insurance Company of America, formerly known as Podiatry Insurance Company of America.

⁽³⁾ Rating provided is the rating applicable to all Lloyd's syndicates.

In addition to the evaluation of our claims paying ability, four rating agencies (A.M. Best, S&P, Fitch and Moody's) evaluate and rate our ability to service current debt and potential debt. These financial strength ratings reflect each agency's independent evaluation of our ability to meet our obligation to holders of our debt, if any. While these ratings may be of greater interest to investors than our claims-paying ratings, these are not ratings of our equity securities nor a recommendation to buy, hold or sell our equity securities.

Our business could be adversely affected by the loss or consolidation of independent agents, agencies, brokers or brokerage firms.

We heavily depend on the services of independent agents and brokers in the marketing of our insurance products. We face competition from other insurance companies for their services and allegiance. These agents and brokers may choose to direct business to competing insurance companies.

As a member of the Lloyd's market and a capital provider to Lloyd's Syndicate 1729 and Syndicate 6131 we are subject to certain risks which could affect us.

As a participant in Lloyd's Syndicates, we are subject to certain risks and uncertainties, including the following:

- reliance on insurance and reinsurance brokers and distribution channels to distribute and market products;
- obligation to pay levies to Lloyd's;
- obligations to maintain funds to support underwriting activities and risk-based capital requirements that are assessed periodically by Lloyd's and subject to variation;
- ability to maintain liquidity to fund claims payments, when due;
- ability to obtain reinsurance and retrocessional coverage to protect against adverse loss activity;
- reliance on ongoing approvals from Lloyd's and various regulators to conduct business, including a requirement that Annual Business Plans be approved by Lloyd's before the start of underwriting for each account year;
- financial strength ratings are derived from the rating assigned to Lloyd's, although they have limited ability to directly affect the overall Lloyd's rating; and
- reliance on Lloyd's trading licenses in order to underwrite business outside the U.K.

Financial

We cannot guarantee that our reinsurers will pay in a timely fashion or at all, and as a result, we could experience losses.

We transfer part of our risks to reinsurance companies in exchange for part of the premium we receive in connection with the risk. Although our reinsurance agreements make the reinsurer liable to us to the extent the risk is transferred, our liability to our policyholders remains our responsibility. Reinsurers may periodically dispute our demand for reimbursement from them based upon their interpretation of the terms of our agreements or may fail to pay us for financial or other reasons. If reinsurers refuse or fail to pay us or fail to pay on a timely basis, our financial results and/or cash flows could be adversely affected and could have a material effect on our results of operations in the period in which uncollectible amounts are identified.

At December 31, 2019 our receivable from reinsurers on unpaid losses and loss adjustment expenses was \$391 million, and our receivable from reinsurers on paid losses and loss adjustment expenses was \$13 million. As of December 31, 2019, no reinsurer, on an individual basis, had an estimated net amount due which exceeded \$40 million.

If our businesses do not perform well, we may be required to recognize an impairment of our goodwill or intangible assets, which could have a material adverse effect on our results of operations and financial condition.

We review our definite-lived intangible assets for impairment when events or changes in circumstances indicate that the carrying value may not be recoverable from estimated future cash flows. We test goodwill and intangible assets with indefinite lives for impairment at least annually. If we determine that such goodwill or intangible assets are impaired, we would be required to write down the goodwill or the intangible asset by the amount of the impairment, with a corresponding charge to net income. Such write downs could have a material adverse effect on our results of operations or financial position.

Our investment results will fluctuate as interest rates change.

Our investment portfolio is primarily comprised of interest-earning assets, marked to fair value each period. Thus, prevailing economic conditions, particularly changes in market interest rates, may significantly affect our results of operations. Significant movements in interest rates potentially expose us to lower yields or lower asset values. Changes in market interest rate levels generally affect our net income to the extent that reinvestment yields are different than the yields on maturing securities. Changes in interest rates also can affect the value of our interest-earning assets, which are principally comprised of fixed and adjustable-rate investment securities. Generally, the values of fixed-rate investment securities fluctuate inversely with changes in interest rates. Interest rate fluctuations could affect our shareholders' equity, income and/or cash flows.

Our investments are subject to credit, prepayment and other risks.

A significant portion of our total assets (\$3.4 billion or 71%) at December 31, 2019 are financial instruments whose value can be significantly affected by economic and market factors beyond our control including, among others, the unemployment rate, the strength of the domestic housing market, the price of oil, changes in interest rates and spreads, consumer confidence, investor confidence regarding the economic prospects of the entities in which we invest, corrective or remedial actions taken by the entities in which we invest, including mergers, spin-offs and bankruptcy filings, the actions of the U.S. government and global perceptions regarding the stability of the U.S. economy. Adverse economic and market conditions could cause investment losses or OTTIs of our securities, which could affect our financial condition, results of operations or cash flows.

At December 31, 2019 approximately 15% of our investment portfolio was invested in mortgage and asset-backed securities. We utilize ratings determined by NRSROs (Moody's, Standard & Poor's and Fitch) as an element of our evaluation of the creditworthiness of our securities. The ratings are subject to error by the agencies; therefore, we may be subject to additional credit exposure should the rating be misstated.

Our asset-backed securities are also subject to prepayment risk. A prepayment is the unscheduled return of principal. When rates decline, the propensity for refinancing may increase and the period of time we hold our asset-backed securities may shorten due to prepayments. Prepayments may cause us to reinvest cash proceeds at lower yields than the retired security. Conversely, as rates increase and motivations for prepayments lessen, the period of time over which our asset-backed securities are repaid may lengthen, causing us to not reinvest cash flows at the higher available yields.

At December 31, 2019 the fair value of our state/municipal portfolio was \$296.1 million (amortized cost basis of \$287.7 million). While our state/municipal portfolio had a high credit rating (AA on average), which indicates a strong ability to pay, there is no assurance that there will not be a credit related event which would cause fair values to decline. An economic downturn could lessen tax receipts and other revenues in many states and their municipalities. Due to the decrease in U.S. corporate tax rates, the overall attractiveness of owning municipal bonds may decline and impact the market valuations.

Our tax credit partnership interests are subject to risks related to the potential forfeiture of the tax credits and all or a portion of the previously claimed tax credits. Loss of all or a portion of the tax credits might occur if the property owner fails to

meet the specified requirements of planning and constructing or, in the case of the qualified affordable housing project tax credits, fails to operate the property as required or below expected capacity. With the decrease in U.S. corporate tax rates, the utilization of our tax credits may take longer than anticipated. While this would not impact the amount of tax credits we receive, a delay in recognition could be impactful from an economic perspective due to the time value of money. Additionally, the value of losses embedded in our tax credits could decrease due to a lower deduction value, which would reduce the carrying value of the partnership interests and could result in an OTTI. At December 31, 2019 the carrying value of our tax credit partnership interests was approximately \$48.5 million.

In a period of market illiquidity and instability, the fair values of our investments are more difficult to assess, and our assessments may prove to be greater or less than amounts received in actual transactions.

At December 31, 2019 and in accordance with applicable GAAP, we valued 95% of our investments at fair value and the remaining 5% at cost, equity, or cash surrender value. See Notes 1, 2 and 3 of the Notes to Consolidated Financial Statements for additional information.

We determine the fair value of our investments using quoted exchange or over-the-counter prices, when available. At December 31, 2019, we valued approximately 16% of our investments in this manner. When exchange or over-the-counter quotes are not available, we estimate fair values based on broker dealer quotes and various other valuation methodologies, which may require us to choose among various input assumptions and utilize judgment. At December 31, 2019, approximately 70% of our investments were valued in this manner. When markets exhibit significant volatility, there is more risk that we may utilize a quoted market price, broker dealer quote, valuation technique or input assumption that results in a fair value estimate that is either over or understated as compared to actual amounts that would be received upon disposition of the security. At December 31, 2019, approximately 9% of our investments are investment funds which measure fund assets at fair value on a recurring basis and provide us with a NAV for our interest. As a practical expedient, we consider the NAV provided to approximate the fair value of the interest. NAV is provided by the asset managers, and in some cases, estimates are used for valuation and are subject to variations depending on those estimates. Our funds valued at NAV have various redemption requirements and lock-up provisions (see Note 2 of the Notes to the Consolidated Financial Statements for further information).

Our ability to issue additional debt or letters of credit or other types of indebtedness on terms consistent with current debt is subject to market conditions, economic conditions at the time of proposed issuance, results of ratings reviews and the inclusion in certain bond indices of past and future issues. Also, certain of our current debt agreements and loans include financial covenants, and the issuance of debt by one of our insurance subsidiaries requires regulatory approval, both of which may limit or prohibit the issuance of additional debt.

In November 2019, we executed an amendment to our Revolving Credit Agreement which extended the expiration to November 2024 and increased the permitted borrowings from \$250 million to \$300 million. There were no changes to the financial covenants of the agreement which require that our consolidated debt to capital ratio (0.16 to 1.0 at December 31, 2019) be 0.35 to 1.0 or less and that we maintain a minimum net worth of \$1 billion which represents 65% of consolidated shareholders' equity, excluding AOCI, determined as of June 30, 2019.

During 2017, two of our insurance subsidiaries entered into ten-year mortgage loans. These mortgage loans require each of the subsidiaries to have a leverage ratio of consolidated funded debt to consolidated total capitalization (principally, SAP consolidated net worth plus consolidated funded debt) be 0.35 to 1.0 or less. Furthermore, our insurance subsidiaries must obtain regulatory approval before incurring additional debt.

During 2013, we issued \$250 million of unsecured Senior Notes Payable due in 2023 at a 5.3% interest rate. There is no guarantee that additional debt could be issued on similar terms in the future as rates available to us may change due to changes in the economic climate, or shifts in the yield curve may occur, or an increase in our level of debt may result in rating agencies lowering our debt rating.

The interest rates on our Mortgage Loans and Revolving Credit Agreement are priced using a spread over LIBOR, which may be phased out in the future.

LIBOR is the basic rate of interest used in lending between banks on the London interbank market and is widely used as a reference for setting interest rates on loans globally. The terms of certain of our debt agreements include interest rates which are calculated based on LIBOR.

On July 27, 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, announced that it intends to phase out LIBOR by the end of 2021. It is unclear if at that time whether or not LIBOR will cease to exist or if new methods of calculating LIBOR will be established such that it continues to exist after 2021. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rates Committee, a steering committee comprised of large U.S. financial institutions, announced replacement of U.S. dollar LIBOR with a new index calculated by short-term repurchase agreements, backed by U.S. Treasury securities called the Secured Overnight Financing Rate ("SOFR"). The first publication of SOFR was released in April 2018 and was subsequently codified by the FASB in October 2018. The updated codification added the overnight index swap rate ("OIS") based on the SOFR to the list of U.S. benchmark interest rates that are eligible to be hedged. As a result, entities may now designate changes in the OIS rate as the hedged risk in hedges of interest rate risk for fixed-rate financial instruments.

We have exposure to LIBOR-based financial instruments through our variable rate Mortgage Loans and Revolving Credit Agreement; however, these agreements include provisions for an alternative benchmark rate if LIBOR ceases to exist which do not materially change our liability exposure. Additionally, we have exposure to LIBOR in our fixed maturities portfolio which represented approximately 3% of our total investments, or \$102 million, as of December 31, 2019. We are currently working with our external asset managers to assess the transition state of our variable LIBOR rate fixed maturity investments; however, 70% of these investments with exposure to LIBOR were issued during 2019 and include provisions for an alternative benchmark rate. At this time, we cannot predict the overall effect of the modification or discontinuation of LIBOR or the establishment of alternative benchmark rates.

Resolution of uncertain tax matters and changes in tax laws or taxing authority interpretations of tax laws could result in actual tax benefits or deductions that are different than we have estimated, both with regard to amounts recognized and the timing of recognition. Such differences could affect our results of operations or cash flows.

Our provision for income taxes, our recorded tax liabilities and net deferred tax assets, including any valuation allowances, are recorded based on estimates. These estimates require us to make significant judgments regarding a number of factors, including, among others, the applicability of various federal and state laws, the interpretations given to those tax laws by taxing authorities, courts and the Company, the timing of future income and deductions, and our expected levels and sources of future taxable income. We believe our tax positions are supportable under current tax laws and that our estimates are prepared in accordance with GAAP. Additionally, from time to time, due to changes in economic and/or political conditions, there are changes in tax laws and interpretations of tax laws which could significantly change our estimates of the amount of tax benefits or deductions expected to be available to us in future periods. Specifically, recent changes in federal tax law included a reduction in the U.S. corporate income tax rate, changes to the cost of cross border reinsurance, changes to the overall tax base and a limitation on the deductibility of certain executive compensation in future periods. Changes to our prior estimates in these cases would be reflected in the period changed and could have a material effect on our effective tax rate, financial position, results of operations and cash flows. As the Company has reinsurance operations domiciled in the Cayman Islands, changes in the tax laws of the Cayman Islands as well as the recent change in U.S. federal tax law regarding outbound cross border affiliate reinsurance could result in the loss of profitability of that business.

We are subject to U.S. federal and various state income taxes as well as U.K. related taxes. We are periodically under examination by federal, state and local authorities regarding income tax matters, and our tax positions could be successfully challenged; the costs of defending our tax positions could be considerable. Our estimate of our potential liability for known uncertain tax positions is reflected in our financial statements. As of December 31, 2019 we had a net deferred tax asset of approximately \$44.4 million and a net federal income tax receivable of approximately \$8.0 million, which included a liability for unrecognized current tax benefits of \$5.1 million.

New or changes in existing accounting standards, practices and/or policies, as well as subjective assumptions, estimates and judgments by management related to complex accounting matters could significantly affect our financial results or our ability to maintain investor confidence and shareholder value.

GAAP and related accounting pronouncements, implementation guidelines and interpretations with regard to a wide range of matters that are relevant to our business, such as revenue recognition, lease accounting, estimation of losses, determination of fair value, asset impairment (particularly investment securities and goodwill) and tax matters, are highly complex and involve many subjective assumptions, estimates and judgments. Changes in these rules or their interpretation or changes in underlying assumptions, estimates or judgments could significantly change our reported or expected financial performance or financial condition. See Note 1 of the Notes to Consolidated Financial Statements for a description of our significant accounting policies.

ProAssurance is primarily a holding company of insurance subsidiaries which are required to comply with SAP. SAP and its components are subject to review by the NAIC and state insurance departments. The NAIC Accounting Practices and Procedures Manual provides that a state insurance department may allow insurance companies that are domiciled in that state to depart from SAP by granting them permitted non-SAP accounting practices. This permission may permit a competitor or

competitors to use a more favorable accounting policy.

It is uncertain whether or how SAP might be revised or whether any revisions will have a positive or negative effect. It is also uncertain whether any changes to SAP or its components or any permitted non-SAP accounting practices granted to our competitors will negatively affect our financial results or operations. See the full discussion on regulatory matters in Item I under the heading "Insurance Regulatory Matters."

Our interpretation, integration and/or compliance with new or changes to existing pronouncements by GAAP or SAP could materially impact us as a publicly traded company as it relates to investor confidence and shareholder value.

Operational

Changes in healthcare policy could have a material effect on our operations.

The ACA was enacted in March 2010, and many but not all of its provisions have become effective. To date, we do not believe that the primary provisions of ACA have directly affected our business. However, regulations to implement the law may be revised and the effect of currently enacted provisions may evolve over time. Specifically, presidential and congressional elections in the U.S. could result in significant changes in, and uncertainty with respect to, legislation, regulation and government policy. While it is not possible to predict whether and when any such changes will occur, proposals discussed by the current U.S. administration included the repeal or material amendment of the ACA. Thus, the ACA may yet have unanticipated or indirect effects on our business or alter the risk and cost environments in which we and our insureds operate. These risks include: further increases in the number of physicians choosing to practice as a part of a larger healthcare organization that utilizes a self-insurance or alternative risk management solution for its HCPL needs; use of electronic medical records may lead to additional medical malpractice litigation or increase the cost of litigation; patient dissatisfaction may increase due to greater strain on the patient-physician relationship; overall healthcare costs may increase which would increase loss costs for claims involving bodily injury and additional health conditions may be identified as work-related which could increase the number of workers' compensation claims. Conversely, it is anticipated that there will be growth in the number of ancillary healthcare providers that will become customers for HCPL products. We are unable to predict with any certainty the effect that ACA or future related legislation will have on our insureds or our business.

Changes due to financial reform legislation could have a material effect on our operations.

The Dodd-Frank Act was enacted in July 2010 and established additional regulatory oversight of financial institutions. During 2017, the U.S. House of Representatives passed the Financial CHOICE Act, which would amend or repeal certain regulations in the Dodd-Frank Act, specifically modifying provisions related to insurance regulation. Revisions include the consolidation of two conflicting federal insurance positions into a single position established to advocate for the U.S. insurance industry at domestic and international levels, while preserving the traditional state-based system of insurance regulation. In March 2018, this legislation was passed by the U.S. Senate and signed into law by the President of the U.S. in May 2018.

Although the potential impacts of the Dodd-Frank Act and potential amendments to the Dodd-Frank Act, such as the Financial CHOICE Act, on the U.S. insurance industry are not clear, our business could be affected by changes to the U.S. system of insurance regulation.

The passage of tort reform or other legislation, and the subsequent review of such laws by the courts could have a material impact on our operations.

Tort reforms generally restrict the ability of a plaintiff to recover damages by, among other limitations, eliminating certain claims that may be heard in a court, limiting the amount or types of damages, changing statutes of limitation or the period of time to make a claim, and limiting venue or court selection. A number of states in which we do business previously enacted tort reform legislation in an effort to reduce escalating loss trends.

Challenges to tort reform have been undertaken in most states where tort reforms have been enacted, and in some states the reforms have been fully or partially overturned. Additional challenges to tort reform may be undertaken. We cannot predict with any certainty how state appellate courts will rule on these laws. While the effects of tort reform have been generally beneficial to our business in states where these laws have been enacted, there can be no assurance that such reforms will be ultimately upheld by the courts. Furthermore, if tort reforms are effective, the business of providing professional liability insurance may become more attractive, thereby causing an increase in competition. In addition, the enactment of tort reforms could be accompanied by legislation or regulatory actions that may be detrimental to our business because of expected benefits which may or may not be realized. These expectations could result in regulatory or legislative action limiting the ability of professional liability insurers to maintain rates at adequate levels.

Coverage mandates or other expanded insurance requirements could also be imposed. States may also consider state-sponsored insurance entities that could remove our potential insureds from the private insurance market.

We continue to monitor developments on a state-by-state basis and make business decisions accordingly.

Our performance is dependent on the business, economic, regulatory and legislative conditions of states where we have a significant amount of business.

Our top five states, Pennsylvania, Alabama, Indiana, Texas and Michigan, represented 39% of our direct premiums written for the year ended December 31, 2019. Moreover, on a combined basis, Pennsylvania, Alabama and Indiana accounted for 30% of our direct premiums written for each of the years ended December 31, 2019, 2018 and 2017. Unfavorable business, economic or regulatory conditions in any of these states could have a disproportionately greater effect on us than they would if we were less geographically concentrated.

From time to time we may identify opportunities for growth through acquisitions. However, approval of acquisitions may not be granted or conditions of approval may adversely alter the expected value and benefits of the acquisition. In addition, expected benefits from acquisitions may not be achieved or may be delayed longer than expected.

Growth through the acquisition of other companies or books of business is opportunistic and sporadic. If we are able to identify a target for acquisition, state insurance regulation concerning change or acquisition of control could delay or prevent us from completing the acquisition. State insurance regulatory codes provide that the acquisition of “control” of a domestic insurer or of any person that directly or indirectly controls a domestic insurer cannot be consummated without the prior approval of the domiciliary insurance regulator. There is no assurance that we will receive such approval from the respective insurance regulator or that such approvals will not be conditioned in a manner that materially and adversely affects the aggregate economic value and business benefits expected to be obtained and cause us to not complete the acquisition.

The Company performs thorough due diligence before agreeing to a merger or acquisition; however, there is no guarantee that the procedures we perform will adequately identify all potential weaknesses or liabilities of the target company or potential risks to the consolidated entity.

There is also no guarantee that businesses acquired in the future will be successfully integrated. Ineffective integration of our businesses and processes may result in substantial costs or delays and adversely affect our ability to compete. The process of integrating an acquired company or business can be complex and costly and may create unforeseen operating difficulties and expenditures. Potential problems that may arise include but are not limited to: business disruption, loss of customers and employees, the ineffective integration of underwriting, claims handling and actuarial practices, an increase in the inherent uncertainty of reserve estimates for a period of time until stable trends reestablish themselves within the combined organization, diversion of management time and resources to acquisition integration challenges, the cultural challenges associated with integrating employees, increased operating costs, assumption of greater than expected liabilities or inability to achieve cost savings or synergies.

Furthermore, claims may be asserted by either the policyholders or shareholders of any acquired entity related to payments or other issues associated with the acquisition and merger into the consolidated entity. Such claims may prove costly or difficult to resolve or may have unanticipated consequences.

Our success is dependent upon our ability to effectively design and execute our business strategy.

The Company depends upon the skill and work product of our officers and employees in executing our business strategy. While management and the Board monitor the strategic direction of the Company, strategic changes could be made that are not supportable by our capital base.

Our success is dependent upon our ability to adequately and appropriately serve our customers.

The operations of the Company are heavily dependent upon the delivery of superior customer service across a broad customer base, by which negative feedback from agents, brokers, insureds or internal staff could result in a loss of revenue for the Company.

Our business could be affected by the loss of one or more of our senior executives or other qualified personnel.

We are heavily dependent upon our senior management, and the loss of services of our senior executives could adversely affect our business. Our success has been, and will continue to be, dependent on our ability to retain the services of existing key employees and to attract and retain additional qualified personnel in the future. The loss of the services of key employees or senior managers, or the inability to identify, hire and retain other highly qualified personnel in the future, could adversely affect the quality and profitability of our business operations. Our Board regularly reviews succession planning relating to our Chief Executive Officer as well as other senior officers.

Provisions in our charter documents, Delaware law and state insurance law may impede attempts to replace or remove management or may impede a takeover, which could adversely affect the value of our common stock.

Our certificate of incorporation, bylaws and Delaware law contain provisions that may have the effect of inhibiting a non-negotiated merger or other business combination. We currently have no preferred stock outstanding and no present intention to issue any shares of preferred stock. In addition, our Corporate Governance Principles provide that the Board, subject to its fiduciary duties, will not issue any series of preferred stock for any defense or anti-takeover purpose, for the purpose of implementing any stockholders rights plan, or with features intended to make any acquisition more difficult or costly without obtaining stockholder approval. However, because the rights and preferences of any series of preferred stock may be set by the Board in its sole discretion, the rights and preferences of any such preferred stock may be superior to those of our common stock and thus may adversely affect the rights of the holders of common stock.

The voting structure of common stock and other provisions of our certificate of incorporation are intended to encourage a person interested in acquiring us to negotiate with and to obtain the approval of the Board in connection with a transaction. However, certain of these provisions may discourage our future acquisition, including an acquisition in which stockholders might otherwise receive a premium for their shares. As a result, stockholders who might desire to participate in such a transaction may not have the opportunity to do so.

In addition, state insurance laws provide that no person or entity may directly or indirectly acquire control of an insurance company unless that person or entity has received approval from the insurance regulator. An acquisition of control of ProAssurance would be presumed if any person or entity acquires 10% (5% in Alabama) or more of our outstanding common stock, unless the applicable insurance regulator determines otherwise. These provisions apply even if the offer may be considered beneficial by stockholders.

We are a holding company and are dependent on dividends and other payments from our operating subsidiaries, which may be subject to dividend restrictions.

We are a holding company whose principal source of funds is cash dividends and other permitted payments from operating subsidiaries. If our subsidiaries are unable to make payments to us, or are able to pay only limited amounts, we may be unable to make payments on our indebtedness, meet other holding company financial obligations, or pay dividends to shareholders. The payment of dividends by these operating subsidiaries is subject to restrictions set forth in the insurance laws and regulations of their respective states of domicile, as discussed in Item I under the heading "Insurance Regulatory Matters."

Regulatory requirements or changes to regulatory requirements could have a material effect on our operations.

Our insurance businesses are subject to extensive regulation by state insurance authorities in each state in which they operate. Regulation is intended for the benefit of policyholders rather than shareholders. In addition to the amount of dividends and other payments that can be made to a holding company by insurance subsidiaries, these regulatory authorities have broad administrative and supervisory power relating to:

- licensing requirements;
- trade practices;
- capital and surplus requirements;
- investment practices; and
- rates charged to insurance customers.

These regulations may impede or impose burdensome conditions on rate changes or other actions that we may desire to take in order to enhance our results of operations. In addition, we may incur significant costs in the course of complying with regulatory requirements. Most states also regulate insurance holding companies like us in a variety of matters such as acquisitions, solvency and risk assessment, changes of control and the terms of affiliated transactions.

Also, certain states sponsor insurance entities which affect the amount and type of liability coverages purchased in the sponsoring state. Changes to the number of state sponsored entities of this type could result in a large number of insureds changing the amount and type of coverage purchased from private insurance entities such as ProAssurance.

We own two subsidiaries domiciled in the Cayman Islands and subject to the laws of the Cayman Islands and regulations promulgated by the CIMA. Failure to comply with these laws, regulations and requirements could result in consequences ranging from a regulatory examination to a regulatory takeover of our Cayman Islands subsidiaries, which could potentially impact profitability of alternative market solutions offered through these subsidiaries.

Syndicate 1729 and Syndicate 6131 are regulated in the U.K. by the Prudential Regulation Authority and the Financial Conduct Authority. All Lloyd's Syndicates must also comply with the bylaws and regulations established by the Council of Lloyd's. Failure to comply with bylaws and regulations could affect our ability to underwrite as a Lloyd's Syndicate in the future and therefore affect our profitability. Changes in bylaws and regulations could also affect the profitability of the operations.

The European Union's executive body, the European Commission, has implemented new capital adequacy and risk management regulations called Solvency II that apply to businesses within the European Union. Solvency II became effective January 1, 2016. Syndicate 1729 and Syndicate 6131 follow the Solvency II compliance guidelines set out by the Council of Lloyd's.

The U.K.'s withdrawal from the European Union could have a material effect on our operations.

As previously described in Part I under the heading "Insurance Regulatory Matters", the U.K. withdrew from the European Union on January 31, 2020, commonly referred to as "Brexit", and entered a transitional period lasting until December 31, 2020. During the transitional period, the U.K. and the European Union will negotiate their future relationship and European Union law will continue to apply in and to the U.K. The exit of the U.K. from the European Union could result in significant macroeconomic deterioration including, but not limited to, a decrease in global stock exchange indices and an increase in foreign exchange volatility (in particular a further weakening of the pound sterling against the U.S. dollar). The full effects of Brexit are uncertain and will depend on any agreements the U.K. may make to retain access to European Union markets. However, we do not expect Brexit to have a material effect on our Lloyd's Syndicate operations as Lloyd's has opened a new European insurance company in Brussels in order to maintain access to European Union business (see further discussion in Part I under the heading "Insurance Regulatory Matters").

The assessments that we are required to pay to state associations may increase or our participation in mandatory risk retention pools could be expanded and our results of operations and financial condition could suffer as a result.

Each state in which we operate has separate insurance guaranty fund laws requiring admitted property and casualty insurance companies doing business within their respective jurisdictions to be members of their guaranty associations. These associations are organized to pay covered claims (as defined and limited by the various guaranty association statutes) under insurance policies issued by insurance companies that have become insolvent. Most guaranty association laws enable the associations to make assessments against member insurers to obtain funds to pay covered claims after a member insurer becomes insolvent. These associations levy assessments (up to prescribed limits) on all member insurers in a particular state on the basis of the proportionate share of the premiums written by member insurers in the covered lines of business in that state. Maximum assessments generally vary between 1% and 2% of annual premiums written by a member in that state. Some states permit member insurers to recover assessments paid through surcharges on policyholders or through full or partial premium tax offsets, while other states permit recovery of assessments through the rate filing process. We had no significant guaranty fund recoupments or assessments in 2019, 2018 or 2017. Our practice is to accrue for insurance insolvencies when notified of assessments. We are not able to reasonably estimate assessments or develop a meaningful range of possible assessments prior to notice because the guaranty funds do not provide sufficient information for development of such estimates or ranges.

Certain states in which we write workers' compensation insurance have established administrative and/or second injury funds that levy assessments against insurers that write business in their state. The assessments are generally based on an insurer's proportionate share of premiums or losses in a particular state, and the assessment rate can vary from year to year.

Risk pooling mechanisms have been established in certain states that offer insurance coverage to individuals or entities who are otherwise unable to purchase coverage from private insurers. Authorized property and casualty insurers in these states are generally required to share in the underwriting results of these pooled risks, which are typically adverse. Should our mandatory participation in such pools be increased or if the assessments from such pools increased, our results of operations and financial condition would be negatively affected, although that was not the case in 2019, 2018 or 2017.

Our Board may decide that our financial condition does not allow the continued payment of a quarterly cash dividend, or requires that we reduce the amount of our quarterly cash dividend.

Our Board approved a cash dividend policy in September 2011, and we most recently paid a \$0.31 per share dividend for the three months ended December 31, 2019. However, any decision to pay future cash dividends is subject to the Board's final determination after a comprehensive review of the Company's financial performance, future expectations and other factors deemed relevant by the Board.

We are subject to numerous NYSE and SEC regulations including insider trading regulations, Regulation FD and regulations requiring timely and accurate reporting of our operating results as well as certain events and transactions. Noncompliance with these regulations could subject us to enforcement actions by the NYSE or the SEC, and could affect the value of our shares and our ability to raise additional capital.

The Company carefully adheres to NYSE and SEC requirements as the loss of trading privileges on the NYSE or an SEC enforcement action could have a significant financial impact on the Company. Failure to comply with various SEC reporting and record keeping requirements could result in a decline in the value of our stock or a decline in investor confidence which could directly impact our ability to efficiently raise capital. Failure to adhere to NYSE requirements could result in fines, trading restrictions or delisting.

The operations of the Company are heavily reliant upon the Company's reputation as an ethical business organization providing needed services to its customers.

The Company's positive reputation is critical to its role as an insurance provider and as a publicly traded company. The Board adopted a Code of Ethics and Conduct, and management is heavily focused on the integrity of our employees and third-party suppliers, agents or brokers. Illegal, unethical or fraudulent activities perpetrated by an employee or one of our third-party agencies or brokers for personal gain could expose the Company to a potential financial loss.

A natural disaster or pandemic event, or closely related series of events, could cause loss of lives or a substantial loss of property or operational ability at one or more of the Company's facilities.

The Company's disaster preparedness encompasses our Business Continuity Plan, Disaster Recovery Plan, Operations Plan and Pandemic Response Plan. Our disaster preparedness is focused on maintaining the continuity of the Company's data processing and telephone capabilities as well as the use of alternate and temporary facilities in the event of a natural disaster or medical event. The Company's plans are reviewed during the insurance department examinations of the statutory insurance companies. While the Company has plans in place to respond to both short- and long-term disaster scenarios, the loss of certain key operating facilities or data processing capabilities could have a significant impact on Company operations.

The operations of the Company are dependent upon the security, integrity and availability of our internal technology infrastructure and that of certain third parties. Any significant disruption of these infrastructures could result in unauthorized access to Company data or reduce our ability to conduct business effectively, or both.

The Company is dependent upon its technology infrastructure and that of certain third parties to operate and report financial and other Company information accurately and timely. We collect, use, store or transmit an increasingly large amount of confidential, proprietary and other information in connection with the operation of our business. Therefore, the Company has focused resources on securing and preserving the integrity of our data processing systems and related data. Despite our efforts to ensure the integrity of our systems, we are increasingly exposed to the risk that our technology infrastructure could be subject to cyber-attacks and unauthorized access, such as physical and electronic break-ins or unauthorized tampering.

The Company also evaluates the integrity and security of the technology infrastructure of third parties that access, process or store data that the Company considers to be significant. While we review and assess our third party providers' cybersecurity controls, as appropriate, and make changes to our business processes to manage these risks, there is no guarantee that measures taken to date will completely prevent possible disruption, damage or destruction by intentional or unintentional acts or events such as cyber-attacks, viruses, sabotage, human error, system failure or the occurrence of numerous other human or natural events.

Disruption, damage or destruction of any of our systems or data could cause our normal operations to be disrupted, or unauthorized internal or external knowledge or misuse of confidential Company data could occur, all of which could be harmful to the Company from a financial, legal and reputational perspective. We continually enhance our cyber and information security in order to identify and neutralize emerging threats and improve our ability to prevent, detect and respond to attempts to gain unauthorized access to our data and systems. We regularly add additional security measures to our computer systems and network infrastructure to mitigate the possibility of cybersecurity breaches, including firewalls and penetration testing. However, it is impossible to defend against every risk being posed by changing technologies. The Company has a formal

process in place for identifying, handling and disclosing of cybersecurity incidents. In addition, the Company's Board and Audit Committee are involved in the oversight of our cybersecurity policies and procedures and are continually updated on material cybersecurity risks and cybersecurity issues, if any, faced by executive management. To date, the Company has not suffered any material harm or loss relating to cyber-attacks or other security breaches at the Company or its third parties.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

None.

ITEM 2. PROPERTIES.

We own three office properties, one of which is unencumbered. Our properties in Birmingham, AL and Franklin, TN are each encumbered by a ten-year mortgage loan entered into during 2017 for the purpose of recapitalization of these properties:

Property Location	Square Footage of Properties		Total
	Occupied by ProAssurance	Leased or Available for Lease	
Birmingham, AL*	120,000	45,000	165,000
Franklin, TN	52,000	51,000	103,000
Okemos, MI	53,000	—	53,000

* Corporate Headquarters

ITEM 3. LEGAL PROCEEDINGS.

Our insurance subsidiaries are involved in various legal actions, a substantial number of which arise from claims made under insurance policies. While the outcome of all legal actions is not presently determinable, management and its legal counsel are of the opinion that these actions will not have a material adverse effect on our financial position or results of operations. See Note 9 of the Notes to Consolidated Financial Statements included herein.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The executive officers of ProAssurance Corporation serve at the pleasure of the Board. We have a knowledgeable and experienced management team with established track records in building and managing successful insurance operations. Following is a brief description of each executive officer of ProAssurance, including their principal occupation, and relevant background with ProAssurance and former employers.

- Edward L. Rand, Jr.** Mr. Rand was appointed as our Chief Executive Officer in 2019 and has served as President since 2018. Mr. Rand previously served as Chief Operating Officer, Chief Financial Officer, Executive Vice President and Senior Vice President since joining ProAssurance in 2004. Mr. Rand also has previously served as President of our Medmarc subsidiary from 2016 to 2018. Prior to joining ProAssurance, Mr. Rand was Chief Accounting Officer and Head of Corporate Finance for PartnerRe Ltd. Prior to that time, Mr. Rand served as the Chief Financial Officer of Atlantic American Corporation. (Age 53)
- Michael L. Boguski** Mr. Boguski was promoted to President of our Specialty P&C segment in 2019. Mr. Boguski previously served as President of our Eastern subsidiary since ProAssurance acquired Eastern in 2014. Prior to the acquisition of Eastern, Mr. Boguski served as President and Chief Executive Officer of Eastern since 2011 and had been with the Eastern organization since its inception in 1997. Mr. Boguski has almost 34 years of insurance industry experience. (Age 57)
- Dana S. Hendricks** Ms. Hendricks was appointed as our Chief Financial Officer in 2018. Ms. Hendricks has previously served as Senior Vice President of Business Operations for our PICA subsidiary. Prior to that time, Ms. Hendricks served PICA as Vice President of Finance and Corporate Controller. Prior to joining PICA in 2001, Ms. Hendricks held various finance and data analysis positions with American General Life & Accident Insurance Company. Ms. Hendricks is a Certified Public Accountant. (Age 52)
- Jeffrey P. Lisenby** Mr. Lisenby was appointed as an Executive Vice President in 2014 and is also our General Counsel, Corporate Secretary and head of the corporate Legal Department. Mr. Lisenby has previously served as Senior Vice President. Prior to joining ProAssurance, Mr. Lisenby practiced law privately in Birmingham, Alabama. Mr. Lisenby is a member of the Alabama State Bar and the United States Supreme Court Bar and is a Chartered Property Casualty Underwriter. (Age 51)
- Kevin M. Shook** Mr. Shook is President of our Eastern subsidiary. Mr. Shook previously served as Executive Vice President of our Eastern subsidiary and has been with Eastern for 16 years. Mr. Shook has over 26 years of insurance industry experience, including 10 years with PricewaterhouseCoopers where he primarily served companies within the insurance industry. Mr. Shook is a Certified Public Accountant. (Age 50)

We have adopted a Code of Ethics and Conduct that applies to our directors and executive officers, including but not limited to our principal executive officers and principal financial officer. We also have share ownership guidelines in place to ensure that management maintains a significant portion of their personal investments in the stock of ProAssurance. Both our Code of Ethics and Conduct and our Share Ownership Guidelines are available on the Governance section of our website. Printed copies of these documents may be obtained from our Investor Relations department either by mail at P.O. Box 590009, Birmingham, Alabama 35259-0009, or by telephone at (205) 877-4400 or (800) 282-6242.

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.

At February 14, 2020, ProAssurance Corporation had 3,177 stockholders of record and 53,793,370 shares of common stock outstanding. ProAssurance’s common stock currently trades on the NYSE under the symbol “PRA.”

Quarter	2019		2018	
	High	Low	High	Low
First	\$ 45.36	\$ 34.61	\$ 56.00	\$ 47.35
Second	\$ 39.92	\$ 34.71	\$ 48.20	\$ 35.35
Third	\$ 40.67	\$ 36.26	\$ 49.40	\$ 35.50
Fourth	\$ 41.40	\$ 35.93	\$ 46.28	\$ 37.18

Quarter	Dividends Declared		Dividends Paid	
	2019	2018	2019	2018
First	\$ 0.31	\$ 0.31	\$ 0.81	\$ 5.00
Second	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31
Third	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31
Fourth*	\$ 0.31	\$ 0.81	\$ 0.31	\$ 0.31

* Includes a special dividend of \$0.50 per common share declared in 2018.

The Board declared a quarterly dividend in each quarter of 2019 and 2018. Each dividend was paid in the month following the quarter in which it was declared. The Board also declared a special dividend of \$0.50 per common share during the fourth quarter of 2018 which was paid in January of 2019. Any decision to pay regular or special cash dividends in the future is subject to the Board’s final determination after a comprehensive review of financial performance, future expectations and other factors deemed relevant by the Board.

ProAssurance’s insurance subsidiaries are subject to restrictions on the payment of dividends to the parent. Information regarding restrictions on the ability of the insurance subsidiaries to pay dividends is incorporated herein by reference from the paragraphs under the heading “Insurance Regulatory Matters—Regulation of Dividends and Other Payments from Our Operating Subsidiaries” in Item 1 of this Form 10-K.

Securities Authorized for Issuance Under Equity Compensation Plans

The following table provides information regarding ProAssurance’s equity compensation plans as of December 31, 2019.

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	521,365	\$— *	1,760,814
Equity compensation plans not approved by security holders	—	—	—

* No outstanding options as of December 31, 2019. Other outstanding share units have no exercise price.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs* (In thousands)
October 1 - 31, 2019	—	N/A	—	\$109,643
November 1 - 30, 2019	—	N/A	—	\$109,643
December 1 - 31, 2019	—	N/A	—	\$109,643
Total	—	\$—	—	

* Under its current plan begun in November 2010, the Board has authorized \$600 million for the repurchase of common shares or the retirement of outstanding debt. This is ProAssurance's only plan for the repurchase of common shares, and the plan has no expiration date.

ITEM 6. SELECTED FINANCIAL DATA.

(\$ in thousands, except per share data)	Year Ended December 31				
	2019	2018	2017	2016	2015
Selected Financial Data					
Gross premiums written	\$ 967,490	\$ 957,311	\$ 874,876	\$ 835,014	\$ 812,218
Net premiums earned	\$ 847,532	\$ 818,853	\$ 738,531	\$ 733,281	\$ 694,149
Net investment income	\$ 93,269	\$ 91,884	\$ 95,662	\$ 100,012	\$ 108,660
Equity in earnings (loss) of unconsolidated subsidiaries	\$ (10,061)	\$ 8,948	\$ 8,033	\$ (5,762)	\$ 3,682
Net realized investment gains (losses)	\$ 59,874	\$ (43,488)	\$ 16,409	\$ 34,875	\$ (41,639)
Other income	\$ 9,220	\$ 9,833	\$ 7,514	\$ 7,808	\$ 7,227
Total revenues	\$ 999,834	\$ 886,030	\$ 866,149	\$ 870,214	\$ 772,079
Net losses and loss adjustment expenses	\$ 753,915	\$ 593,210	\$ 469,158	\$ 443,229	\$ 410,711
Net income	\$ 1,004	\$ 47,057	\$ 107,264	\$ 151,081	\$ 116,197
Net income per share:					
Basic	\$ 0.02	\$ 0.88	\$ 2.01	\$ 2.84	\$ 2.12
Diluted	\$ 0.02	\$ 0.88	\$ 2.00	\$ 2.83	\$ 2.11
Weighted average shares outstanding:					
Basic	53,740	53,598	53,393	53,216	54,795
Diluted	53,841	53,749	53,611	53,448	55,017
Balance Sheet Data, as of December 31					
Total investments	\$ 3,390,409	\$ 3,349,382	\$ 3,686,528	\$ 3,925,696	\$ 3,650,130
Total assets ⁽¹⁾	\$ 4,805,599	\$ 4,600,726	\$ 4,929,197	\$ 5,065,181	\$ 4,906,021
Reserve for losses and loss adjustment expenses	\$ 2,346,526	\$ 2,119,847	\$ 2,048,381	\$ 1,993,428	\$ 2,005,326
Debt less debt issuance costs ⁽¹⁾	\$ 285,821	\$ 287,757	\$ 411,811	\$ 448,202	\$ 347,858
Total liabilities ⁽¹⁾	\$ 3,293,686	\$ 3,077,724	\$ 3,334,402	\$ 3,266,479	\$ 2,947,667
Total capital	\$ 1,511,913	\$ 1,523,002	\$ 1,594,795	\$ 1,798,702	\$ 1,958,354
Total capital per share of common stock outstanding	\$ 28.11	\$ 28.39	\$ 30.00	\$ 34.00	\$ 37.00
Common stock outstanding, period end	53,792	53,637	53,457	53,251	53,101

⁽¹⁾ For all periods presented, debt is shown net of unamortized debt issuance costs which prior to 2016 were reported as a part of other assets.

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

The following discussion generally focuses on the change in financial condition, results of operation and cash flows for the year ended December 31, 2019 as compared to the year ended December 31, 2018 and be should be read in conjunction with the Consolidated Financial Statements and Notes to those statements which accompany this report. For a full discussion of the changes in the financial condition, results of operations and cash flows for the year ended December 31, 2018 as compared to the year ended December 31, 2017, please refer to Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of ProAssurance's December 31, 2018 report on Form 10-K.

Throughout the discussion we use certain terms and abbreviations, which can be found in the Glossary of Terms and Acronyms at the beginning of this report. In addition, a glossary of insurance terms and phrases is available on the investor section of our website. Throughout the discussion, references to "ProAssurance," "PRA," "Company," "we," "us" and "our" refer to ProAssurance Corporation and its consolidated subsidiaries. The discussion contains certain forward-looking information that involves significant risks, assumptions and uncertainties. As discussed under the heading "Caution Regarding Forward-Looking Statements," our actual financial condition and operating results could differ significantly from these forward-looking statements.

ProAssurance Overview

ProAssurance Corporation is a holding company for property and casualty insurance companies. Our wholly owned insurance subsidiaries provide professional liability insurance for healthcare professionals and facilities, professional liability insurance for attorneys and their firms, liability insurance for medical technology and life sciences risks and workers' compensation insurance. We also provide capital to Syndicate 1729 and are the sole (100%) capital provider for Syndicate 6131 at Lloyd's of London.

We operate in five segments which are based on our internal management reporting structure for which financial results are regularly evaluated by our CODM to determine resource allocation and assess operating performance. Descriptions of ProAssurance's five operating and reportable segments are as follows:

- *Specialty P&C* - This segment includes our professional liability business and medical technology liability business. Professional liability insurance is primarily offered to healthcare providers and institutions and, to a lesser extent, to attorneys and their firms. Medical technology liability insurance is offered to medical technology and life sciences companies that manufacture or distribute products including entities conducting human clinical trials. We also offer custom alternative risk solutions including loss portfolio transfers, assumed reinsurance and captive cell programs for healthcare professional liability insureds. For our alternative market captive cell programs, we cede either all or a portion of the premium to certain SPCs in our Segregated Portfolio Cell Reinsurance segment.
- *Workers' Compensation Insurance* - This segment includes our workers' compensation insurance business which is provided primarily to employers with 1,000 or fewer employees. Our workers' compensation products include guaranteed cost policies, policyholder dividend policies, retrospectively-rated policies, deductible policies and alternative market solutions. Alternative market program premiums are 100% ceded to either SPCs in our Segregated Portfolio Cell Reinsurance segment or, to a limited extent, an unaffiliated captive insurer.
- *Segregated Portfolio Cell Reinsurance* - This segment includes the operating results (underwriting profit or loss, plus investment results) of SPCs at Inova Re and Eastern Re, our Cayman Islands SPC operations. Each SPC is owned, fully or in part, by an agency, group or association, and the operating results of the SPCs are due to the participants of that cell. We participate to a varying degree in the results of selected SPCs and, for the SPCs in which we participate, our participation interest ranges from a low of 20% to a high of 85%. SPC operating results attributable to external cell participants are reflected as an SPC dividend expense (income) in our Segregated Portfolio Cell Reinsurance segment. The SPCs assume workers' compensation insurance, healthcare professional liability insurance or a combination of the two from our Workers' Compensation Insurance and Specialty P&C segments. In addition, an SPC at Eastern Re assumed an errors and omissions liability policy from a captive insurer unaffiliated with ProAssurance during 2019. We do not participate in the SPC that assumed this policy; therefore, the operating results of this policy are reflected in the SPC dividend expense (income).
- *Lloyd's Syndicates* - This segment includes the operating results from our participation (61% for the 2019 underwriting year) in Lloyd's of London Syndicate 1729 and our 100% participation in Syndicate 6131, which is an SPA that underwrites on a quota share basis with Syndicate 1729. To reduce our exposure and the associated earnings volatility, we decreased our participation in the operating results of Syndicate 1729 for the 2020 underwriting year from 61% to 29%. The results of this segment are normally reported on a quarter lag, except when information is available that is material to the current period. Syndicate 1729 underwrites risks over a wide range of property and casualty insurance and reinsurance lines in both the U.S. and international markets while

Syndicate 6131 focuses on contingency and specialty property business, also within the U.S. and international markets.

- *Corporate* - This segment includes our investment operations, other than those reported in our Segregated Portfolio Cell Reinsurance and Lloyd's Syndicates segments, interest expense and U.S. income taxes. This segment also includes non-premium revenues generated outside of our insurance entities and corporate expenses.

Additional information regarding our segments is included in Note 17 of the Notes to Consolidated Financial Statements, Part I and in the Segment Operating Results sections that follow.

Growth Opportunities and Outlook

Over the long-term we expect our growth to come primarily through controlled expansion of our existing operations. In addition, from time to time, we may identify opportunities for growth through the acquisition of other insurers, service providers or books of business. Growth through acquisition is often opportunistic and cannot be predicted.

We operate in very competitive markets and face strong competition from other insurance companies for all of our insurance products. HCPL insurance represents the largest product line in our gross premiums written (53% in 2019) and the healthcare market has been trending toward the formation of larger medical practice groups and the employment of physicians by hospitals. Large medical groups and facilities frequently manage their healthcare professional liability exposure outside of the traditional first dollar insurance marketplace using self-insured mechanisms and other risk sharing arrangements. In response to these trends, we offer products designed to provide greater risk sharing options to hospitals and large physician groups. Since the middle of 2019, new senior leadership in our Specialty P&C segment has executed a comprehensive underwriting strategy in response to emerging loss trends and changing conditions in the HCPL industry. This includes organizational structure enhancements, recruitment of additional talent in specialty underwriting, price strengthening and tightening of underwriting criteria, terms and conditions. Furthermore, the new senior leadership team for our Specialty P&C segment executed several strategic business decisions intended to improve operating performance by bringing together all of the Specialty P&C segment lines of business and operations under a unified organizational and management structure.

We believe our position in the healthcare liability space is strengthened by our ability to offer synergistic solutions through our operations at Eastern, a provider of workers' compensation insurance which currently represents the second largest product line in our gross premiums written (28% in 2019, including alternative market premiums). The workers' compensation industry is highly competitive in the geographic markets in which we operate and multi-line insurers continue to increase their leverage of workers' compensation business in their product offerings. We believe our workers' compensation product offerings allow us to provide flexibility in offering solutions to our customers at a competitive price. In addition, we believe that our claims handling and risk management services are attractive to our customers and provide us with a competitive advantage even when our pricing is higher than our competitors.

We have also been a consistent acquirer of other physician insurers, completing four acquisitions between 2009 and 2013 as well as acquiring an agency largely focused on the professional liability needs of allied healthcare providers, an insurer focused on the legal professional liability market and a mutual company that focused on medical technology liability insurance for companies that manufacture or distribute medical products.

We provide capital to Lloyd's of London Syndicate 1729 and Syndicate 6131 which represents 11% of our gross premiums written in 2019. As previously discussed, to reduce our exposure and the associated earnings volatility, we decreased our participation in the operating results of Syndicate 1729 for the 2020 underwriting year from 61% to 29%. Our allocated share of Syndicate 1729's maximum underwriting capacity for 2020 is £39 million (approximately \$51 million at December 31, 2019). We continue to provide 100% of the capital to Syndicate 6131 which has a maximum underwriting capacity for the 2020 underwriting year of £12 million (approximately \$15.9 million at December 31, 2019).

We believe our emphasis on the fair treatment of our insureds and other important stakeholders through our commitment to "Treated Fairly" has enhanced our market position and differentiated us from other insurers. We will continue to practice our values of integrity, leadership, relationships and enthusiasm in all of our activities. We will honor these values in the execution of "Treated Fairly" to perform our Mission and realize our Vision. We believe that as we reach more customers with this message we will continue to improve retention and add new insureds.

Key Performance Measures

We are committed to disciplined underwriting, pricing and loss reserving practices as well as conservative investment practices, even during difficult market conditions. We are also committed to maintaining prudent operating and financial leverage. We recognize the importance that our customers and producers place on the financial strength of our insurance subsidiaries, and we manage our business to protect our financial security.

In evaluating our performance, we consider a number of performance measures, including the following:

- The *net loss ratio* which is calculated as net losses and loss adjustment expenses incurred divided by net premiums earned and is a component of underwriting profitability.
- The *underwriting expense ratio* which is calculated as underwriting, policy acquisition and operating expenses incurred divided by net premiums earned and is a component of underwriting profitability.
- The *combined ratio* which is the sum of the net loss ratio and the underwriting expense ratio and measures underwriting profitability.
- The *investment income ratio* which is calculated as net investment income divided by net premiums earned and measures the contribution investment earnings provide to our overall profitability.
- The *operating ratio* which is the combined ratio, less the investment income ratio. This ratio provides the combined effect of underwriting profitability and investment income.
- The *tax ratio* which is calculated as total income tax expense (benefit) divided by income (loss) before income taxes and measures our effective tax rate.
- *ROE* which is calculated as net income divided by the average of beginning and ending shareholders' equity. This ratio measures our overall after-tax profitability and shows how efficiently capital is being used.
- *Book value per share* which is calculated as total shareholders' equity at the balance sheet date divided by the total number of common shares outstanding. This ratio measures the net worth of the company to shareholders on a per-share basis. The declaration of dividends decreases book value per share. Growth in book value per share, adjusted for dividends declared, is an indicator of overall profitability.

We particularly focus on our combined ratio and investment returns, both of which directly affect our ROE and growth in our book value. We currently target a dynamic long-term ROE of 700 basis points above the 10-year U.S. Treasury rate, which at December 31, 2019 was approximately 8.9%.

Our emphasis on rate adequacy, selective underwriting, effective claims management and prudent investments is a key factor in our ability to achieve our long-term ROE target. We closely monitor premium revenues, losses and loss adjustment expenses, and underwriting and policy acquisition expenses. Our overall investment strategy is to focus on maximizing current income from our investment portfolio while maintaining safety, liquidity, duration and portfolio diversification. While we engage in activities that generate other income, these activities, such as insurance agency services, do not constitute a significant use of our resources or a significant source of revenues or profits.

Critical Accounting Estimates

Our Consolidated Financial Statements are prepared in conformity with GAAP. Preparation of these financial statements requires us to make estimates and assumptions that affect the amounts we report on those statements. We evaluate these estimates and assumptions on an ongoing basis based on current and historical developments, market conditions, industry trends and other information that we believe to be reasonable under the circumstances. We can make no assurance that actual results will conform to our estimates and assumptions; reported results of operations may be materially affected by changes in these estimates and assumptions.

Management considers the following accounting estimates to be critical because they involve significant judgment by management and those judgments could result in a material effect on our financial statements.

Reserve for Losses and Loss Adjustment Expenses

The largest component of our liabilities is our reserve for losses and loss adjustment expenses ("reserve for losses" or "reserve"), and the largest component of expense for our operations is incurred losses and loss adjustment expenses (also referred to as "losses and loss adjustment expenses," "incurred losses," "losses incurred" and "losses"). Incurred losses reported in any period reflect our estimate of losses incurred related to the premiums earned in that period as well as any changes to our previous estimate of the reserve required for prior periods.

As of December 31, 2019 our reserve is comprised almost entirely of long-tail exposures. The estimation of long-tailed losses is inherently difficult and is subject to significant judgment on the part of management. Due to the nature of our claims, our loss costs, even for claims with similar characteristics, can vary significantly depending upon many factors, including but not limited to the specific characteristics of the claim and the manner in which the claim is resolved. Long-tailed insurance is characterized by the extended period of time typically required both to assess the viability of a claim and potential damages, if any, and to reach a resolution of the claim. The claims resolution process may extend to more than five years. The combination of continually changing conditions and the extended time required for claim resolution results in a loss cost estimation process that requires actuarial skill and the application of significant judgment, and such estimates require periodic modification.

Our reserve is established by management after taking into consideration a variety of factors including premium rates, claims frequency and severity, historical paid and incurred loss development trends, the expected effect of inflation, general economic and social trends, the legal and political environment and the conclusions reached by our internal and consulting actuaries. We update and review the data underlying the estimation of our reserve for losses each reporting period and make adjustments to loss estimation assumptions that we believe best reflect emerging data. Both our internal and consulting actuaries perform an in-depth review of our reserve for losses on at least a semi-annual basis using the loss and exposure data of our insurance subsidiaries.

We partition our reserves by accident year, which is the year in which the claim becomes our liability. For claims-made policies, the insured event generally becomes a liability when the event is first reported to us. For occurrence policies, the insured event becomes a liability when the event takes place. For retroactive coverages, the insured event becomes a liability at inception of the underlying contract. As claims are incurred (reported) and claim payments are made, they are aggregated by accident year for analysis purposes. We also partition our reserves by reserve type: case reserves and IBNR reserves. Case reserves are established by our claims departments based upon the particular circumstances of each reported claim and represent our estimate of the future loss costs (often referred to as expected losses) that will be paid on reported claims. Case reserves are decremented as claim payments are made and are periodically adjusted upward or downward as estimates regarding the amount of future losses are revised; reported loss for an individual claim is the case reserve at any point in time plus the claim payments that have been made to date. IBNR reserves represent our estimate in the aggregate of future development on losses that have been reported to us and our estimate of losses that have been incurred but not reported to us.

Our reserving process can be broadly grouped into three areas: the establishment of the reserve for the current accident year (the initial reserve), the re-estimation of the reserve for prior accident years (development of prior accident years) and the establishment of the initial reserve for risks assumed in business combinations, applicable only in periods in which acquisitions occur (the acquired reserve). A summary of the activity in our net reserve for losses during 2019 and 2018 is provided under the heading "Losses" in the Liquidity and Capital Resources and Financial Condition section that follows.

Current Accident Year - Initial Reserve

Considerable judgment is required in establishing our initial reserve for any current accident year period, as there is limited data available upon which to base our estimate (see further discussion that follows under the heading "Uses of Judgment"). Our process for setting an initial reserve considers the unique characteristics of each product, but in general we rely heavily on the loss assumptions that were used to price business, as our pricing reflects our analysis of loss costs that we expect to incur relative to the insurance product being priced.

Specialty P&C Segment. Loss costs within this segment are impacted by many factors including but not limited to the nature of the claim, including whether or not the claim is an individual or a mass tort claim, the personal situation of the claimant or the claimant's family, the outcome of jury trials, the legislative and judicial climate where any potential litigation may occur, general economic and social trends and, for claims involving bodily injury, the trend of healthcare costs. Within our Specialty P&C segment, for our HCPL business (76% of our consolidated gross reserve for losses and loss adjustment expenses as of December 31, 2019), we set an initial reserve based upon our evaluation of the current loss environment including frequency, severity, economic inflation, social inflation and legal trends. The initial loss ratio for our HCPL business has ranged from 87% to 106% in recent years. We have recently trended towards the higher end of this range due to increased reserve estimates for a large national healthcare account that far exceeded the assumptions we made when originally underwriting the account as well as increases in loss severity in the broader HCPL industry, including our excess and surplus lines of business. See further discussion on our current accident year net loss ratio in our Segment Operating Results - Specialty Property & Casualty section that follows under the heading "Losses." A similar practice is followed for our legal professional liability business (3% of our consolidated gross reserve for losses and loss adjustment expenses as of December 31, 2019).

The risks insured in our medical technology liability business (3% of our consolidated gross reserve for losses and loss adjustment expenses as of December 31, 2019) are more varied, and policies are individually priced based on the risk characteristics of the policy and the account. The insured risks range from startup operations to large multinational entities, and the larger entities often have significant deductibles or self-insured retentions. Reserves are established using our most recently developed actuarial estimates of losses expected to be incurred based on factors which include results from prior analysis of similar business, industry indications, observed trends and judgment. Claims in this line of business primarily involve bodily injury to individuals and are affected by factors similar to those of our HCPL line of business. For the medical technology liability business, we also establish an initial reserve using a loss ratio approach, including a provision in consideration of historical loss volatility that this line of business has exhibited.

Workers' Compensation Insurance Segment. Many factors affect the ultimate losses incurred for our workers' compensation coverages (10% of our consolidated gross reserve for losses and loss adjustment expenses as of December 31, 2019) including but not limited to the type and severity of the injury, the age, health and occupation of the injured worker, the estimated length of disability, medical treatment and related costs, and the jurisdiction and workers' compensation laws of the state of the injury occurrence. We use various actuarial methodologies in developing our workers' compensation reserve, combined with a review of the payroll exposure base. For the current accident year, given the lack of seasoned information, the different actuarial methodologies produce results with significant variability; therefore, more emphasis is placed on supplementing results from the actuarial methodologies with trends in exposure base, medical expense inflation, general inflation, severity, and claim counts, among other things, to select an expected loss ratio.

Segregated Portfolio Cell Reinsurance Segment. The factors that affect the ultimate losses incurred for the workers' compensation and healthcare professional liability coverages assumed by the SPCs at Inova Re and Eastern Re (4% of our consolidated gross reserve for losses and loss adjustment expenses as of December 31, 2019) are consistent with that of our Workers' Compensation Insurance and Specialty P&C segments, respectively.

Lloyd's Syndicates Segment. Initial reserves for Syndicate 1729 and Syndicate 6131 are primarily recorded using the loss assumptions by risk category incorporated into each Syndicate's business plan submitted to Lloyd's with consideration given to loss experience incurred to date (4% of our consolidated gross reserve for losses and loss adjustment expenses as of December 31, 2019). The assumptions used in each business plan are consistent with loss results reflected in Lloyd's historical data for similar risks. The loss ratios may also fluctuate due to the timing of earned premium adjustments. Such adjustments may be the result of premiums for certain policies and assumed reinsurance contracts being reported subsequent to the coverage period and may be subject to adjustment based on loss experience. Premium and exposure for some of Syndicate 1729's insurance policies and reinsurance contracts are initially estimated and subsequently recorded over an extended period of time as reports are received under delegated underwriting authority programs. When reports are received, the premium, exposure and corresponding loss estimates are revised accordingly. Changes in loss estimates due to premium or exposure fluctuations are incurred in the accident year in which the premium is earned.

For significant property catastrophe exposures, Syndicate 1729 uses third-party catastrophe models to accumulate a listing of potentially affected policies. Each identified policy is given an estimate of loss severity based upon a combination of factors including the probable maximum loss of each policy, market share analytics, underwriting judgment, client/broker estimates and historical loss trends for similar events. These models are inherently uncertain, reliant upon key assumptions and management judgment and are not always a representation of actual events and ensuing potential loss exposure. Determination of actual losses may take an extended period of time until claims are reported and resolved, including coverage litigation.

Development of Prior Accident Years

In addition to setting the initial reserve for the current accident year, each period we reassess the amount of reserve required for prior accident years.

The foundation of our reserve re-estimation process is an actuarial analysis that is performed by both our internal and consulting actuaries. This very detailed analysis projects ultimate losses based on partitions which include line of business, geography, coverage layer and accident year. The procedure uses the most representative data for each partition, capturing its unique patterns of development and trends. In all there are over 200 different partitions of our business for purposes of this analysis. We believe that the use of consulting actuaries provides an independent view of our loss data as well as a broader perspective on industry loss trends.

For the Specialty P&C, Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance segments, the analysis performed by the consulting actuaries analyzes each partition of our business in a variety of ways and uses multiple actuarial methodologies in performing these analyses, including:

- Bornhuetter-Ferguson (Paid and Reported) Method
- Paid Development Method
- Reported (Incurred) Development Method
- Average Paid Value Method
- Average Reported Value Method
- The Adjusted Reported and the Adjusted Paid Methods

A brief description of each method follows.

Bornhuetter-Ferguson Method. We use both the Paid and the Reported Bornhuetter-Ferguson Methods. The Paid Method assigns partial weight to initial expected losses for each accident year (initial expected losses being the first established case and IBNR reserves for a specific accident year) and partial weight to paid to date losses. The Reported Method assigns partial weight to the initial expected losses and partial weight to current expected losses. The weights assigned to the initial expected losses decrease as the accident year matures.

Paid Development and Reported (Incurred) Development Methods. These methods use historical, cumulative losses (paid losses for the Paid Development Method, reported losses for the Reported (Incurred) Development Method) by accident year and develop those actual losses to estimated ultimate losses based upon the assumption that each accident year will develop to estimated ultimate cost in a manner that is analogous to prior years, adjusted as deemed appropriate for the expected effects of known changes in the claim payment environment (and case reserving environment for the Reported (Incurred) Development Method); and to the extent necessary, supplemented by analyses of the development of broader industry data.

Average Paid Value and Average Reported Value Methods. In these methods, average claim cost data (paid claim cost for the Average Paid Value Method and reported claim cost for the Reported Value Method) is developed to an ultimate average cost level by report year based on historical data. Claim counts are similarly developed to an ultimate count level. The average claim cost (after rounding and adjustment, if necessary, to accommodate report year data that is not considered to be predictive) is then multiplied by the ultimate claim counts by report year to derive ultimate loss and ALAE.

The Adjusted Reported and the Adjusted Paid Methods. These methods are based on the premise that the relative change in a given accident year's adjusted reported loss estimates (Adjusted Reported Method) or adjusted paid losses (Adjusted Paid Method) from one evaluation point to the next is similar to changes observed for earlier accident years at the same evaluation points. In the Adjusted Reported Method reported loss estimates are adjusted to reflect a common case reserve adequacy basis. In the Adjusted Paid Method, the historical paid loss experience is adjusted to reflect a common claim settlement rate basis. We principally use these methods to evaluate reserves for our legal liability coverages.

Generally, methods such as the Bornhuetter-Ferguson Method are used on more recent accident years where we have less data on which to base our analysis. As time progresses and we have an increased amount of data for a given accident year, we begin to give more confidence to the development and average methods, as these methods typically rely more heavily on our own historical data. These methods emphasize different aspects of loss reserve estimation and provide a variety of perspectives for our decisions.

Certain of the methodologies utilized to estimate the ultimate losses for each partition of our reserves consider the actual amounts paid. Paid data is particularly influential when a large portion of known claims have been closed, as is the case for older accident years. In selecting a point estimate for each partition, management considers the extent to which trends are emerging consistently for all partitions and known industry trends. Thus, actual, rather than estimated severity trends are given more consideration. If actual severity trends are lower than those estimated at the time that reserves were previously established, the recognition of favorable development is indicated. This is particularly true for older accident years where our actuarial methodologies give more weight to actual loss costs (severity).

The various actuarial methods discussed above are applied in a consistent manner from period to period. In addition, we perform statistical reviews of claims data such as claim counts, average settlement costs and severity trends when establishing our reserves.

We utilize the selected point estimates of ultimate losses to develop estimates of ultimate losses recoverable from reinsurers, based on the terms and conditions of our reinsurance agreements. An overall estimate of the amount receivable from reinsurers is determined by combining the individual estimates. Our net reserve estimate is the gross reserve point estimate less the estimated reinsurance recovery.

For our Workers' Compensation Insurance segment and for the workers' compensation exposures in our Segregated Portfolio Cell Reinsurance segment, we utilize the Reported (Incurred) Development Method, Paid Development Method and Bornhuetter-Ferguson Method, to develop our reserve for each accident year. The actuarial review includes the stratification of claims data (lost time claims, medical only claims) using different variations that allow us to identify trends that may not be readily identifiable if the data was evaluated only in the aggregate. Reported and paid loss development factors are key assumptions in the reserve estimation process and are based on our historical reported and paid loss development patterns. As accident years mature, the various actuarial methodologies produce more consistent loss estimates.

For our Lloyd's Syndicates segment we rely on the analysis of actual loss experience on the book of business written by Syndicate 1729 to determine loss development by accident year.

Acquired Reserve

The acquisition of Eastern on January 1, 2014 increased our loss reserve by \$153.2 million which represented the fair value of Eastern's loss reserve at the time of the acquisition. The fair value of the reserve for losses and loss adjustment expenses and related reinsurance recoverables was based on an actuarial estimate of the expected future net cash flows, a reduction of those cash flows for the time value of money determined utilizing the U.S. Treasury Yield Curve, and a risk adjustment to reflect the net present value of profit that an investor would demand in return for the assumption of the associated risks. Expected net cash flows were derived from the expected loss payment patterns included in an actuarial analysis of Eastern's reserve performed as of December 31, 2013. The fair value of the reserve, including the risk margin discussed above, exceeded the undiscounted loss reserve previously established by Eastern by \$9.3 million; this fair value adjustment was amortized over the average expected life of the reserve of 6 years. The fair value adjustment has been fully amortized as of December 31, 2019.

Use of Judgment

The process of estimating reserves involves a high degree of judgment and is subject to a number of variables. These variables can be affected by both views of internal and external events, such as changes in views of economic inflation, legal trends and legislative changes, as well as differentiating views of individuals involved in the reserve estimation process, among others. We continually refine our estimates in a regular, ongoing process as historical loss experience develops and additional claims are reported and settled. Our objective is to consider all significant facts and circumstances known at the time.

We use various actuarial methods in the process of setting reserves. Each actuarial method generally returns a different value, and for the more recent accident years the variations among the various methodologies can be significant. For each partition of our reserves, we evaluate the results of the various methods, along with the supplementary statistical data regarding such factors as closed with and without indemnity ratios, claim severity trends, the expected duration of such trends, changes in the legal and legislative environment and the current economic environment to develop a point estimate based upon management's judgment and past experience. The series of selected point estimates is then combined to produce an overall point estimate for ultimate losses.

HCPL. Over the past several years the most influential factor affecting the analysis of our HCPL reserves and the related development recognized has been an observed increase in claim severity for the broader HCPL industry as well as higher initial loss expectations on incurred claims. The severity trend is an explicit component of our pricing models, whereas in our reserving process the severity trend's impact is implicit. Our estimate of this trend and our expectations about changes in this trend impact a variety of factors, from the selection of expected loss ratios to the ultimate point estimates established by management.

Because of the implicit and wide-ranging nature of severity trend assumptions on the loss reserving process, it is not practical to specifically isolate the impact of changing severity trends. However, because severity is an explicit component of our HCPL pricing process we can better isolate the impact that changing severity can have on our loss costs and loss ratios in regards to our pricing models for this business component. Our current HCPL pricing models assume severity trends in the range of 2% to 5% depending on state, territory and specialty. In some portions of our HCPL business we have observed and reflected higher severity trends in our estimates of losses and loss adjustment expenses.

If the severity trend were to be higher by 1 percentage point, the impact would be an increase in our initial expected loss ratio for this business of 3.2 percentage points, based on current claim disposition patterns. An increase in the severity trend of 3 percentage points would result in a 10.1 percentage point increase in our initial expected loss ratio. Due to the long-tailed nature of our claims and the previously discussed historical volatility of loss costs, selection of a severity trend assumption is a

subjective process that is inherently likely to prove inaccurate over time. Given the long tail and volatility, we are generally cautious in making changes to the severity assumptions within our pricing models. All open claims and accident years are generally impacted by a change in the severity trend, which compounds the effect of such a change.

Although the future degree and impact of the ultimate severity trend remains uncertain due to the long-tailed nature of our business, we have given consideration to observed loss costs in setting our rates. For our HCPL business, this practice had generally resulted in rate reductions as claim frequency declined and remained at historically low levels. For example, on average, excluding our podiatry business acquired in 2009, we had gradually reduced the premium rates we charged on our standard physician renewal business (our largest HCPL line) by approximately 17% from the beginning of 2006 to December 31, 2016.

However, from early 2017 to December 31, 2019, the average charged premium rates on our standard physician renewal business have increased by approximately 4% per annum, and we anticipate further rate increases due to indications of increasing loss severity.

Workers' Compensation. The projection of changes in claim severity trend has not historically been an influential factor affecting our analysis of workers' compensation reserves, as claims are typically resolved more quickly than the industry norm. As previously mentioned, the determination and calculation of loss development factors, in particular, the selection of tail factors which are used to extend the projection of losses beyond historical data, requires considerable judgment.

Loss Development

We recognized net favorable reserve development of \$11.8 million for the year ended December 31, 2019, of which \$10.1 million related to our Segregated Portfolio Cell Reinsurance segment and \$7.8 million related to our Workers' Compensation Insurance segment, partially offset by net unfavorable reserve development of \$5.7 million and \$0.4 million related to our Specialty P&C and Lloyd's Syndicates segments, respectively.

Net favorable reserve development recognized within our Segregated Portfolio Cell Reinsurance segment primarily reflected better than expected claim trends in the 2015 through 2018 accident years. The improved claim trends reflected lower frequency and severity than anticipated at the time the reserves were established.

Net favorable reserve development recognized within our Workers' Compensation Insurance segment reflected overall favorable trends in claim closing patterns primarily in the 2015 and 2016 accident years.

Net unfavorable reserve development of \$5.7 million in our Specialty P&C segment was driven by \$51.5 million of unfavorable reserve development recognized in 2019 related to our reserves for the previously mentioned large national healthcare account that has experienced losses far exceeding the assumptions we made when underwriting the account, beginning in 2016. Excluding the unfavorable reserve development related to this account, the Specialty P&C segment recognized favorable reserve development totaling \$45.8 million in 2019 which included favorable reserve development in our medical technology liability line of business of \$12.8 million. Net favorable reserve development in 2018 of \$77.0 million included \$13.3 million and \$10.9 million attributable to our medical technology liability and legal professional liability lines of business, respectively. While the majority of our reserves in our Specialty P&C segment continue to develop favorably, the favorable development we recognized, excluding the large national healthcare account, was lower as compared to 2018, in part due to the observed increase in claim severity in the broader HCPL industry. See further discussion in our Segment Operating Results - Specialty Property & Casualty section that follows under the heading "Losses."

Net unfavorable development recognized within our Lloyd's Syndicates segment was driven by higher than expected losses and development on certain large claims which resulted in unfavorable development with respect to a previous year of account. See further discussion in our Segment Operating Results - Lloyd's Syndicates section that follows.

Loss Development by Line of Business

Professional Liability

Our professional liability line of business includes both our HCPL and legal professional lines, with our HCPL line representing the largest component of our reserve. In support of our concern that the decline in frequency will result in a higher severity trend for our HCPL claims, we saw our closed-with-indemnity-payment ratio (i.e., the number of claims closed with an indemnity or loss payment as compared to the total number of closed claims) for our claims increase from 10% in 2005 to 18% in 2019.

The following table presents additional information about the loss development for our professional liability line of business:

(\$ in thousands)		2019		2018		2017	
Accident Years	Estimated Ultimate Losses, Net of Reinsurance, December 31, 2019	Reserve Development (favorable) unfavorable	% of Known Claims Closed	Reserve Development (favorable) unfavorable	% of Known Claims Closed	Reserve Development (favorable) unfavorable	% of Known Claims Closed
2019	\$ 512,638	N/A	25.3%	N/A	N/A	N/A	N/A
2018	\$ 516,785	\$ 69,518	46.9%	N/A	18.0%	N/A	N/A
2017	\$ 438,847	\$ 35,591	67.8%	\$ 13,637	46.4%	N/A	20.4%
2016	\$ 405,034	\$ 1,848	82.1%	\$ 10,648	66.4%	\$ 3,413	48.2%
2015	\$ 367,663	\$ (27,495)	89.6%	\$ (1,268)	80.8%	\$ 1,510	68.7%
2014	\$ 335,433	\$ (17,412)	93.9%	\$ (16,627)	89.4%	\$ (15,782)	82.3%
2013	\$ 359,089	\$ (12,799)	96.9%	\$ (20,398)	94.7%	\$ (23,164)	90.4%
2012	\$ 379,772	\$ (9,173)	98.7%	\$ (13,403)	97.4%	\$ (17,187)	95.3%
2011	\$ 373,439	\$ (4,343)	98.9%	\$ (13,940)	97.8%	\$ (18,277)	96.4%
2010	\$ 375,783	\$ (4,686)	99.3%	\$ (4,268)	99.1%	\$ (17,224)	98.7%
Prior to 2010	\$ 7,532,378	\$ (12,543)		\$ (18,174)		\$ (22,508)	

During 2019 the loss experience in our HCPL excess and surplus lines of business deteriorated further, particularly in regard to the reserves we established for a large national healthcare account, as previously discussed. This deterioration is the primary driver of the unfavorable development we recognized in 2019 for accident years 2016-2018. During the years ended December 31, 2018 and 2017, reflection of higher severity trends in certain HCPL lines of business also resulted in increases of estimated ultimate losses for open claims for earlier accident years, which resulted in a lower amount of favorable development recognized in 2018 and 2017 as compared to earlier years.

This can be seen in looking at both the absolute amount of reserve development recognized for the less developed accident years as well as the size of such development when compared to established ultimates for those same accident years at the end of the preceding calendar year. The following table provides this information for years ended December 31, 2019, 2018 and 2017 with respect to the three then most recent prior accident years:

(\$ in millions)	2019		2018		2017	
Prior accident years	2016-2018		2015-2017		2014-2016	
Net favorable (unfavorable) development recognized for the specified years	\$	(107.0)	\$	(23.0)	\$	10.9
Development as a % of established ultimates, prior calendar year end		(8.5%)		(2.0%)		0.9%

Medical Technology Liability

Our medical technology liability line of business has not experienced the change in claim frequency previously described for HCPL. However, the nature of the risks insured and volatility of the loss experience in this line of business has produced more variable loss development, as presented in the following table:

(\$ in thousands)

Accident Years	Estimated Ultimate Losses, Net of Reinsurance, December 31, 2019	2019		2018		2017	
		Reserve Development (favorable) unfavorable	% of Known Claims Closed	Reserve Development (favorable) unfavorable	% of Known Claims Closed	Reserve Development (favorable) unfavorable	% of Known Claims Closed
2019	\$ 13,909	N/A	13.4%	N/A	N/A	N/A	N/A
2018	\$ 12,249	\$ (1,856)	68.2%	N/A	52.4%	N/A	N/A
2017	\$ 12,063	\$ (2,166)	85.6%	\$ (695)	72.2%	N/A	42.2%
2016	\$ 11,223	\$ (1,249)	65.9%	\$ (1,114)	62.8%	\$ (537)	53.3%
2015	\$ 9,283	\$ (1,548)	85.8%	\$ (1,511)	64.6%	\$ (1,755)	79.5%
2014	\$ 10,148	\$ (1,823)	94.3%	\$ (1,526)	93.2%	\$ (187)	92.5%
2013	\$ 5,021	\$ (291)	98.7%	\$ (1,526)	98.7%	\$ (2,622)	96.4%
2012	\$ 8,505	\$ (1,362)	99.2%	\$ 585	98.8%	\$ (1,251)	96.9%
2011	\$ 9,141	\$ (467)	99.6%	\$ (5,273)	99.8%	\$ 92	73.9%
2010	\$ 23,502	\$ (828)	99.8%	\$ 1,449	99.6%	\$ (1,385)	96.3%
Prior to 2010	\$ 553,844	\$ (1,175)		\$ (3,680)		\$ (2,428)	

Approximately \$6.8 million of the \$12.8 million total net favorable development recognized in 2019 related to the 2014 to 2017 accident years. The development for the 2014 to 2017 accident years represents a 13.7% reduction to the ultimates established for those reserves at December 31, 2018. Approximately \$5.7 million of the \$13.3 million total net favorable development recognized in 2018 related to the 2013 to 2016 accident years. The development for the 2013 to 2016 accident years represents a 12.3% reduction to the ultimates established for those reserves at December 31, 2017. Approximately \$5.8 million of the \$10.1 million total net favorable development recognized in 2017 related to the 2012 to 2015 accident years. The development for the 2012 to 2015 accident years represents a 12.1% reduction to the ultimates established for those reserves at December 31, 2016.

In 2019, 2018 and 2017 the development was largely attributable to favorable results from claims closed during the year. As time has elapsed we have recognized that actual loss experience has on average been better than estimated. We have been cautious in recognizing the improvement, but as claims have matured and claims are closed or have become more certain for the remaining open claims, we have revised reserve estimates. We believe the need for a cautious approach is required as outcomes are uncertain and results can be significantly affected by outcomes for a small number of cases.

Workers' Compensation

Claims in our workers' compensation line of business have historically closed at a faster rate than in our HCPL or medical technology liability lines of business. This faster disposition rate, along with a lower net retention after the application of reinsurance, has resulted in less volatility in loss estimates on a net basis. However, a change in the number of individually-severe claims can create volatility in a given accident year. The following table presents additional information about the loss development for our workers' compensation line of business:

Accident Years	Estimated Ultimate Losses, Net of Reinsurance, December 31, 2019	2019		2018		2017	
		Reserve Development (favorable) unfavorable	% of Known Claims Closed	Reserve Development (favorable) unfavorable	% of Known Claims Closed	Reserve Development (favorable) unfavorable	% of Known Claims Closed
2019	\$ 168,257	N/A	43.0%	N/A	N/A	N/A	N/A
2018	\$ 159,188	\$ (2,561)	81.8%	N/A	40.0%	N/A	N/A
2017	\$ 134,119	\$ (4,349)	91.4%	\$ (4,203)	80.8%	N/A	37.0%
2016	\$ 114,223	\$ (8,923)	95.2%	\$ (8,257)	91.8%	\$ (7,546)	82.5%
2015	\$ 123,074	\$ (2,128)	96.9%	\$ (1,998)	95.3%	\$ (5,773)	92.4%
2014	\$ 120,948	\$ (363)	98.9%	\$ (92)	98.4%	\$ (1,428)	97.0%
2013	\$ 115,698	\$ 2,405	99.4%	\$ (227)	99.2%	\$ 441	98.3%
2012	\$ 94,803	\$ (72)	99.7%	\$ (565)	99.5%	\$ (308)	99.3%
2011	\$ 90,967	\$ (134)	99.5%	\$ (60)	99.3%	\$ 241	99.0%
2010	\$ 71,519	\$ (305)	99.6%	\$ (54)	99.4%	\$ (42)	99.4%
Prior to 2010	\$ 401,898	\$ 40		\$ (11)		\$ 1,710	

In 2019, we recognized \$10.1 million of net favorable development in our Segregated Portfolio Cell Reinsurance segment and \$7.8 million of net favorable development in our Workers' Compensation Insurance segment. In 2018, we recognized \$9.0 million of net favorable development in our Segregated Portfolio Cell Reinsurance segment and \$8.0 million of net favorable development in our Workers' Compensation Insurance segment. In 2017, we recognized \$8.5 million of net favorable development in our Segregated Portfolio Cell Reinsurance segment and \$5.7 million of net favorable development in our Workers' Compensation Insurance segment. In each of the years ended December 31, 2019, 2018 and 2017, net favorable development in our Workers' Compensation Insurance segment included \$1.6 million related to the amortization of the purchase accounting fair value adjustment. As previously discussed, this fair value adjustment has been fully amortized as of December 31, 2019.

Variability of Loss Reserves

As previously noted, the number of data points and variables considered and the subjective process followed in establishing our loss reserve makes it impractical to isolate individual variables and demonstrate their impact on our estimate of loss reserves. However, to provide a better understanding of the potential variability in our reserves, we have modeled implied reserve ranges around our single point net reserve estimates for our various lines of business assuming different confidence levels. The ranges have been developed by aggregating the expected volatility of losses across partitions of our business to obtain a consolidated distribution of potential reserve outcomes. The aggregation of this data takes into consideration correlations among our geographic and specialty mix of business. The result of the correlation approach to aggregation is that the ranges are narrower than the sum of the ranges determined for each partition.

We have used this modeled statistical distribution to calculate an 80% and 60% confidence interval for the potential outcome of our consolidated net reserve for losses. The high and low end points of the distributions are as follows:

	Low End Point	Carried Net Reserve	High End Point
80% Confidence Level	\$1.479 billion	\$1.956 billion	\$2.517 billion
60% Confidence Level	\$1.649 billion	\$1.956 billion	\$2.263 billion

Any change in our estimate of net ultimate losses for prior years is reflected in net income in the period in which such changes are made.

Due to the size of our consolidated reserve for losses and the large number of claims outstanding at any point in time, even a small percentage adjustment to our total reserve estimate could have a material effect on our results of operations for the period in which the adjustment is made, as was the case in 2019, 2018 and 2017.

Reinsurance

We use insurance and reinsurance (collectively, “reinsurance”) to provide capacity to write larger limits of liability, to provide reimbursement for losses incurred under the higher limit coverages we offer, to provide protection against losses in excess of policy limits and, in the case of risk sharing arrangements, to align our objectives with those of our strategic business partners and to provide custom insurance solutions for large customer groups. The purchase of reinsurance does not relieve us from the ultimate risk on our policies; however, it does provide reimbursement for certain losses we pay.

We make a determination of the amount of insurance risk we choose to retain based upon numerous factors, including our risk tolerance and the capital we have to support it, the price and availability of reinsurance, the volume of business, our level of experience with a particular set of claims and our analysis of the potential underwriting results. We purchase excess of loss reinsurance to limit the amount of risk we retain and we do so from a number of companies to mitigate concentrations of credit risk. We utilize reinsurance brokers to assist us in the placement of these reinsurance programs and in the analysis of the credit quality of our reinsurers. The determination of which reinsurers we choose to do business with is based upon an evaluation of their then current financial strength, rating, stability and claims payment practices.

We evaluate each of our ceded reinsurance contracts at inception to confirm that there is sufficient risk transfer to allow the contract to be accounted for as reinsurance under current accounting guidance. At December 31, 2019, all ceded contracts were accounted for as risk transferring contracts.

Our receivable from reinsurers on unpaid losses and loss adjustment expenses represents our estimate of the amount of our reserve for losses that will be recoverable under our reinsurance programs. We base our estimate of funds recoverable upon our expectation of ultimate losses and the portion of those losses that we estimate to be allocable to reinsurers based upon the terms and conditions of our reinsurance agreements. Our assessment of the collectability of the recorded amounts receivable from reinsurers considers the payment history of the reinsurer, publicly available financial and rating agency data, our interpretation of the underlying contracts and policies and responses by reinsurers.

Given the uncertainty inherent in our estimates of losses and related amounts recoverable from reinsurers, these estimates may vary significantly from the ultimate outcome.

Under the terms of certain of our reinsurance agreements, the amount of premium that we cede to our reinsurers is based in part on the losses we recover under the agreements. Therefore, we make an estimate of premiums ceded under these reinsurance agreements subject to certain maximums and minimums. Any adjustments to our estimates of losses recoverable under our reinsurance agreements or the premiums owed under our agreements are reflected in then current operations. Due to the size of our reinsurance balances, an adjustment to these estimates could have a material effect on our results of operations for the period in which the adjustment is made.

The financial strength of our reinsurers and their ability to pay us may change in the future due to forces or events we cannot control or anticipate. We have not experienced significant collection difficulties due to the financial condition of any reinsurer as of December 31, 2019; however, reinsurers may periodically dispute our demand for reimbursement from them based upon their interpretation of the terms of our agreements. As of December 31, 2019, reinsurance recoverables totaling approximately \$92.6 million were collateralized by letters of credit or funds withheld. We had no allowance for credit losses related to our reinsurance receivables at December 31, 2019 or 2018 as all reinsurance balances were considered collectible. No reinsurance balances were written off for credit reasons during the years ended December 31, 2019 and 2018, and reinsurance balances written off for credit reasons during the year ended December 31, 2017 were nominal in amount. Should future events lead us to believe that any reinsurer will not meet its obligations to us, adjustments to the amounts recoverable would be reflected in the results of current operations. Such an adjustment has the potential to be material to the results of operations in the period in which it is recorded; however, we would not expect such an adjustment to have a material effect on our capital position or our liquidity.

Investment Valuations

We record the majority of our investments at fair value as shown in the table below. At December 31, 2019, the distribution of our investments based on GAAP fair value hierarchies (levels) was as follows:

	Distribution by GAAP Fair Value Hierarchy			Not Categorized	Total Investments
	Level 1	Level 2	Level 3		
Investments recorded at:					
Fair value	16%	69%	1%	9%	95%
Other valuations					5%
Total Investments					100%

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. All of our fixed maturity and equity investments are carried at fair value. The fair value of our short-term securities approximates the cost of the securities due to their short-term nature.

Because of the number of securities we own and the complexity of developing accurate fair values, we utilize multiple independent pricing services to assist us in establishing the fair value of individual securities. The pricing services provide fair values based on exchange-traded prices, if available. If an exchange-traded price is not available, the pricing services, if possible, provide a fair value that is based on multiple broker/dealer quotes or that has been developed using pricing models. Pricing models vary by asset class and utilize currently available market data for securities comparable to ours to estimate a fair value for our securities. The pricing services scrutinize market data for consistency with other relevant market information before including the data in the pricing models. The pricing services disclose the types of pricing models used and the inputs used for each asset class. Determining fair values using these pricing models requires the use of judgment to identify appropriate comparable securities and to choose a valuation methodology that is appropriate for the asset class and available data.

The pricing services provide a single value per instrument quoted. We review the values provided for reasonableness each quarter by comparing market yields generated by the supplied value versus market yields observed in the marketplace. We also compare yields indicated by the provided values to appropriate benchmark yields and review for values that are unchanged or that reflect an unanticipated variation as compared to prior period values. We utilize a primary pricing service for each security type and compare provided information for consistency with alternate pricing services, known market data and information from our own trades, considering both values and valuation trends. We also review weekly trades versus the prices supplied by the services. If a supplied value appears unreasonable, we discuss the valuation in question with the pricing service and make adjustments if deemed necessary. Historically our review has not resulted in any material changes to the values supplied by the pricing services. The pricing services do not provide a fair value unless an exchange-traded price or multiple observable inputs are available. As a result, the pricing services may provide a fair value for a security in some periods but not others, depending upon the level of recent market activity for the security or comparable securities.

Level 1 Investments

Fair values for a majority of our equity securities and portions of our corporate debt, short-term and convertible securities are determined using exchange-traded prices. There is little judgment involved when fair value is determined using an exchange-traded price. In accordance with GAAP, we classify securities valued using an exchange-traded price as Level 1 securities.

Level 2 Investments

Most fixed income securities do not trade daily; thus, exchange-traded prices are generally not available for these securities. However, market information (often referred to as observable inputs or market data, including but not limited to, last reported trade, non-binding broker quotes, bids, benchmark yield curves, issuer spreads, two-sided markets, benchmark securities, offers and recent data regarding assumed prepayment speeds, cash flow and loan performance data) is available for most of our fixed income securities. We determine fair value for a large portion of our fixed income securities using available market information. In accordance with GAAP, we classify securities valued based on multiple market observable inputs as Level 2 securities.

Level 3 Investments

When a pricing service does not provide a value for one of our fixed maturity securities, management estimates fair value using either a single non-binding broker quote or pricing models that utilize market based assumptions which have limited observable inputs. The process involves significant judgment in selecting the appropriate data and modeling techniques to use in the valuation process. In accordance with GAAP, we classify securities valued using limited observable inputs as Level 3 securities.

Fair Values Not Categorized

We hold interests in certain investment funds, primarily LPs/LLCs, which measure fund assets at fair value on a recurring basis and provide us with a NAV for our interest. As a practical expedient, we consider the NAV provided to approximate the fair value of the interest. In accordance with GAAP, we do not categorize these investments within the fair value hierarchy.

Nonrecurring Fair Value Measurements

We measure the fair value of certain assets on a nonrecurring basis when events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. These assets include investments carried principally at cost, investments in tax credit partnerships, fixed assets, goodwill and other intangible assets. These assets would also include any equity method investments that do not provide a NAV.

Investments - Other Valuation Methodologies

Certain of our investments, in accordance with GAAP for the type of investment, are measured using methodologies other than fair value. At December 31, 2019, these investments represented approximately 5% of total investments, and are detailed in the following table. Additional information about these investments is provided in Notes 2 and 3 of the Notes to Consolidated Financial Statements.

<i>(In millions)</i>	<u>Carrying Value</u>	<u>GAAP Measurement Method</u>
Other investments:		
Other, principally FHLB capital stock	\$ 2.9	Principally Cost
Investment in unconsolidated subsidiaries:		
Investments in tax credit partnerships	48.5	Equity
Equity method investments, primarily LPs/LLCs	39.8	Equity
	88.3	
BOLI	66.1	Cash surrender value
Total investments - Other valuation methodologies	<u>\$ 157.3</u>	

Other-than-temporary Impairments

We evaluate our available-for-sale investment securities on at least a quarterly basis for the purpose of determining whether declines in fair value below recorded cost basis represent OTTI. We consider an OTTI to have occurred:

- if there is intent to sell the security;
- if it is more likely than not that the security will be required to be sold before full recovery of its amortized cost basis; or
- if the entire amortized basis of the security is not expected to be recovered.

The assessment of whether the amortized cost basis of a security, particularly an asset-backed debt security, is expected to be recovered requires management to make assumptions regarding various matters affecting future cash flows. The choice of assumptions is subjective and requires the use of judgment. Actual credit losses experienced in future periods may differ from management's estimates of those credit losses. Methodologies used to estimate the present value of expected cash flows are:

For non-structured fixed maturities (obligations of states, municipalities and political subdivisions and corporate debt) the estimate of expected cash flows is determined by projecting a recovery value and a recovery time frame and assessing whether further principal and interest will be received. We consider various factors in projecting recovery values and recovery time frames, including the following:

- third-party research and credit rating reports;
- the current credit standing of the issuer, including credit rating downgrades, whether before or after the balance sheet date;

- the extent to which the decline in fair value is attributable to credit risk specifically associated with the security or its issuer;
- internal assessments and the assessments of external portfolio managers regarding specific circumstances surrounding an investment, which indicate the investment is more or less likely to recover its amortized cost than other investments with a similar structure;
- for asset-backed securities, the origination date of the underlying loans, the remaining average life, the probability that credit performance of the underlying loans will deteriorate in the future and our assessment of the quality of the collateral underlying the loan;
- failure of the issuer of the security to make scheduled interest or principal payments;
- any changes to the rating of the security by a rating agency; and
- recoveries or additional declines in fair value subsequent to the balance sheet date.

For structured securities (primarily asset-backed securities), management estimates the present value of the security's cash flows using the effective yield of the security at the date of acquisition (or the most recent implied rate used to accrete the security if the implied rate has changed as a result of a previous impairment or changes in expected cash flows). We consider the most recently available six month averages of the levels of delinquencies, defaults, severities and prepayments for the collateral (loans) underlying the securitization or, if historical data is not available, sector based assumptions to estimate expected future cash flows of these securities.

Exclusive of securities where there is an intent to sell or where it is not more likely than not that the security will be required to be sold before recovery of its amortized cost basis, OTTI for debt securities is separated into a credit component and a non-credit component. The credit component of an OTTI is the difference between the security's amortized cost basis and the present value of its expected future cash flows, while the non-credit component is the remaining difference between the security's fair value and the present value of expected future cash flows. The credit component of the OTTI is recognized in earnings while the non-credit component is recognized in OCI.

Investments in tax credit partnerships are evaluated for OTTI by considering both qualitative and quantitative factors. These factors include, but are not limited to:

- our ability and intent to hold the investment until the recovery of its carrying value; and
- in situations where there was not a previous OTTI for the investment, whether the current expected cash flows from the investment, primarily tax benefits, are less than those expected at the time the investment was acquired due to various factors, such as a change in the statutory tax rate; or
- in situations where there was a previous OTTI for the investment, whether the expected cash flows from the investment at the time of the OTTI, primarily tax benefits, are less than its current carrying value.

Investments which are accounted for under the equity method are evaluated for impairment whenever events or changes in circumstances indicate that the carrying value of the investment might not be recoverable. These circumstances include, but are not limited to, evidence of the inability to recover the carrying value of the investment, the inability of the investee to sustain an earnings capacity that would justify the carrying value of the investment or the current fair value of the investment is less than the carrying value.

We recognize OTTI, exclusive of non-credit OTTI, in earnings as a part of net realized investment gains (losses). In subsequent periods, any measurement of gain, loss or impairment is based on the revised amortized basis of the security. Non-credit OTTI on debt securities and declines in fair value of available-for-sale securities not considered to be other-than-temporary are recognized in OCI.

Asset-backed debt securities that have been impaired due to credit reasons or are below investment grade quality are accounted for under the effective yield method. Under the effective yield method, estimates of cash flows expected over the life of asset-backed securities are used to recognize income on the investment balance for subsequent accounting periods.

Deferred Policy Acquisition Costs

Policy acquisition costs (primarily commissions, premium taxes and underwriting salaries) which are directly related to the successful acquisition of new and renewal premiums are capitalized as DPAC and charged to expense, net of ceding commissions earned, as the related premium revenue is recognized. We evaluate the recoverability of our DPAC typically at the segment level each reporting period or in a manner that is consistent with the way we manage our business. Any amounts estimated to be unrecoverable are charged to expense in the current period.

As part of our evaluation of the recoverability of DPAC, we also evaluate our unearned premiums for premium deficiencies. A premium deficiency is recognized if the sum of anticipated losses and loss adjustment expenses, unamortized DPAC and maintenance costs, net of anticipated investment income, exceeds the related unearned premium. If a premium deficiency is identified, the associated DPAC is written off, and a PDR is recorded for the excess deficiency as a component of net losses and loss adjustment expenses in our Consolidated Statement of Income and Comprehensive Income and as a

component of the reserve for losses on our Consolidated Balance Sheet. For the year ended December 31, 2019, a nominal amount of DPAC was charged to expense as it was determined to be unrecoverable, and a \$9.2 million PDR was established in our Specialty P&C segment related to a large national healthcare account. See further discussion on the PDR in the Segment Operating Results - Specialty Property & Casualty section that follows. No amounts were determined to be unrecoverable for the year ended December 31, 2018.

Deferred Taxes

Deferred federal income taxes arise from the recognition of temporary differences between the basis of assets and liabilities determined for financial reporting purposes and the basis determined for income tax purposes. Our temporary differences principally relate to our loss reserves, unearned and advanced premiums, DPAC, compensation related items, unrealized investment gains (losses) and basis differences on fixed assets, intangible assets and operating leases. Deferred tax assets and liabilities are measured using the enacted tax rates expected to be in effect when such benefits are realized. We review our deferred tax assets quarterly for impairment. If we determine that it is more likely than not that some or all of a deferred tax asset will not be realized, a valuation allowance is recorded to reduce the carrying value of the asset. In assessing the need for a valuation allowance, management is required to make certain judgments and assumptions about our future operations based on historical experience and information as of the measurement period regarding reversal of existing temporary differences, carryback capacity, future taxable income (including its capital and operating characteristics) and tax planning strategies.

A valuation allowance was established in a prior year against the deferred tax asset related to the NOL carryforwards for the U.K. operations as management concluded that it was more likely than not that the deferred tax asset will not be realized. We also established a valuation allowance in a prior year against the deferred tax assets of certain SPCs at our recently formed wholly owned Cayman Islands reinsurance subsidiary, Inova Re. Due to the limited operations of these recently formed SPCs, management concluded that a valuation allowance was required. As of December 31, 2019, management concluded that a valuation allowance was still required against the deferred tax assets related to the NOL carryforwards for the U.K. operations and against the deferred tax assets of certain SPCs at Inova Re. See further discussion in Note 6 of the Notes to Consolidated Financial Statements.

Tax Cuts and Jobs Act

The TCJA introduced a minimum tax on payments made to related foreign entities referred to as the BEAT. The BEAT is imposed by adding back into the U.S. tax base any base erosion payment made by the U.S. taxpayer to a related foreign entity and applying a minimum tax rate to this newly calculated modified taxable income. Base erosion payments represent any amount paid or accrued by the U.S. taxpayer to a related foreign entity for which a deduction is allowed. Premiums we cede to the SPCs at Inova Re, one of our wholly owned Cayman Islands reinsurance subsidiaries, do not fall within the scope of base erosion payments as the SPCs at Inova Re intend to elect to be taxed as U.S. taxpayers. However, premiums that we cede to any active SPC at our other wholly owned Cayman Islands reinsurance subsidiary, Eastern Re, fall within the scope of base erosion payments and therefore could be significantly impacted by the BEAT. We have evaluated our exposure to the BEAT and have concluded that our expected outbound deductible payments to related foreign entities are below the threshold for application of the BEAT; therefore, we have not recognized any incremental tax expense for the BEAT provision of the TCJA for the year ended December 31, 2019. See further discussion on our Cayman Islands SPC operations in the Segment Operating Results - Segregated Portfolio Cell Reinsurance section that follows.

The TCJA also requires a U.S. shareholder of a controlled foreign corporation to include its GILTI in U.S. taxable income. The GILTI amount is based on the U.S. shareholder's aggregate share of the gross income of the controlled foreign corporation reduced by certain exceptions and a net deemed tangible income return. The net deemed tangible income return is based on the controlled foreign corporation's basis in the tangible depreciable business property. Cell rental fee income earned by Inova Re and Eastern Re fall within the scope of the GILTI provisions of the TCJA. We have evaluated the new GILTI provisions of the TCJA and we have made an accounting policy election to treat the taxes due on inclusions of GILTI in U.S. taxable income as a current period expense when incurred. We recognized a nominal amount of tax expense for the GILTI provision of the TCJA during year ended December 31, 2019.

Unrecognized Tax Benefits

We evaluate tax positions taken on tax returns and recognize positions in our financial statements when it is more likely than not that we will sustain the position upon resolution with a taxing authority. If recognized, the benefit is measured as the largest amount of benefit that has a greater than 50% probability of being realized. We review uncertain tax positions each period, considering changes in facts and circumstances, such as changes in tax law, interactions with taxing authorities and developments in case law, and make adjustments as we consider necessary. Adjustments to our unrecognized tax benefits may

affect our income tax expense, and settlement of uncertain tax positions may require the use of cash. Other than differences related to timing, no significant adjustments were considered necessary during 2019 or 2018. At December 31, 2019, our liability for unrecognized tax benefits approximated \$5.1 million.

Goodwill

Impairment of goodwill is tested at the reporting unit level, which is consistent with our reportable segments identified in Note 17 of the Notes to Consolidated Financial Statements. Of the five reporting units, three have goodwill - Specialty P&C, Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance. We evaluate goodwill for impairment annually on October 1, upon the occurrence of certain triggering events or substantive changes in circumstances that indicate the fair value of goodwill may be impaired and immediately before and after a reorganization that affects the composition of one or more of our reporting units, if applicable.

Annual Goodwill Impairment Test

When testing goodwill for impairment on our annual test date, we have the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of a reporting unit is less than its carrying amount. If we elect to perform a qualitative assessment and determine that an impairment is more likely than not, we are then required to perform the two-step quantitative impairment test; otherwise, no further analysis is required. We also may elect not to perform the qualitative assessment and, instead, proceed directly to the two-step quantitative impairment test.

In the first step of the two-step quantitative impairment test, the fair value of a reporting unit is determined using income and market approaches and is compared to its carrying value, as described above. The estimate of fair value derived from the income approach is based on the present value of expected future cash flows, including terminal value, utilizing a market based weighted average cost of capital determined separately for each reporting unit. The estimate of fair value derived from the market approach is based on earnings multiple data derived from market information. The determination of fair value involves the use of significant estimates and assumptions, including revenue growth rates, operating margins, capital expenditures, working capital requirements, tax rates, terminal growth rates, discount rates, comparable public companies and synergistic benefits available to market participants. In addition, we make certain judgments and assumptions in allocating shared assets and liabilities to individual reporting units to determine the carrying amount of each reporting unit. To corroborate the reporting units' valuation, we perform a reconciliation of the estimate of the aggregate fair value of the reporting units to ProAssurance's market capitalization, including consideration of a control premium. Because not all of our reporting units have goodwill, we make certain assumptions regarding the fair value of our other reporting units in reconciling to our market capitalization.

If the carrying value of a reporting unit exceeds its fair value, the second step of the impairment test is performed for purposes of measuring the impairment of goodwill, if any. In the second step, the fair value of the reporting unit is allocated to all of the assets and liabilities of the reporting unit to determine an implied fair value of goodwill. If the carrying amount of the reporting unit's goodwill exceeds the implied fair value of goodwill, an impairment loss will be recognized in an amount equal to that excess.

As of the most recent goodwill impairment test performed on October 1, 2019, we elected to perform a qualitative goodwill impairment test for our Specialty P&C, Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance reporting units. Each of these reporting units have historically had an excess of fair value over book value and based on current operations are expected to continue to do so; therefore, our annual impairment test for these reporting units was performed qualitatively. In applying the qualitative approach, management considered macroeconomic factors, industry and market conditions, cost factors that could have a negative impact on the reporting units, actual financial performance of the reporting units versus expectations and management's future business expectations. As a result of the qualitative assessments, management concluded that it was not more likely than not that the fair value of each of our three reporting units that have goodwill was less than the carrying value of each reporting unit as of the testing date; therefore, no further impairment testing was required. No goodwill impairment was recorded in 2019, 2018 or 2017.

Intangibles

Intangible assets with definite lives are amortized over the estimated useful life of the asset. Amortizable intangible assets primarily consist of agency and policyholder relationships, renewal rights and trade names. Intangible assets with an indefinite life, primarily state licenses, are not amortized. Intangible assets are evaluated for impairment on an annual basis or upon the occurrence of certain triggering events or substantive changes in circumstances that indicate the fair value of the asset may be impaired. Additional information regarding our intangible assets is included in Note 1 of the Notes to Consolidated Financial Statements.

Leases

During the first quarter of 2019, we adopted ASU 2016-02, which requires us to make certain estimates and assumptions in applying the requirements of this new guidance. We are involved in a number of leases, primarily for office facilities. We determine if an arrangement is a lease at the inception date of the contract and classify all leases as either financing or operating. As of December 31, 2019, all of our leases were classified as operating. Operating lease ROU assets and operating lease liabilities are recognized as of the lease commencement date based on the present value of the remaining lease payments, discounted over the term of the lease using a discount rate determined based on information available as of the commencement date. The ROU asset represents the right to use the underlying asset (office space) for the lease term. As the majority of our lessors do not provide an implicit discount rate, we use our collateralized incremental borrowing rate in determining the present value of remaining lease payments. For leases entered into or reassessed after the adoption of ASU 2016-02, we account for lease and non-lease components of a contract as a single lease component.

We evaluate our operating lease ROU assets for impairment at the asset group level whenever events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable. The carrying amount of an asset group, which includes the operating lease ROU asset and the related operating lease liability, is not recoverable if the carrying amount exceeds the sum of the undiscounted cash flows expected to result from the use of the asset group over the life of the primary asset in the asset group. That assessment is based on the carrying amount of the asset group, including the operating lease ROU asset and the related operating lease liability, at the date it is tested for recoverability and an impairment loss is measured and recognized as the amount by which the carrying amount of the asset group exceeds its fair value. Any impairment loss is allocated to each asset in the asset group, including the operating ROU asset.

When a lease of an office facility is to be abandoned and will not be subleased, we first evaluate whether or not the operating lease ROU asset's inclusion in an existing asset group continues to be appropriate and if the commitment to abandon the lease constitutes a change in circumstances requiring the operating lease ROU asset, or the larger asset group, to be tested for impairment. If an impairment test is required, it is performed in the same manner as discussed above. Any remaining carrying value of the operating lease ROU asset is amortized from the date we commit to a plan to abandon the lease to the expected date that we will cease to use the leased property. Leases to be abandoned in which we have the intent or practical ability to sublease continue to be accounted for under a held and use model, with no change to the amortization period of the operating lease ROU asset, and are evaluated for impairment as a separate asset group at the date the sublease is executed.

Additional information regarding our leases is included in Note 1 and Note 10 of the Notes to Consolidated Financial Statements.

Audit Premium

Workers' compensation premiums are determined based upon the payroll of the insured, respective premium rates and, where applicable, an experience-based modification factor. An audit of the policyholders' records is conducted after policy expiration to make a final determination of applicable premiums. Audit premium due from or due to a policyholder as a result of an audit is reflected in net premiums written and earned when billed. We track, by policy, the amount of additional premium billed in final audit invoices as a percentage of payroll exposure and use this information to estimate the probable additional amount of EBUB premium as of the balance sheet date. We include changes to the EBUB premium estimate in net premiums written and earned in the period recognized.

Lloyd's Premium Estimates

For certain insurance policies and reinsurance contracts written in our Lloyd's Syndicates segment, premiums are initially recognized based upon estimates of ultimate premium. Estimated ultimate premium consists primarily of premium written under delegated underwriting authority arrangements, which consist primarily of binding authorities, and certain assumed reinsurance agreements. These estimates of ultimate premium are judgmental and are dependent upon certain assumptions, including historical premium trends for similar agreements. As reports are received from programs, ultimate premium estimates are revised, if necessary, with changes reflected in current operations.

Accounting Changes

We did not have any change in accounting estimate or policy that had a material effect on our results of operations or financial position during 2019. We are not aware of any accounting changes not yet adopted as of December 31, 2019 that would have a material effect on our results of operations, financial position or cash flows. Note 1 of the Notes to Consolidated Financial Statements provides additional detail regarding accounting changes not yet adopted.

Liquidity and Capital Resources and Financial Condition

Overview

ProAssurance Corporation is a holding company and is a legal entity separate and distinct from its subsidiaries. As a holding company, our principal source of external revenue is our investment revenues. In addition, dividends from our operating subsidiaries represent a significant source of funds for our obligations, including debt service and shareholder dividends. We also charge our operating subsidiaries within our Specialty P&C and Workers' Compensation Insurance segments a management fee based on the extent to which services are provided to the subsidiary and the amount of gross premium written by the subsidiary. At December 31, 2019, we held cash and liquid investments of approximately \$280 million outside our insurance subsidiaries that were available for use without regulatory approval or other restriction, of which \$17 million was used to pay shareholder dividends in January 2020. We also have \$250 million in permitted borrowings under our Revolving Credit Agreement and an accordion feature available which, if subscribed successfully, would allow another \$50 million in available funds as discussed in this section under the heading "Debt." As of February 14, 2020, no borrowings were outstanding under our Revolving Credit Agreement.

During 2019, our operating subsidiaries paid dividends to us of approximately \$123 million, including extraordinary dividends from our insurance subsidiaries of approximately \$20 million. Our insurance subsidiaries, in the aggregate, are permitted to pay dividends of approximately \$88 million over the course of 2020 without prior approval of state insurance regulators. However, the payment of any dividend requires prior notice to the insurance regulator in the state of domicile, and the regulator may reduce or prevent the dividend if, in its judgment, payment of the dividend would have an adverse effect on the surplus of the insurance subsidiary. We make the decision to pay dividends from an insurance subsidiary based on the capital needs of that subsidiary and may pay less than the permitted dividend or may also request permission to pay an additional amount (an extraordinary dividend).

Cash Flows

Cash flows between periods compare as follows:

	Year Ended December 31		
	2019	2018	Change
(In thousands)			
Net cash provided (used) by:			
Operating activities	\$ 148,166	\$ 177,265	\$ (29,099)
Investing activities	50,522	214,897	(164,375)
Financing activities	(103,790)	(446,186)	342,396
Increase (decrease) in cash and cash equivalents	\$ 94,898	\$ (54,024)	\$ 148,922

	Year Ended December 31		
	2018	2017	Change
(In thousands)			
Net cash provided (used) by:			
Operating activities	\$ 177,265	\$ 173,388	\$ 3,877
Investing activities	214,897	200,275	14,622
Financing activities	(446,186)	(356,515)	(89,671)
Increase (decrease) in cash and cash equivalents	\$ (54,024)	\$ 17,148	\$ (71,172)

The principal components of our operating cash flows are the excess of premiums collected and net investment income over losses paid and operating costs, including income taxes. Timing delays exist between the collection of premiums and the payment of losses associated with the premiums. Premiums are generally collected within the twelve-month period after the policy is written, while our claim payments are generally paid over a more extended period of time. Likewise, timing delays exist between the payment of claims and the collection of any associated reinsurance recoveries.

The decrease in operating cash flows in 2019 as compared to 2018 of \$29.1 million was primarily due to an increase in paid losses of \$30.2 million, a decrease in cash received from investment income of \$9.8 million and an increase in cash paid for operating expenses of \$8.1 million. The increase in paid losses was driven by our Specialty P&C and Workers' Compensation Insurance segments. The increase in paid losses in our Specialty P&C segment primarily reflected higher average claims payments in 2019 as compared to 2018 and the increase in paid losses in our Workers' Compensation Insurance segment primarily reflected the timing of loss payments between periods. The decrease in cash received from investment income was primarily due to a decline in distributed earnings from our unconsolidated subsidiaries. The increase in cash paid for operating expenses was driven by an increase in brokerage expenses in our Lloyd's Syndicates segment from the continuing

growth of Syndicate 6131 as well as an increase in fees associated with a data analytics services agreement entered into during the fourth quarter of 2018 in our Specialty P&C segment. In addition, the decrease in operating cash flows reflected a decrease in net cash received of \$3.0 million associated with the cash settlement from the commutation of the 2017 and 2016 calendar year quota share reinsurance arrangements between our Specialty P&C segment and Syndicate 1729 due to the reduction in premiums ceded to Syndicate 1729. The decrease in operating cash flows was partially offset by an increase in net premium receipts of \$19.0 million and a decrease in estimated tax payments of \$3.0 million. The increase in net premium receipts was primarily due to the growth in written premium in our Lloyd's Syndicates and Specialty P&C segments.

The increase in operating cash flows in 2018 as compared to 2017 of \$3.9 million was primarily due to an increase in premium receipts of \$60.8 million, a decrease in 2018 estimated tax payments as compared to 2017 of \$11.5 million and a decrease in cash paid for operating expenses of \$1.6 million, partially offset by an increase in paid losses of \$64.3 million and a decrease in cash received from investment income of \$5.1 million. The increase in premium receipts was driven by our Specialty P&C segment, primarily due to premiums received from a loss portfolio transfer entered into during the second quarter of 2018 and, to a lesser extent, our Workers' Compensation Insurance segment, primarily due to premiums received related to the third quarter 2017 acquisition of the Great Falls book of business. The decrease in 2018 estimated tax payments was primarily due to the lower statutory federal income tax rate in 2018 as compared to 2017. The increase in paid losses was driven by all of our operating segments, particularly in our Specialty P&C segment, primarily due to the timing of loss payments between periods, and our Lloyd's Syndicates segment, primarily due to 2017 storm-related losses which were paid in 2018. The decrease in cash paid for operating expenses was primarily due to a decrease in compensation related costs, largely offset by an increase in cash paid for operating expenses in our Lloyd's Syndicates segment primarily due to the start-up of Syndicate 6131. The decrease in cash received from investment income was primarily due to a reduction in interest received on our fixed maturities portfolio resulting from lower average balances.

We manage our investing cash flows to ensure that we will have sufficient liquidity to meet our obligations, taking into consideration the timing of cash flows from our investments, including interest payments, dividends and principal payments, as well as the expected cash flows to be generated by our operations as discussed in this section under the heading "Investing Activities and Related Cash Flows."

Our financing cash flows are primarily composed of dividend payments and borrowings and repayments under our Revolving Credit Agreement. See further discussion of our financing activities in this section under "Financing Activities and Related Cash Flows."

Operating Activities and Related Cash Flows

Losses

The following table, known as the Analysis of Reserve Development, presents information over the preceding ten years regarding the payment of our losses as well as changes to (the development of) our estimates of losses during that time period. As noted in the table, we have completed various acquisitions over the ten year period which have affected original and re-estimated gross and net reserve balances as well as loss payments.

The table includes losses on both a direct and an assumed basis and is net of anticipated reinsurance recoverables. The gross liability for losses before reinsurance, as shown on the balance sheet, and the reconciliation of that gross liability to amounts net of reinsurance are reflected below the table. We do not discount our reserve for losses to present value. Information presented in the table is cumulative and, accordingly, each amount includes the effects of all changes in amounts for prior years. The table presents the development of our balance sheet reserve for losses; it does not present accident year or policy year development data. Conditions and trends that have affected the development of liabilities in the past may not necessarily occur in the future. Accordingly, it is not appropriate to extrapolate future redundancies or deficiencies based on this table.

The following may be helpful in understanding the Analysis of Reserve Development:

- The line entitled "Reserve for losses, undiscounted and net of reinsurance recoverables" reflects our reserve for losses and loss adjustment expense, less the receivables from reinsurers, each as reported in our Consolidated Balance Sheets at the end of each year (the Balance Sheet Reserves).
- The section entitled "Cumulative net paid, as of" reflects the cumulative amounts paid as of the end of each succeeding year with respect to the previously recorded Balance Sheet Reserves.
- The section entitled "Re-estimated net liability as of" reflects the re-estimated amount of the liability previously recorded as Balance Sheet Reserves that includes the cumulative amounts paid and an estimate of the remaining net liability based upon claims experience as of the end of each succeeding year (the Net Re-estimated Liability).
- The line entitled "Net cumulative redundancy (deficiency)" reflects the difference between the previously recorded Balance Sheet Reserve for each applicable year and the Net Re-estimated Liability relating thereto as of the end of the most recent fiscal year.

Analysis of Reserve Development

December 31

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>(In thousands)</i>											
Reserve for losses, undiscounted and net of reinsurance recoverables	\$ 2,159,571	\$ 2,136,664	\$ 2,000,114	\$ 1,860,076	\$ 1,825,304	\$ 1,820,300	\$ 1,755,976	\$ 1,719,953	\$ 1,712,796	\$ 1,776,027	\$ 1,955,818
Cumulative net paid, as of:											
One Year Later	291,654	264,597	300,703	311,835	343,197	390,849	383,062	369,682	412,711	458,991	
Two Years Later	476,682	491,657	526,903	563,805	571,690	646,878	633,246	644,422	704,830		
Three Years Later	614,369	639,220	682,576	704,795	732,892	804,624	818,102	824,686			
Four Years Later	706,091	737,253	763,703	800,189	826,384	917,236	918,403				
Five Years Later	761,659	789,965	821,742	852,873	891,615	971,392					
Six Years Later	793,528	828,043	852,119	893,529	924,334						
Seven Years Later	811,333	844,810	876,840	915,730							
Eight Years Later	821,435	859,561	891,820								
Nine Years Later	829,217	869,316									
Ten Years Later	835,391										
Re-estimated net liability as of:											
End of Year	2,159,571	2,136,664	2,000,114	1,860,076	1,825,304	1,820,300	1,755,976	1,719,953	1,712,796	1,776,027	
One Year Later	1,925,581	1,810,799	1,728,076	1,644,203	1,644,516	1,659,120	1,612,198	1,585,593	1,620,680	1,764,244	
Two Years Later	1,615,603	1,543,650	1,498,158	1,472,259	1,483,378	1,519,078	1,485,357	1,481,292	1,541,237		
Three Years Later	1,362,538	1,324,906	1,342,996	1,331,828	1,358,560	1,396,130	1,380,687	1,373,145			
Four Years Later	1,172,091	1,205,737	1,224,597	1,231,337	1,252,605	1,296,074	1,279,877				
Five Years Later	1,086,027	1,111,591	1,148,793	1,157,493	1,173,975	1,228,480					
Six Years Later	1,012,597	1,050,549	1,091,646	1,108,716	1,126,308						
Seven Years Later	961,987	1,010,802	1,056,053	1,078,057							
Eight Years Later	940,035	988,980	1,034,690								
Nine Years Later	919,089	971,554									
Ten Years Later	906,557										
Net cumulative redundancy (deficiency)	\$ 1,253,014	\$ 1,165,110	\$ 965,424	\$ 782,019	\$ 698,996	\$ 591,820	\$ 476,099	\$ 346,808	\$ 171,559	\$ 11,783	
Original gross liability - end of year	\$ 2,422,230	\$ 2,414,100	\$ 2,247,772	\$ 2,051,428	\$ 2,072,822	\$ 2,058,266	\$ 2,005,326	\$ 1,993,428	\$ 2,048,381	\$ 2,119,847	
Reinsurance recoverables	(262,659)	(277,436)	(247,658)	(191,352)	(247,518)	(237,966)	(249,350)	(273,475)	(335,585)	(343,820)	
Original net liability - end of year	\$ 2,159,571	\$ 2,136,664	\$ 2,000,114	\$ 1,860,076	\$ 1,825,304	\$ 1,820,300	\$ 1,755,976	\$ 1,719,953	\$ 1,712,796	\$ 1,776,027	
Gross re-estimated liability - latest	\$ 1,034,056	\$ 1,099,815	\$ 1,165,715	\$ 1,203,615	\$ 1,273,256	\$ 1,394,413	\$ 1,488,937	\$ 1,631,943	\$ 1,866,091	\$ 2,116,160	
Re-estimated reinsurance recoverables	(127,499)	(128,261)	(131,025)	(125,558)	(146,948)	(165,933)	(209,060)	(258,798)	(324,854)	(351,916)	
Net re-estimated liability - latest	\$ 906,557	\$ 971,554	\$ 1,034,690	\$ 1,078,057	\$ 1,126,308	\$ 1,228,480	\$ 1,279,877	\$ 1,373,145	\$ 1,541,237	\$ 1,764,244	
Gross cumulative redundancy (deficiency)	\$ 1,388,174	\$ 1,314,285	\$ 1,082,057	\$ 847,813	\$ 799,566	\$ 663,853	\$ 516,389	\$ 361,485	\$ 182,290	\$ 3,687	

See table notes on following page.

Table Notes

- Reserves for 2009 and thereafter include gross and net reserves acquired in 2009 business combinations of \$169.4 million and \$163.9 million, respectively.
- Reserves for 2010 and thereafter include gross and net reserves acquired in 2010 business combinations of \$88.1 million and \$82.2 million, respectively.
- Reserves for 2012 and thereafter include gross and net reserves acquired in 2012 business combinations of \$21.8 million and \$19.2 million, respectively, which considers reductions of \$3.6 million and \$3.3 million, respectively, recorded in 2013 due to the re-estimation of the fair value of the acquired reserves.
- Reserves for 2013 include gross and net reserves acquired in 2013 business combinations of \$201.1 million and \$126.0 million, respectively.
- Reserves for 2014 include gross and net reserves acquired in 2014 business combinations of \$153.2 million and \$139.5 million, respectively.

In each year reflected in the table, we have estimated our reserve for losses utilizing the management and actuarial processes discussed under the heading "Reserve for Losses and Loss Adjustment Expenses" in the Critical Accounting Estimates section. Factors that have contributed to the variation in loss development are primarily related to the extended period of time required to resolve professional liability claims and include the following:

- The HCPL legal environment deteriorated in the late 1990's and severity began to increase at a greater pace than anticipated in our rates and reserve estimates. We addressed the adverse severity trends through increased rates, stricter underwriting and modifications to claims handling procedures, and reflected this adverse severity trend when we established our initial reserves for subsequent years.
- These adverse severity trends later moderated, with that moderation becoming more pronounced beginning in 2009. We were cautious in giving full recognition to indications that the pace of severity increase had slowed, however we gave measured recognition of the improved trend in our reserve estimates. The favorable development was most pronounced for years 2004 to 2008, as the initial reserves for these accident years were established prior to substantial indication that severity trends were moderating. We gave stronger recognition to the lower severity trend as time elapsed and a greater percentage of claims were closed.
- A general decline in claim frequency has also been a contributor to favorable loss development. A significant portion of our policies through 2003 were issued on an occurrence basis, and a smaller portion of our ongoing business results from the issuance of extended reporting endorsements which have occurrence-like exposure. As claim frequency declined, the number of reported claims related to these coverages was less than originally expected.
- Beginning in 2017, we identified potential higher severity trends in the broader HCPL industry. These trends were also reflected in increases in estimates of ultimate losses for open HCPL claims for earlier accident years, which resulted in a lower amount of favorable development recognized in 2018 and 2017 as compared to prior years.
- During 2019 the loss experience in our HCPL excess and surplus lines of business deteriorated further, particularly in regard to the reserves we established for a large national healthcare account that has experienced losses far exceeding the assumptions we made when underwriting the account, beginning in 2016. As a result, we strengthened our HCPL reserves through the recognition of net unfavorable development on prior accident years and a higher current accident year net loss ratio in our Specialty P&C segment in 2019 as discussed more fully in our Segment Operating Results - Specialty Property and Casualty section that follows.

Activity in our net reserve for losses during 2019, 2018 and 2017 is summarized below:

<i>(In thousands)</i>	Year Ended December 31		
	2019	2018	2017
Balance, beginning of year	\$ 2,119,847	\$ 2,048,381	\$ 1,993,428
Less reinsurance recoverables on unpaid losses and loss adjustment expenses	343,820	335,585	273,475
Net balance, beginning of year	1,776,027	1,712,796	1,719,953
Net losses:			
Current year*	765,698	685,326	603,518
Favorable development of reserves established in prior years, net	(11,783)	(92,116)	(134,360)
Total	753,915	593,210	469,158
Paid related to:			
Current year	(115,133)	(117,268)	(106,633)
Prior years	(458,991)	(412,711)	(369,682)
Total paid	(574,124)	(529,979)	(476,315)
Net balance, end of year	1,955,818	1,776,027	1,712,796
Plus reinsurance recoverables on unpaid losses and loss adjustment expenses	390,708	343,820	335,585
Balance, end of year	\$ 2,346,526	\$ 2,119,847	\$ 2,048,381

* Current year net losses in 2019 included a PDR of \$9.2 million associated with the unearned premium of a large national healthcare account in our Specialty P&C segment (see Note 7 of the Notes to Consolidated Financial Statements). Current year net losses in 2018 included incurred losses of \$25.4 million related to a loss portfolio transfer entered into during the second quarter of 2018 (see Note 4 of the Notes to Consolidated Financial Statements).

At December 31, 2019 our gross reserve for losses included case reserves of approximately \$1.5 billion and IBNR reserves of approximately \$0.9 billion. Our consolidated gross reserve for losses on a GAAP basis exceeds the combined gross reserves of our insurance subsidiaries on a statutory basis by approximately \$0.2 billion, which is principally due to the portion of the GAAP reserve for losses that is reflected for statutory accounting purposes as unearned premiums. These unearned premiums are applicable to extended reporting endorsements (“tail” coverage) issued without a premium charge upon death, disability or retirement of an insured who meets certain qualifications.

Reinsurance

Within our Specialty P&C segment, we use insurance and reinsurance (collectively, “reinsurance”) to provide capacity to write larger limits of liability, to provide reimbursement for losses incurred under the higher limit coverages we offer and to provide protection against losses in excess of policy limits. Within our Workers' Compensation Insurance segment, we use reinsurance to reduce our net liability on individual risks, to mitigate the effect of significant loss occurrences (including catastrophic events), to stabilize underwriting results and to increase underwriting capacity by decreasing leverage. In both our Specialty P&C and Workers' Compensation Insurance segments, we use reinsurance in risk sharing arrangements to align our objectives with those of our strategic business partners and to provide custom insurance solutions for large customer groups. The purchase of reinsurance does not relieve us from the ultimate risk on our policies; however, it does provide reimbursement for certain losses we pay. We pay our reinsurers a premium in exchange for reinsurance of the risk. In certain of our excess of loss arrangements, the premium due to the reinsurer is determined by the loss experience of the business reinsured, subject to certain minimum and maximum amounts. Until all loss amounts are known, we estimate the premium due to the reinsurer. Changes to the estimate of premium owed under reinsurance agreements related to prior periods are recorded in the period in which the change in estimate occurs and can have a significant effect on net premiums earned.

We offer alternative market solutions whereby we cede certain premiums from our Workers' Compensation Insurance and Specialty P&C segments to either the SPCs at Inova Re or Eastern Re, our Cayman Islands reinsurance subsidiaries which are reported in our Segregated Portfolio Cell Reinsurance segment, or, to a limited extent, an unaffiliated captive insurer. During 2019 and 2018, we wrote total alternative market premium of approximately \$90.0 million and \$90.2 million, respectively. The majority of these policies (\$86.7 million and \$85.1 million in 2019 and 2018, respectively) are reinsured to the SPCs at Inova Re or Eastern Re, net of a ceding commission. Each SPC at Inova Re and Eastern Re is owned, fully or in part, by an agency, group or association, and the operating results of the SPCs are due to the participants of that cell. We participate to a varying

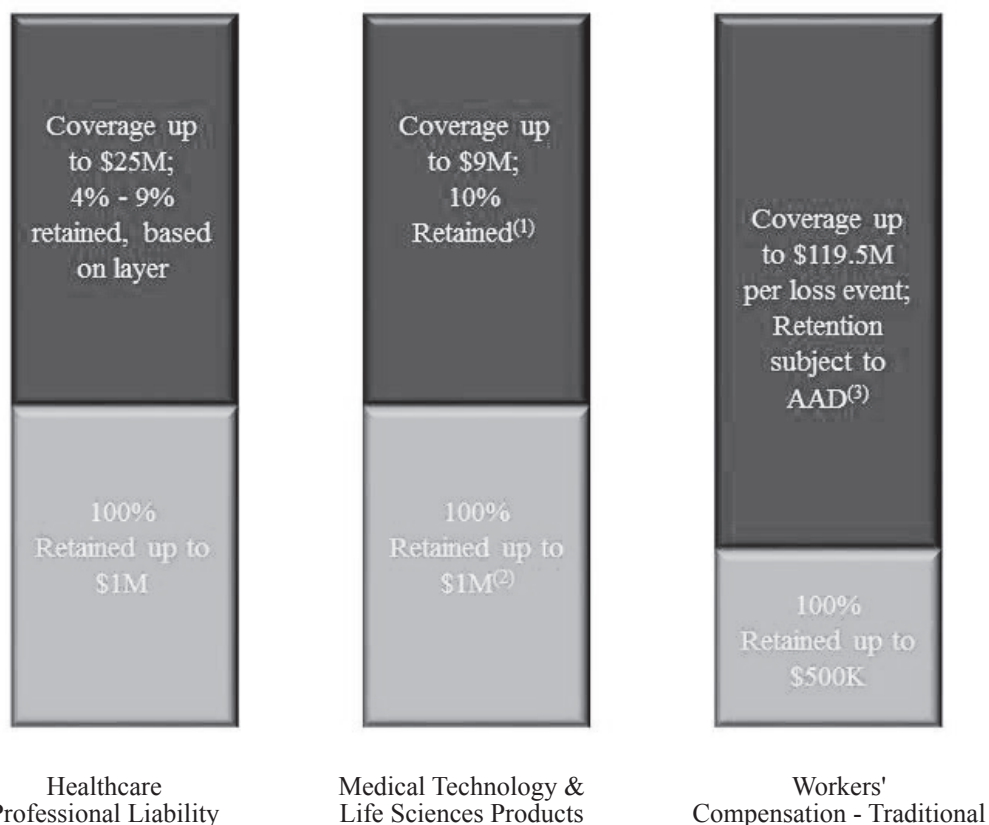
degree in the results of selected SPCs and, for the SPCs in which we participate, our participation interest ranges from a low of 20% to a high of 85%. SPC operating results due to external cell participants are reflected as an SPC dividend expense (income) in our Segregated Portfolio Cell Reinsurance segment. See further discussion on our SPC operations in the Segment Operating Results - Segregated Portfolio Cell Reinsurance section that follows. The alternative market workers' compensation policies are ceded from our Workers' Compensation Insurance segment to the SPCs under 100% quota share reinsurance agreements. The alternative market professional liability policies are ceded from our Specialty P&C segment to the SPCs under either excess of loss or quota share reinsurance agreements, depending on the structure of the individual program. The nominal portion of the risk that is not ceded to an SPC is retained in our Specialty P&C segment and may also be reinsured under our standard healthcare professional liability reinsurance program, depending on the policy limits provided. The remaining premium written in our alternative market business of \$2.4 million and \$4.5 million in 2019 and 2018, respectively, was 100% ceded to a single unaffiliated captive insurer in 2019 and to two unaffiliated captive insurers in 2018.

For all of our segments, we make a determination of the amount of insurance risk we choose to retain based upon numerous factors, including our risk tolerance and the capital we have to support it, the price and availability of reinsurance, the volume of business, our level of experience with a particular set of claims and our analysis of the potential underwriting results. We purchase excess of loss reinsurance to limit the amount of risk we retain and we do so from a number of companies to mitigate concentrations of credit risk. We utilize reinsurance brokers to assist us in the placement of these reinsurance programs and in the analysis of the credit quality of our reinsurers. The determination of which reinsurers we choose to do business with is based upon an evaluation of their then current financial strength, rating and stability. However, the financial strength of our reinsurers and their corresponding ability to pay us may change in the future due to forces or events we cannot control or anticipate. As of December 31, 2019, there is no reinsurer, on an individual basis, for which our recoverables for both paid and unpaid claims (net of amounts due to the reinsurer) and our prepaid balances are aggregately \$40 million or more.

Excess of Loss Reinsurance Agreements

We generally reinsure risks under treaties (our excess of loss reinsurance agreements) pursuant to which the reinsurers agree to assume all or a portion of all risks that we insure above our individual risk retention levels, up to the maximum individual limits offered. These agreements are negotiated and renewed annually. Renewal dates for our healthcare professional liability, medical technology liability and workers' compensation treaties are October 1, January 1 and May 1, respectively. Our healthcare professional liability treaty renewed October 1, 2019 at a higher rate than the previous agreement, partially offset by a lower intermediary compensation rate. Our medical technology liability treaty renewed January 1, 2020 at a lower rate than the previous agreement. Our workers' compensation treaty renewed May 1, 2019 at a lower rate than the previous agreement; however, the lower rate reflects the addition of an AAD and the elimination of the return premium component of the contract. The significant coverages provided by our current excess of loss reinsurance agreements are detailed in the following table.

Excess of Loss Reinsurance Agreements



⁽¹⁾ Historically, retention has ranged from 5% to 32.5%.

⁽²⁾ Historically, retention has been as high as \$2M.

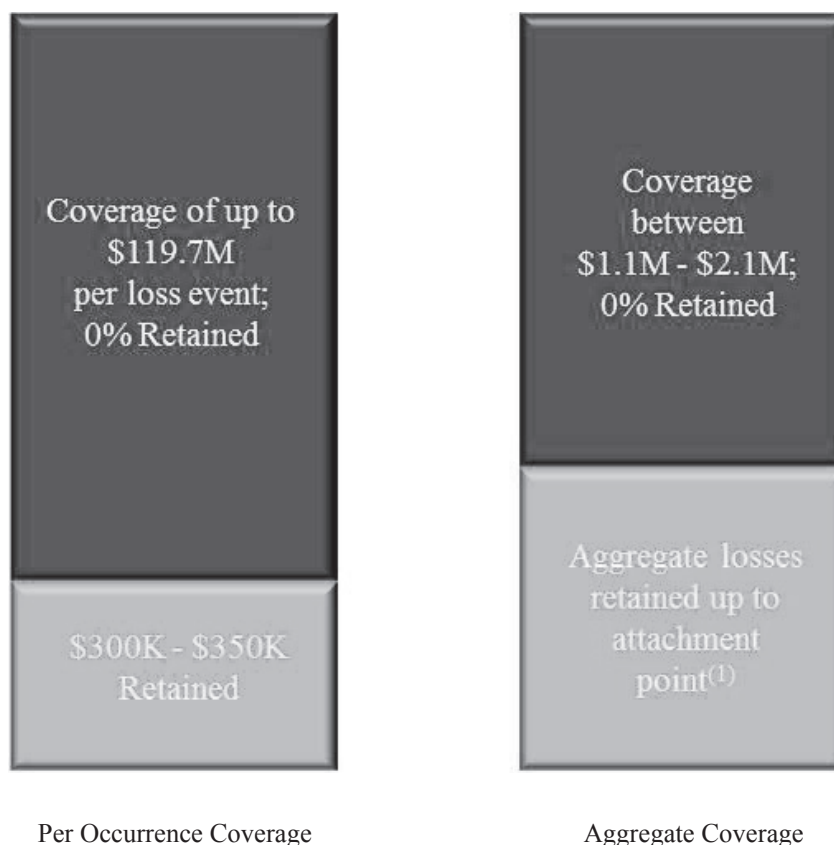
⁽³⁾ Includes an AAD where retention is the greater of \$3.9M or 2.1% of subject premium in annual losses otherwise recoverable in excess of the \$500k retention per loss occurrence.

Large healthcare professional liability risks that are above the limits of our basic reinsurance treaties are reinsured on a facultative basis, whereby the reinsurer agrees to insure a particular risk up to a designated limit. We also have in place a number of risk sharing arrangements that apply to the first \$1 million of losses for certain large healthcare systems and other insurance entities, as well as with certain insurance agencies that produce business for us.

Other Reinsurance Arrangements

For the workers' compensation business ceded to Inova Re and Eastern Re, each SPC has in place its own reinsurance arrangements; which are illustrated in the following table.

Segregated Portfolio Cell Reinsurance



⁽¹⁾ The attachment point is based on a percentage of written premium within individual cells (average is 89%) and varies by cell.

Each SPC has participants and the profit or loss of each cell accrues fully to these cell participants. As previously discussed, we participate in certain SPCs to a varying degree. Each SPC maintains a loss fund initially equal to the difference between premium assumed by the cell and the ceding commission. The external participants of each cell provide collateral, typically in the form of a letter of credit, to us that is initially equal to the difference between the loss fund of the SPC (amount of funds available to pay losses after deduction of ceding commission) and the aggregate attachment point of the reinsurance. Over time, an SPC's retained profits are considered in the determination of the collateral amount required to be provided by the cell's external participants.

Within our Lloyd's Syndicates segment, Syndicate 1729 utilizes reinsurance to provide capacity to write larger limits of liability on individual risks, to provide protection against catastrophic loss and to provide protection against losses in excess of policy limits. The level of reinsurance that Syndicate 1729 purchases is dependent on a number of factors, including its underwriting risk appetite for catastrophic exposure, the specific risks inherent in each line or class of business written and the pricing, coverage and terms and conditions available from the reinsurance market. Reinsurance protection by line of business is as follows:

- Reinsurance is utilized on a per risk basis for the property insurance and casualty coverages in order to mitigate risk volatility.
- Catastrophic protection is utilized on both our property insurance and casualty coverages to protect against losses in excess of policy limits as well as natural catastrophes.
- Both quota share reinsurance and excess of loss reinsurance are utilized to manage the net loss exposure on our property reinsurance coverages.
- Property umbrella excess of loss reinsurance is utilized for peak catastrophe and frequency of catastrophe exposures.
- External excess of loss reinsurance is utilized by Syndicate 1729 to manage the net loss exposure on the specialty property and contingency coverages ceded to Syndicate 6131 (see further discussion in Segment Operating Results - Lloyd's Syndicates section that follows).

Syndicate 1729 may still be exposed to losses that exceed the level of reinsurance purchased as well as to reinstatement premiums triggered by losses exceeding specified levels. Cash demands on Syndicate 1729 can vary significantly depending on

the nature and intensity of a loss event. For significant reinsured catastrophe losses, the inability or unwillingness of the reinsurer to make timely payments under the terms of the reinsurance agreement could have an adverse effect on Syndicate 1729's liquidity.

Litigation

We are involved in various legal actions related to insurance policies and claims handling including, but not limited to, claims asserted against us by policyholders. These types of legal actions arise in the ordinary course of business and, in accordance with GAAP for insurance entities, are generally considered as a part of our loss reserving process, which is described in detail in our Critical Accounting Estimates section under the heading "Reserve for Losses and Loss Adjustment Expenses." We also have other direct actions against the Company unrelated to our claims activity which we evaluate and account for as a part of our other liabilities. For these corporate legal actions, we evaluate each case separately and establish what we believe is an appropriate reserve based on GAAP guidance related to contingent liabilities. As of December 31, 2019 there were no material reserves established for corporate legal actions.

Investing Activities and Related Cash Flows

Our investments at December 31, 2019 and December 31, 2018 are comprised as follows:

<i>(\$ in thousands)</i>	December 31, 2019		December 31, 2018	
	Carrying Value	% of Total Investment	Carrying Value	% of Total Investment
Fixed maturities, available for sale:				
U.S. Treasury obligations	\$ 110,467	3%	\$ 120,201	4%
U.S. Government-sponsored enterprise obligations	17,340	1%	35,354	1%
State and municipal bonds	296,093	9%	293,772	9%
Corporate debt	1,340,364	40%	1,223,475	37%
Residential mortgage-backed securities	208,408	6%	181,238	5%
Commercial mortgage-backed securities	80,089	2%	44,101	1%
Other asset-backed securities	236,024	7%	195,657	6%
Total fixed maturities, available for sale	2,288,785	68%	2,093,798	63%
Fixed maturities, trading	47,284	1%	38,188	1%
Total fixed maturities	2,336,069	69%	2,131,986	64%
Equity investments	250,552	7%	442,937	13%
Short-term investments	339,907	10%	308,319	9%
BOLI	66,112	2%	64,096	1%
Investment in unconsolidated subsidiaries	358,820	11%	367,757	11%
Other investments	38,949	1%	34,287	2%
Total investments	\$ 3,390,409	100%	\$ 3,349,382	100%

At December 31, 2019, 99% of our investments in available-for-sale fixed maturity securities were rated, and the average rating was A+. The distribution of our investments in available-for-sale fixed maturity securities by rating were as follows:

Rating*	December 31, 2019		December 31, 2018	
	Carrying Value	% of Total Investment	Carrying Value	% of Total Investment
	(\$ in thousands)			
AAA	\$ 677,554	30%	\$ 645,300	31%
AA+	84,991	3%	101,328	5%
AA	152,118	7%	120,801	6%
AA-	153,377	7%	155,352	7%
A+	182,966	8%	190,595	9%
A	338,697	15%	311,036	15%
A-	171,553	7%	146,721	7%
BBB+	182,041	8%	133,199	6%
BBB	155,935	7%	118,864	6%
BBB-	52,523	2%	50,466	2%
Below investment grade	130,929	5%	100,447	5%
Not rated	6,101	1%	19,689	1%
Total	\$ 2,288,785	100%	\$ 2,093,798	100%

*Average of three NRSRO sources, presented as an S&P equivalent. Source: S&P, Copyright ©2020, S&P Global Market Intelligence

A detailed listing of our investment holdings as of December 31, 2019 is located under the Financial Information heading on the Investor Relations page of our website which can be reached directly at www.proassurance.com/investmentholdings, or through links from the Investor Relations section of our website, investor.proassurance.com.

We manage our investments to ensure that we will have sufficient liquidity to meet our obligations, taking into consideration the timing of cash flows from our investments, including interest payments, dividends and principal payments, as well as the expected cash flows to be generated by our operations. In addition to the interest and dividends we will receive, we anticipate that between \$30 million and \$80 million of our investments will mature (or be paid down) each quarter over the next twelve months and become available, if needed, to meet our cash flow requirements. The primary outflow of cash at our insurance subsidiaries is related to paid losses and operating costs, including income taxes. The payment of individual claims cannot be predicted with certainty; therefore, we rely upon the history of paid claims in estimating the timing of future claims payments. To the extent that we may have an unanticipated shortfall in cash, we may either liquidate securities or borrow funds under existing borrowing arrangements through our Revolving Credit Agreement and the FHLB system. As of February 14, 2020, \$300 million could be made available for use through our Revolving Credit Agreement, as discussed in this section under the heading "Debt." Given the duration of our investments, we do not foresee a shortfall that would require us to meet operating cash needs through additional borrowings. Additional information regarding our Revolving Credit Agreement is detailed in Note 11 of the Notes to Consolidated Financial Statements.

At December 31, 2019, our FAL was comprised of fixed maturity securities with a fair value of \$129.9 million and cash and cash equivalents of \$7.2 million deposited with Lloyd's. See further discussion in Note 3 of the Notes to Consolidated Financial Statements.

Our investment portfolio continues to be primarily composed of high quality fixed income securities with approximately 94% of our fixed maturities being investment grade securities as determined by national rating agencies. The weighted average effective duration of our fixed maturity securities at December 31, 2019 was 2.96 years; the weighted average effective duration of our fixed maturity securities combined with our short-term securities was 2.58 years.

The carrying value and unfunded commitments for certain of our investments were as follows:

(\$ in thousands, except expected funding period)	Carrying Value		December 31, 2019	
	December 31, 2019	December 31, 2018	Unfunded Commitment	Expected funding period in years
Qualified affordable housing project tax credit partnerships ⁽¹⁾	\$ 46,421	\$ 65,677	\$ 847	6
Historic tax credit partnerships ⁽²⁾	2,085	3,757	276	1
All other investments, primarily investment fund LPs/LLCs	310,314	298,323	164,227	4
Total	<u>\$ 358,820</u>	<u>\$ 367,757</u>	<u>\$ 165,350</u>	

⁽¹⁾The carrying value reflects our total commitments (both funded and unfunded) to the partnerships, less any amortization, since our initial investment. We fund these investments based on funding schedules maintained by the partnerships.

⁽²⁾The carrying value reflects our funded commitments less any amortization.

Investment fund LPs/LLCs are by nature less liquid and may involve more risk than other investments. We manage our risk through diversification of asset class and geographic location. At December 31, 2019, we had investments in 37 separate investment funds with a total carrying value of \$310.3 million which represented approximately 9% of our total investments. We review and monitor the performance of these investments on a quarterly basis.

Business Combinations and Ventures

There were no business combinations during the years ended December 31, 2019 or 2018.

Financing Activities and Related Cash Flows

Treasury Shares

Treasury share activity for 2019, 2018 and 2017 was as follows:

(In thousands)	2019	2018	2017
Treasury shares at the beginning of the period	9,352	9,368	9,409
Shares reissued, primarily those reissued pursuant to the ProAssurance 2011 Employee Stock Ownership Plan, had a fair value of approximately \$1 million in both 2019 and 2018 and approximately \$2 million in 2017	(27)	(16)	(41)
Treasury shares at the end of the period	<u>9,325</u>	<u>9,352</u>	<u>9,368</u>

We did not repurchase any common shares subsequent to December 31, 2019 and as of February 14, 2020 our remaining Board authorization was approximately \$110 million.

Shareholder Dividends

Our Board declared cash dividends during 2019, 2018 and 2017 as follows:

	Quarterly Cash Dividends Declared, per Share		
	2019	2018	2017
First Quarter	\$ 0.31	\$ 0.31	\$ 0.31
Second Quarter	\$ 0.31	\$ 0.31	\$ 0.31
Third Quarter	\$ 0.31	\$ 0.31	\$ 0.31
Fourth Quarter	\$ 0.31	\$ 0.31	\$ 0.31
Fourth Quarter - Special dividend	\$ —	\$ 0.50	\$ 4.69

Each dividend was paid in the month following the quarter in which it was declared. Cash dividends totaling \$93 million, \$316 million and \$315 million were paid during the years ended December 31, 2019, 2018 and 2017, respectively. Any decision to pay future cash dividends is subject to the Board's final determination after a comprehensive review of financial performance, future expectations and other factors deemed relevant by the Board.

Debt

At December 31, 2019, our debt included \$250 million of outstanding unsecured senior notes. The notes bear interest at 5.3% annually and are due in 2023 although they may be redeemed in whole or part prior to maturity. There are no financial covenants associated with these notes.

We have a Revolving Credit Agreement which may be used for general corporate purposes, including, but not limited to, short-term working capital, share repurchases as authorized by the Board and support for other activities. On November 7, 2019, we executed an amendment to our Revolving Credit Agreement which extended its expiration from June 2020 to November 2024 and increased the permitted borrowings from \$200 million to \$250 million. In addition to the permitted borrowings of \$250 million, our Revolving Credit Agreement has available a \$50 million accordion feature, which, if successfully subscribed, would expand permitted borrowings up to \$300 million. At December 31, 2019, there were no outstanding borrowings on our Revolving Credit Agreement and we are in compliance with the financial covenants of the Revolving Credit Agreement.

We have Mortgage Loans with one lender in connection with the recapitalization of two office buildings, which mature in December 2027. The Mortgage Loans accrue interest at three-month LIBOR plus 1.325% with principal and interest payable on a quarterly basis. At December 31, 2019, the outstanding balance of the Mortgage Loans was approximately \$38 million and we are in compliance with the financial covenant of the Mortgage Loans.

Additional information regarding our debt is provided in Note 11 of the Notes to Consolidated Financial Statements.

We utilize an interest rate cap agreement with a notional amount of \$35 million to manage our exposure to increases in LIBOR on our Mortgage Loans. Per the interest rate cap agreement, we are entitled to receive cash payments if and when the three-month LIBOR exceeds 2.35%. Additional information on our interest rate cap agreement is provided in Note 12 of the Notes to Consolidated Financial Statements.

Two of our insurance subsidiaries are members of an FHLB. Through membership, those subsidiaries have access to secured cash advances which can be used for liquidity purposes or other operational needs. In order for us to use FHLB proceeds, regulatory approvals may be required depending on the nature of the transaction. To date, those subsidiaries have not materially utilized their membership for borrowing purposes.

Off-Balance Sheet Arrangements/Guarantees

We have no significant off-balance sheet arrangements/guarantees that have or are reasonably likely to have a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources. See more information on our off-balance sheet arrangements in Note 9 of the Notes to Consolidated Financial Statements.

Contractual Obligations

We believe that our operating cash flow and funds from our investment portfolio are adequate to meet our contractual obligations.

A schedule of our non-cancellable contractual obligations at December 31, 2019 was as follows:

(In thousands)	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Losses and loss adjustment expenses	\$ 2,346,526	\$ 629,799	\$ 917,935	\$ 433,644	\$ 365,148
Debt obligations including interest and fees	349,509	16,446	32,907	268,035	32,121
Operating lease obligations	25,213	4,146	6,995	4,113	9,959
Funding commitments primarily related to non-public investment entities	205,121	137,924	63,136	3,994	67
Total	\$ 2,926,369	\$ 788,315	\$ 1,020,973	\$ 709,786	\$ 407,295

The anticipated payout of losses and loss adjustment expenses is based upon our historical payout patterns. Both the timing and amount of these payments may vary from the payments indicated.

At December 31, 2019, there were no outstanding borrowings on our Revolving Credit Agreement; however, the above table includes unused commitment fees associated with our Revolving Credit Agreement as we presume the full unused facility will remain available through expiration of the agreement in November 2024. Additionally, we presume the current interest rate on our Mortgage Loans at December 31, 2019 will remain constant until maturity of the Mortgage Loans in December 2027. For more information regarding these agreements see Note 11 of the Notes to Consolidated Financial Statements.

We are involved in a number of operating leases primarily for office facilities. Office facility leases have remaining lease terms ranging from one year to thirteen years. The above table includes the remaining future minimum lease payments including imputed interest for operating leases that had an initial or remaining non-cancellable lease term in excess of one year as of December 31, 2019. In addition, the above table excludes total future minimum lease payments of \$1.5 million for an eleven year lease signed but not yet commenced as of December 31, 2019. Additional information regarding our leases is included in Note 1 and Note 10 of the Notes to Consolidated Financial Statements.

Our funding commitments are primarily related to non-public investment entities but also include the unused commitment under our Syndicate Credit Agreement as we presume it will be fully advanced within the next year for purposes of the disclosure in the table above. The above table excludes a short-term loan commitment where we have agreed to advance funds on a 30 day basis. For more information regarding these agreements see Note 9 of the Notes to Consolidated Financial Statements.

Results of Operations - Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Selected consolidated financial data for each period is summarized in the table below.

<i>(\$ in thousands, except per share data)</i>	Year Ended December 31		
	2019	2018	Change
Revenues:			
Net premiums written	\$ 842,725	\$ 834,914	\$ 7,811
Net premiums earned	\$ 847,532	\$ 818,853	\$ 28,679
Net investment result	83,208	100,832	(17,624)
Net realized investment gains (losses)	59,874	(43,488)	103,362
Other income	9,220	9,833	(613)
Total revenues	999,834	886,030	113,804
Expenses:			
Net losses and loss adjustment expenses	753,915	593,210	160,705
Underwriting, policy acquisition and operating expenses	253,508	238,556	14,952
Segregated portfolio cell dividend expense (income)	4,579	9,122	(4,543)
Interest expense	16,636	16,117	519
Total expenses	1,028,638	857,005	171,633
Income (loss) before income taxes	(28,804)	29,025	(57,829)
Income tax expense (benefit)	(29,808)	(18,032)	(11,776)
Net income	\$ 1,004	\$ 47,057	\$ (46,053)
Non-GAAP operating income (loss)	\$ (43,779)	\$ 79,527	\$ (123,306)
Earnings per share:			
Basic	\$ 0.02	\$ 0.88	\$ (0.86)
Diluted	\$ 0.02	\$ 0.88	\$ (0.86)
Non-GAAP operating earnings (loss) per share:			
Basic	\$ (0.81)	\$ 1.48	\$ (2.29)
Diluted	\$ (0.81)	\$ 1.48	\$ (2.29)
Net loss ratio	89.0%	72.4 %	16.6 pts
Underwriting expense ratio	29.9%	29.1 %	0.8 pts
Combined ratio	118.9%	101.5 %	17.4 pts
Operating ratio	107.9%	90.3 %	17.6 pts
Effective tax rate	103.5%	(62.1%)	165.6 pts
Return on equity	0.1%	3.0 %	(2.9) pts

In all tables that follow, the abbreviation "nm" indicates that the information or the percentage change is not meaningful.

Executive Summary of Operations

The following sections provide an overview of our consolidated and segment results of operations for the year ended December 31, 2019 as compared to 2018. See the Segment Operating Results sections that follow for additional information regarding each segment's operating results. For a discussion of the changes in the financial condition, results of operations and cash flows for the year ended December 31, 2018 as compared to the year ended December 31, 2017, please refer to Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of ProAssurance's December 31, 2018 report on Form 10-K.

Revenues

The following table shows our consolidated and segment net premiums earned:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Net Premiums Earned				
Specialty P&C	\$ 499,058	\$ 491,787	\$ 7,271	1.5%
Workers' Compensation Insurance	189,240	186,079	3,161	1.7%
Segregated Portfolio Cell Reinsurance	78,563	73,940	4,623	6.3%
Lloyd's Syndicates	80,671	67,047	13,624	20.3%
Consolidated total	\$ 847,532	\$ 818,853	\$ 28,679	3.5%

Consolidated net premiums earned for the years ended December 31, 2019 and 2018 included the effects of two different loss portfolio transfers in our Specialty P&C segment which resulted in \$2.7 million and \$26.6 million, respectively, of one-time premium written and fully earned in the respective periods. See further discussion of these loss portfolio transfers in our Segment Operating Results - Specialty Property & Casualty section that follows. After removing the impacts of the 2019 and 2018 loss portfolio transfers, consolidated net premiums earned increased \$52.6 million during 2019 as compared to 2018. All of our operating segments contributed to the remaining increase in consolidated net premiums earned, particularly our Specialty P&C segment due to the pro rata effect of an increase in the volume of written premium during the preceding twelve months, predominantly in our physicians and healthcare facilities lines of business, driven by an increase in renewal pricing.

The following table shows our consolidated net investment result:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Net investment income	\$ 93,269	\$ 91,884	\$ 1,385	1.5%
Equity in earnings (loss) of unconsolidated subsidiaries	(10,061)	8,948	(19,009)	(212.4%)
Net investment result	\$ 83,208	\$ 100,832	\$ (17,624)	(17.5%)

The decrease in our consolidated net investment result in 2019 as compared to 2018 was primarily attributable to a decrease in earnings (loss) from our unconsolidated subsidiaries, somewhat offset by an increase in net investment income. Equity in earnings (loss) of unconsolidated subsidiaries includes our share of the operating results of interests we hold in certain LPs/LLCs as well as operating losses associated with our tax credit partnership investments, which are designed to generate returns in the form of tax credits and tax-deductible project operating losses. During 2019, the earnings generated from our LPs/LLCs did not exceed the operating losses recorded from our tax credit partnership investments resulting in an overall loss from investments in unconsolidated subsidiaries as compared to earnings from investments in unconsolidated subsidiaries in 2018. The decrease in earnings generated from our LPs/LLCs in 2019 was driven by lower reported earnings from two LP investments, somewhat offset by lower operating losses from our tax credit partnership investments. The increase in net investment income in 2019 was primarily due to an increase in interest earned on our FAL in our Lloyd's Syndicate segment due to a higher average balance in 2019 as compared to 2018. Our FAL primarily includes investment-grade corporate debt securities deposited with Lloyd's.

The following table shows our total consolidated net realized investment gains (losses):

(\$ in thousands)	Year Ended December 31		
	2019	2018	Change
Net impairment losses recognized in earnings	\$ (751)	\$ (490)	\$ (261) (53.3%)
Other net realized investment gains (losses)	60,625	(42,998)	103,623 241.0%
Net realized investment gains (losses)	\$ 59,874	\$ (43,488)	\$ 103,362 237.7%

During 2019, we recognized OTTI in earnings of \$0.8 million and non-credit OTTI in OCI of \$0.2 million, both of which related to three corporate bonds in the energy and consumer sectors. We recognized OTTI in earnings of \$0.5 million during 2018 related to debt instruments from two issuers in the energy sector. Other net realized investment gains during 2019 was driven by changes in the fair value of our equity trading portfolio. See further discussion in our Segment Operating Results - Corporate section that follows.

Expenses

The following table shows our consolidated and segment net loss ratios and net loss development:

(\$ in millions)	Year Ended December 31		
	2019	2018	Change
Current accident year net loss ratio			
Consolidated ratio	90.3%	83.7%	6.6 pts
Specialty P&C	105.5%	93.8%	11.7 pts
Workers' Compensation Insurance	68.4%	68.0%	0.4 pts
Segregated Portfolio Cell Reinsurance	79.6%	64.5%	15.1 pts
Lloyd's Syndicates	58.2%	74.0%	(15.8) pts
Calendar year net loss ratio			
Consolidated ratio	89.0%	72.4%	16.6 pts
Specialty P&C	106.7%	78.2%	28.5 pts
Workers' Compensation Insurance	64.3%	63.7%	0.6 pts
Segregated Portfolio Cell Reinsurance	66.7%	52.4%	14.3 pts
Lloyd's Syndicates	58.7%	76.9%	(18.2) pts
Favorable (unfavorable) net loss development, prior accident years			
Consolidated	\$ 11.8	\$ 92.1	\$ (80.3)
Specialty P&C	\$ (5.7)	\$ 77.0	\$ (82.7)
Workers' Compensation Insurance	\$ 7.8	\$ 8.0	\$ (0.2)
Segregated Portfolio Cell Reinsurance	\$ 10.1	\$ 9.0	\$ 1.1
Lloyd's Syndicates	\$ (0.4)	\$ (2.0)	\$ 1.6

The primary drivers of the increase in our consolidated current accident year net loss ratio for the year ended December 31, 2019 as compared to 2018 were as follows:

<i>(In percentage points)</i>	Increase (Decrease) 2019 versus 2018
Estimated ratio increase (decrease) attributable to:	
Change in actuarial adjustments related to the current accident year reserve in our Specialty P&C segment	3.4 pts
Change in DDR reserve adjustment	1.7 pts
E&O reserve impact	1.2 pts
PDR	1.1 pts
All other, net	(0.8) pts
Increase in the consolidated current accident year net loss ratio	<u>6.6 pts</u>

As a result of actuarial analyses performed by both internal and consulting actuaries during 2019 and 2018, we increased our current accident year net loss ratio in our Specialty P&C segment in both 2019 and 2018; however, the adjustment was greater in 2019 as compared to 2018 which accounted for 3.4 percentage points of the increase in our consolidated current accident year net loss ratio. This increase in 2019 was driven by increased reserve estimates for a large national healthcare account and, to a lesser extent, in our broader HCPL excess and surplus lines of business. In addition, the higher consolidated current accident year net loss ratio reflected changes to our reserve in our Specialty P&C segment related to DDR coverage endorsements as well as a PDR of \$9.2 million, which accounted for 1.7 and 1.1 percentage points, respectively, of the increase. The PDR represents an estimated premium deficiency associated with the aforementioned large national healthcare account which is reflected as a component of current accident year net losses in 2019 (see further discussion in our Segment Operating Results - Specialty Property & Casualty section that follows). Furthermore, the increase in our consolidated current accident year net loss ratio also reflected a \$10 million reserve that an SPC at Eastern Re established during 2019 associated with an assumed E&O liability policy in our Segregated Portfolio Cell Reinsurance segment which accounted for 1.2 percentage points of the increase. We do not participate in the SPC that assumed this policy; therefore, these losses are the obligation of the external cell participants and are reflected in the SPC dividend expense (income), which is an offset to expenses, and thus has no effect on our consolidated net income or Segregated Portfolio Cell Reinsurance segment net operating results for 2019 (see further discussion in our Segment Operating Results - Segregated Portfolio Cell Reinsurance section that follows).

In both 2019 and 2018, our consolidated calendar year net loss ratio was lower than our consolidated current accident year net loss ratio due to the recognition of consolidated net favorable prior year reserve development, as shown in the previous table. Consolidated net favorable prior year reserve development in 2019 was lower than in 2018 driven by unfavorable development recognized in our Specialty P&C segment of \$5.7 million in 2019 as compared to favorable development of \$77.0 million recognized in 2018. The unfavorable development recognized in our Specialty P&C segment in 2019 was driven by \$51.5 million of unfavorable prior year reserve development related to the previously mentioned large national healthcare account that has experienced losses far exceeding the assumptions we made when underwriting the account, beginning in 2016. Excluding the unfavorable development related to this account, our Specialty P&C segment recognized favorable prior year reserve development totaling \$45.8 million in 2019.

Our consolidated and segment underwriting expense ratios were as follows:

	Year Ended December 31		
	2019	2018	<i>Change</i>
Underwriting Expense Ratio			
Consolidated	29.9%	29.1%	0.8 pts
Specialty P&C	24.1%	22.9%	1.2 pts
Workers' Compensation Insurance	30.4%	29.9%	0.5 pts
Segregated Portfolio Cell Reinsurance	30.9%	30.3%	0.6 pts
Lloyd's Syndicates	43.0%	47.3%	(4.3) pts
Corporate*	2.3%	2.3%	— pts

*There are no net premiums earned associated with the Corporate segment. Ratios shown are the contribution of the Corporate segment to the consolidated ratio (Corporate operating expenses divided by consolidated net premiums earned).

Our consolidated underwriting expense ratio increased for the year ended December 31, 2019 as compared to 2018 due to the effect of a loss portfolio transfer (net premiums earned with minimal associated operating expenses) entered into during

2018 in our Specialty P&C segment (see further discussion in our Segment Operating Results - Specialty Property & Casualty section that follows). Excluding the impact of the 2018 loss portfolio transfer, our consolidated underwriting expense ratio for 2019 was relatively unchanged as compared to 2018 driven by an increase in consolidated net premiums earned which outpaced the increase in consolidated DPAC amortization, offset by an increase operating expenses in our Specialty P&C segment driven by fees associated with a data analytics services agreement entered into during the fourth quarter of 2018.

Taxes

Our effective tax rates for the years ended December 31, 2019 and 2018 were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Income (loss) before income taxes	\$ (28,804)	\$ 29,025	\$ (57,829)	200.8 %
Income tax expense (benefit)	(29,808)	(18,032)	(11,776)	39.5 %
Net income	\$ 1,004	\$ 47,057	\$ (46,053)	(4,587.0%)
Effective tax rate	103.5%	(62.1%)	165.6 pts	

We recognized an income tax benefit in both 2019 and 2018; however, the comparability of our effective tax rates is impacted by the pre-tax loss recognized in 2019 as compared to pre-tax income recognized in 2018.

Our effective tax rates for the years ended December 31, 2019 and 2018 were different from the statutory federal income tax rates in effect for each year primarily due to the recognition of a tax benefit from credits transferred to us from our tax credit partnership investments and, to a lesser extent, portions of our income that are exempt from federal income taxes. See further discussion, including other notable items during 2019 and 2018 in the Segment Operating Results - Corporate section that follows under the heading "Taxes."

Operating Ratio

Our operating ratio is our combined ratio, less our investment income ratio. This ratio provides the combined effect of underwriting profitability and investment income. Our operating ratio for the years ended December 31, 2019 and 2018 was as follows:

	Year Ended December 31		
	2019	2018	Change
Combined ratio	118.9%	101.5%	17.4 pts
Less: investment income ratio	11.0%	11.2%	(0.2) pts
Operating ratio	107.9%	90.3%	17.6 pts

Our operating ratio for the year ended December 31, 2019 as compared to 2018 increased by approximately 17.6 percentage points driven by a higher combined ratio in our Specialty P&C segment. The higher combined ratio in our Specialty P&C segment was driven by a higher current accident year net loss ratio and the recognition of net unfavorable development on prior accident year reserves. See previous discussion in this section under the heading "Expenses" and further discussion in our Segment Operating Results - Specialty Property & Casualty section that follows under the heading "Losses."

ROE

ROE is calculated as net income divided by the average of beginning and ending shareholders' equity. This ratio measures our overall after-tax profitability and shows how efficiently capital is being used. ROE for the years ended December 31, 2019 and 2018 was as follows:

	Year Ended December 31		
	2019	2018	Change
ROE	0.1%	3.0%	(2.9) pts

The decrease in our ROE in 2019 as compared to 2018 was due to the decrease in net income, driven by a higher combined ratio in our Specialty P&C segment, as discussed above under the heading "Operating Ratio", largely offset by the increase in the fair value of our equity trading portfolio due to the improvement in the market since December 31, 2018.

Book Value per Share

Book value per share is calculated as total shareholders' equity at the balance sheet date divided by the total number of common shares outstanding. This ratio measures the net worth of the Company to shareholders' on a per share basis. Our book value per share at December 31, 2019 as compared to December 31, 2018 is shown in the following table.

	Book Value Per Share
Book Value Per Share at December 31, 2018	\$ 28.39
Increase (decrease) to book value per share during the year ended December 31, 2019 attributable to:	
Dividends declared	(1.24)
Net income	0.02
OCI	1.00
Other *	(0.06)
Book Value Per Share at December 31, 2019	<u>\$ 28.11</u>

* Includes the impact of cumulative effect adjustments related to ASUs adopted during 2019 and the impact of share-based compensation.

Non-GAAP Financial Measures

Non-GAAP operating income (loss) is a financial measure that is widely used to evaluate performance within the insurance sector. In calculating Non-GAAP operating income (loss), we have excluded the after-tax effects of the items listed in the following table that do not reflect normal operating results. We believe Non-GAAP operating income (loss) presents a useful view of the performance of our insurance operations, however it should be considered in conjunction with net income computed in accordance with GAAP.

The following table is a reconciliation of net income to Non-GAAP operating income (loss):

<i>(In thousands, except per share data)</i>	Year Ended December 31	
	2019	2018
Net income	\$ 1,004	\$ 47,057
Items excluded in the calculation of Non-GAAP operating income (loss):		
Net realized investment (gains) losses	(59,874)	43,488
Net realized gains (losses) attributable to SPCs which no profit/loss is retained ⁽¹⁾	3,144	(2,535)
Guaranty fund assessments (recoupments)	43	148
Pre-tax effect of exclusions	(56,687)	41,101
Tax effect, at 21% ⁽²⁾	11,904	(8,631)
After-tax effect of exclusions	(44,783)	32,470
Non-GAAP operating income (loss)	\$ (43,779)	\$ 79,527
Per diluted common share:		
Net income	\$ 0.02	\$ 0.88
Effect of exclusions	(0.83)	0.60
Non-GAAP operating income (loss) per diluted common share	\$ (0.81)	\$ 1.48

⁽¹⁾ Net realized investment gains (losses) on investments related to SPCs are recognized in our Segregated Portfolio Cell Reinsurance segment. SPC operating results, including any realized gain or loss, that are attributable to external cell participants are reflected in the SPC dividend expense (income). To be consistent with our exclusion of net realized investment gains (losses) recognized in earnings, we are excluding the portion of net realized investment gains (losses) that is included in the SPC dividend expense (income) which is attributable to the external cell participants.

⁽²⁾ The 21% rate is the statutory rate associated with the taxable or tax deductible items listed above. See previous discussion in this section under the heading "Taxes."

Segment Operating Results - Specialty Property & Casualty

Our Specialty P&C segment focuses on professional liability insurance and medical technology liability insurance as discussed in Note 17 of the Notes to Consolidated Financial Statements. Segment operating results reflected pre-tax underwriting profit or loss from these insurance lines, exclusive of investment results, which are included in our Corporate segment. Segment operating results included the following:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Net premiums written	\$ 495,750	\$ 494,148	\$ 1,602	0.3%
Net premiums earned	\$ 499,058	\$ 491,787	\$ 7,271	1.5%
Other income	5,796	5,844	(48)	(0.8%)
Net losses and loss adjustment expenses	(532,485)	(384,431)	(148,054)	38.5%
Underwriting, policy acquisition and operating expenses	(120,310)	(112,419)	(7,891)	7.0%
Segment operating results	\$ (147,941)	\$ 781	\$ (148,722)	(19,042.5%)
Net loss ratio	106.7%	78.2%	28.5 pts	
Underwriting expense ratio	24.1%	22.9%	1.2 pts	

As a result of actuarial analyses performed by both internal and consulting actuaries during 2019, we concluded that additional reserves were needed in our Specialty P&C segment. As such, we recorded \$5.7 million of net unfavorable development on our prior accident year reserves and recorded a higher current accident year net loss ratio which resulted in a net loss ratio of 106.7% in 2019. Furthermore, net losses and loss adjustment expenses for the year ended December 31, 2019 included a \$9.2 million PDR which represents an estimated premium deficiency associated with the unearned premium related to a large national healthcare account. See further discussion that follows under the heading "Losses."

In addition, segment operating results for the years ended December 31, 2019 and 2018 included the effect of two separate loss portfolio transfers; one entered into during the third quarter of 2019 and one entered into during the second quarter of 2018. A loss portfolio transfer is a form of retroactive insurance coverage as we are assuming and accepting an entity's existing open and future claim liabilities through the transfer of the entity's loss reserves. The loss portfolio transfer entered into during the third quarter of 2019 resulted in total net premiums written and earned of \$2.7 million (consisting of \$0.9 million of retroactive premium and \$1.8 million of prospective (tail) premium) and total net losses and loss adjustment expenses of \$2.1 million. The loss portfolio transfer entered into during the second quarter of 2018 resulted in total net premiums written and earned of \$26.6 million (consisting of \$18.7 million of retroactive premium and \$7.9 million of prospective (tail) premium) and total net losses and loss adjustment expenses of \$25.4 million. See further discussion of these loss portfolio transfers in Note 4 of the Notes to Consolidated Financial Statements.

Premiums Written

Changes in our premium volume within our Specialty P&C segment are driven by four primary factors: (1) the amount of new business, (2) our retention of existing business, (3) the premium charged for business that is renewed, which is affected by rates charged and by the amount and type of coverage an insured chooses to purchase and (4) the timing of premium written through multi-period policies. In addition, premium volume may periodically be affected by shifts in the timing of renewals between periods. The healthcare professional liability market, which accounts for a majority of the revenues in this segment, remains challenging as physicians continue joining hospitals or larger group practices and are thus no longer purchasing individual or group policies in the standard market. In addition, some competitors have chosen to compete primarily on price; both factors may impact our ability to write new business and retain existing business. Furthermore, the insurance and reinsurance markets have historically been cyclical, characterized by extended periods of intense price competition due to excessive underwriting capacity as well as periods when shortages of capacity permitted more favorable premium levels. Changes in the frequency and severity of losses may affect the cycles of the insurance and reinsurance markets significantly. During soft markets, it could be very difficult for us to grow or maintain premium volume levels without sacrificing underwriting profits. Conversely, during hard markets, rising prices may pressure retention levels.

Gross, ceded and net premiums written were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums written	\$ 577,700	\$ 577,196	\$ 504	0.1%
Less: Ceded premiums written	81,950	83,048	(1,098)	(1.3%)
Net premiums written	\$ 495,750	\$ 494,148	\$ 1,602	0.3%

Gross Premiums Written

Gross premiums written by component were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Professional liability				
Physicians ⁽¹⁾⁽⁸⁾				
Twelve month term	\$ 367,029	\$ 352,279	\$ 14,750	4.2%
Twenty-four month term	26,863	22,171	4,692	21.2%
Total Physicians	393,892	374,450	19,442	5.2%
Healthcare facilities ⁽²⁾⁽⁸⁾	63,361	65,014	(1,653)	(2.5%)
Other healthcare providers ⁽³⁾	34,162	32,200	1,962	6.1%
Legal professionals ⁽⁴⁾	26,399	26,227	172	0.7%
Tail coverages ⁽⁵⁾⁽⁶⁾	21,724	25,579	(3,855)	(15.1%)
Retroactive coverages ⁽⁶⁾	900	18,708	(17,808)	(95.2%)
Total professional liability	540,438	542,178	(1,740)	(0.3%)
Medical technology liability ⁽⁷⁾	35,128	34,528	600	1.7%
Other ⁽⁹⁾	2,134	490	1,644	335.5%
Total	\$ 577,700	\$ 577,196	\$ 504	0.1%

- ⁽¹⁾ Physician policies were our greatest source of premium revenues in both 2019 and 2018. The increase in twelve month term policies in 2019 included timing differences of \$5.6 million primarily related to the prior year renewal of certain policies. Excluding the effect of these timing differences, twelve month term policies increased \$9.2 million as compared to 2018. The remaining increase was primarily due to new business written, an increase in exposure related to three policies written on an excess and surplus lines basis totaling \$5.2 million and an increase in renewal pricing, partially offset by retention losses. Renewal pricing increases in 2019 are reflective of our concern about increases in loss severity. The lower retention for 2019 is largely attributable to our focus on underwriting discipline, as we continue to emphasize careful risk selection, rate adequacy and a willingness to walk away from business that does not fit our goal of achieving a long-term underwriting profit. We anticipate a lower than average level of retention to persist as we continue to reevaluate certain books of business and set our rates to reflect our observations of higher severity trends. We also offer twenty-four month term policies to our physician insureds in one selected jurisdiction. The increase in twenty-four month term policies in 2019 as compared to 2018 primarily reflected the normal cycle of renewals (policies subject to renewal in 2019 were previously written in 2017 rather than in 2018).
- ⁽²⁾ Our healthcare facilities premium (which includes hospitals, surgery centers, long-term care facilities and other miscellaneous healthcare facilities) decreased in 2019 as compared to 2018 due to retention losses, partially offset by new business written and, to a lesser extent, an increase in renewal pricing. Retention losses in 2019 were driven by our decision not to renew certain products written on an excess and surplus lines basis after our underwriting evaluation and, to a lesser extent, the loss of two large policies totaling \$1.7 million due to price competition as a result of rate increases. As we continue to reevaluate certain books of business, we anticipate our retention to remain at a lower than historic level. Renewal pricing increases in 2019 reflect rate increases where we believe appropriate given the loss environment and loss indications we are seeing in the healthcare facilities space.
- ⁽³⁾ Our other healthcare providers are primarily dentists, chiropractors and allied health professionals. The increase in 2019 is primarily due to the timing of the prior year renewal of one policy as well as new business written.

- (4) Our legal professionals policies are primarily individual and small group policies in select areas of practice. Our legal professionals premium remained relatively unchanged in 2019 as compared to 2018 as new business written and renewal pricing increases were offset by retention losses. The increase in renewal pricing was primarily the result of an increase in the rate charged for certain renewed policies in select states due to rate filings.
- (5) We offer extended reporting endorsement or "tail" coverage to insureds who discontinue their claims-made coverage with us, and we also periodically offer tail coverage through custom policies. Tail coverage premiums are generally 100% earned in the period written because the policies insure only incidents that occurred in prior periods and are not cancellable. The amount of tail coverage premium written can vary significantly from period to period. The decrease in tail premiums in 2019 was driven by \$7.9 million of tail coverage provided in connection with a loss portfolio transfer entered into during the second quarter of 2018, partially offset by \$1.8 million of tail coverage provided in connection with a loss portfolio transfer entered into during the third quarter of 2019.
- (6) We offer custom alternative risk solutions including loss portfolio transfers for healthcare entities that, most commonly, are exiting a line of business, changing an insurance approach or simply preferring to transfer risk. In the third quarter of 2019, we entered into a loss portfolio transfer with a regional hospital group which resulted in \$0.9 million of retroactive premium written and fully earned in 2019. In the second quarter of 2018, we entered into a loss portfolio transfer with a large healthcare organization which resulted in \$18.7 million of retroactive premium written and fully earned in 2018. See Note 4 of the Notes to Consolidated Financial Statements for further information on these transactions.
- (7) Our medical technology liability business is marketed throughout the U.S.; coverage is typically offered on a primary basis, within specified limits, to manufacturers and distributors of medical technology and life sciences products including entities conducting human clinical trials. In addition to the previously listed factors that affect our premium volume, our medical technology liability premium is impacted by the sales volume of insureds. The increase in 2019 was primarily due to new business written and, to a lesser extent, an increase in renewal pricing, largely offset by retention losses. Renewal pricing increases primarily reflect increases in the sales volume and exposure of certain insureds. Retention losses in 2019 are primarily attributable to an increase in competition on terms and pricing.
- (8) Certain components of our gross premiums written include alternative market premiums in our captive cell program. We cede either all or a portion of the alternative market premium, net of reinsurance, to certain SPCs of our wholly owned Cayman Islands reinsurance subsidiaries, Inova Re and Eastern Re, which are reported in our Segregated Portfolio Cell Reinsurance segment (see further discussion in the Ceded Premiums Written section that follows). The portion not ceded to the SPCs is retained within our Specialty P&C segment. Total gross premiums written by component in our alternative market captive cell program were as follows:

(\$ in millions)	Year Ended December 31			
	2019	2018	Change	
Physicians	\$ 1.4	\$ 1.4	\$ —	—%
Healthcare facilities	6.4	4.4	2.0	45.5%
Total	\$ 7.8	\$ 5.8	\$ 2.0	34.5%

The increase in our alternative market healthcare facilities premium during 2019 was primarily due to new business written, including the addition of one large policy totaling \$1.4 million. The remaining increase was attributable to multiple short-term policies written throughout 2018 that renewed on January 1, 2019 with twelve month terms.

- (9) This component of gross premiums written includes all other product lines within our Specialty P&C segment. The increase during 2019 was due to a \$1.5 million specialty contractual liability policy.

We are committed to a rate structure that will allow us to fulfill our obligations to our insureds, while generating competitive long-term returns for our shareholders. Our pricing continues to be based on expected losses as indicated by our historical loss data and available industry loss data. In recent years, this practice has resulted in gradual rate increases and we anticipate further rate increases due to indications of increasing loss severity. Additionally, the pricing of our business includes the effects of filed rates, surcharges and discounts. Renewal pricing also reflects changes in our exposure base, deductibles, self-insurance retention limits and other policy items.

The change in renewal pricing for our Specialty P&C segment, including by major component, was as follows:

	Year Ended December 31
	2019
Specialty P&C segment ⁽¹⁾	6%
Physicians ⁽¹⁾⁽²⁾	6%
Healthcare facilities ⁽¹⁾⁽²⁾	14%
Other healthcare providers ⁽¹⁾	5%
Legal professionals ⁽²⁾	2%
Medical technology liability ⁽²⁾	2%

⁽¹⁾ Excludes certain policies written on an excess and surplus lines basis as the terms and conditions of these policies are not consistent between periods.

⁽²⁾ See Gross Premiums Written section for further explanation of renewal pricing increase.

New business written by major component on a direct basis was as follows:

<i>(In millions)</i>	Year Ended December 31	
	2019	2018
Physicians	\$ 25.1	\$ 19.8
Healthcare facilities	9.2	19.8
Other healthcare providers	1.5	2.5
Legal professionals	2.6	2.8
Medical technology liability	4.2	3.0
Total	<u>\$ 42.6</u>	<u>\$ 47.9</u>

For our Specialty P&C segment, we calculate retention as annualized renewed premium divided by all annualized premium subject to renewal. Retention is affected by a number of factors. We may lose insureds to competitors or to alternative insurance mechanisms such as risk retention groups or self-insurance entities (often when physicians join hospitals or large group practices) or due to pricing or other issues. We may choose not to renew an insured as a result of our underwriting evaluation. Insureds may also terminate coverage because they have left the practice of medicine for various reasons, principally for retirement, death or disability, but also for personal reasons.

Retention for our Specialty P&C segment, including by major component, was as follows:

	Year Ended December 31	
	2019	2018
Specialty P&C segment ⁽¹⁾	86%	89%
Physicians ⁽¹⁾⁽²⁾	88%	90%
Healthcare facilities ⁽¹⁾⁽²⁾	62%	87%
Other healthcare providers ⁽¹⁾	88%	87%
Legal professionals	88%	86%
Medical technology liability	88%	87%

⁽¹⁾ Excludes certain policies written on an excess and surplus lines basis as the terms and conditions of these policies are not consistent between periods.

⁽²⁾ See Gross Premiums Written section for further explanation of retention decline in 2019.

Ceded Premiums Written

Ceded premiums represent the amounts owed to our reinsurers for their assumption of a portion of our losses. Through our current excess of loss reinsurance arrangements we generally retain the first \$1 million in risk insured by us and cede coverages in excess of this amount. For our healthcare professional liability coverages, we also retain from 4% - 9% of the next \$25 million of risk for coverages in excess of \$1 million. For our medical technology liability coverages, we also retain 10% of the next \$9 million of risk for coverages in excess of \$1 million. We pay our reinsurers a ceding premium in exchange for their accepting the risk, and in certain of our excess of loss arrangements, the ultimate amount of which is determined by the loss experience of the business ceded, subject to certain minimum and maximum amounts.

Ceded premiums written were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Excess of loss reinsurance arrangements ⁽¹⁾	\$ 35,014	\$ 35,591	\$ (577)	(1.6%)
Premium ceded to Syndicate 1729 ⁽²⁾	—	2,105	(2,105)	nm
Other shared risk arrangements ⁽³⁾	33,976	31,358	2,618	8.3%
Premium ceded to SPCs ⁽⁴⁾	6,860	5,159	1,701	33.0%
Other ceded premiums written	3,266	3,310	(44)	(1.3%)
Adjustment to premiums owed under reinsurance agreements, prior accident years, net ⁽⁵⁾	2,834	5,525	(2,691)	(48.7%)
Total ceded premiums written	\$ 81,950	\$ 83,048	\$ (1,098)	(1.3%)

- ⁽¹⁾ We generally reinsure risks under our excess of loss reinsurance arrangements pursuant to which the reinsurers agree to assume all or a portion of all risks that we insure above our individual risk retention levels, up to the maximum individual limits offered. Premium due to reinsurers also fluctuates with the volume of written premium subject to cession under the arrangement. In certain of our excess of loss reinsurance arrangements, the premium due to the reinsurer is determined by the loss experience of that business reinsured, subject to certain minimum and maximum amounts. Due to increases in loss experience of business reinsured under those loss sensitive agreements and resulting increases in premium due to those reinsurers, we have reached the maximum level of premium due under those arrangements which is driving the decrease in ceded premiums written in 2019 as compared to 2018.
- ⁽²⁾ Prior to January 1, 2018, our Specialty P&C segment ceded premiums to Syndicate 1729 under a quota share reinsurance agreement. We record our participation in Syndicate 1729 in our Lloyd's Syndicates segment on a quarter lag, except when information is material to the current period. We also recorded the cession to Syndicate 1729 from our Specialty P&C segment on the same quarter lag as the amounts were not material and that permitted the cession to be reported by both our Lloyd's Syndicates segment and our Specialty P&C segment in the same reporting period. The decrease in premiums ceded to Syndicate 1729 during 2019 is due to the non-renewal of the quota share reinsurance agreement with Syndicate 1729 on January 1, 2018; the impact of which was not reflected in ceded premiums written until the second quarter of 2018 due to the previously mentioned quarter lag. See the Segment Operating Results - Lloyd's Syndicates section for further discussion on the quota share agreement.
- ⁽³⁾ We have entered into various shared risk arrangements, including quota share, fronting and captive arrangements, with certain large healthcare systems and other insurance entities. These arrangements include our Ascension Health and CAPAssurance programs. While we cede a large portion of the premium written under these arrangements, they provide us an opportunity to grow net premium through strategic partnerships. The increase in 2019 was primarily driven by growth in our CAPAssurance program, partially offset by a decrease in exposure related to one of our Ascension Health programs.
- ⁽⁴⁾ As previously discussed, as a part of our alternative market solutions, all or a portion of certain healthcare premium written is ceded to SPCs in our Segregated Portfolio Cell Reinsurance segment under either excess of loss or quota share reinsurance agreements, depending on the structure of the individual program. See the Segment Operating Results - Segregated Portfolio Cell Reinsurance section for further discussion on the cession to SPCs from our Specialty P&C segment. The increase in premiums ceded to SPCs during 2019 was primarily due to new business written and the renewal of multiple short-term policies written throughout 2018 that renewed on January 1, 2019 with twelve month terms (see discussion in footnote 8 under the heading "Gross Premiums Written").
- ⁽⁵⁾ Given the length of time that it takes to resolve our claims, many years may elapse before all losses recoverable under a reinsurance arrangement are known. As a part of the process of estimating our loss reserve we also make estimates regarding the amounts recoverable under our reinsurance arrangements. As previously discussed, the premiums ultimately ceded under certain of our excess of loss reinsurance arrangements are subject to the losses ceded under the arrangements. As part of the review of our reserves during 2019 and 2018, we increased our estimate of expected losses and associated recoveries for prior year ceded losses, as well as our estimate of ceded premiums owed to reinsurers; however, this increase was lower in 2019 as compared to 2018 due to reaching the maximum level of premium due under certain prior year excess of loss arrangements. Changes to estimates of premiums ceded related to prior accident years are fully earned in the period the changes in estimates occur.

Ceded Premiums Ratio

As shown in the table below, our ceded premiums ratio was affected in both 2019 and 2018 by revisions to our estimate of premiums owed to reinsurers related to coverages provided in prior accident years.

	Year Ended December 31		
	2019	2018	Change
Ceded premiums ratio, as reported	14.2%	14.4%	(0.2) pts
Less the effect of adjustments in premiums owed under reinsurance agreements, prior accident years (as previously discussed)	0.5%	1.0%	(0.5) pts
Ratio, current accident year	13.7%	13.4%	0.3 pts

The slight increase in the current accident year ceded premiums ratio for the year ended December 31, 2019 was primarily due to the effect of the 2018 loss portfolio transfer (increase in gross premiums written with no premium ceded) which decreased the 2018 current accident year ceded premiums ratio by approximately 0.7 percentage points. Excluding the impact of the 2018 loss portfolio transfer, the current accident year ceded premiums ratio decreased by approximately 0.4 percentage points in 2019 as compared to 2018 driven by the effect of the non-renewal of the quota share reinsurance agreement with Syndicate 1729 and a decrease in premium ceded under our excess of loss reinsurance arrangements, partially offset by an increase in premium ceded to the SPCs in our Segregated Portfolio Cell Reinsurance segment.

Net Premiums Earned

Net premiums earned consist of gross premiums earned less the portion of earned premiums that we cede to our reinsurers for their assumption of a portion of our losses. Because premiums are generally earned pro rata over the entire policy period, fluctuations in premiums earned tend to lag those of premiums written. Generally, our policies carry a term of one year; however, as discussed above, we write certain policies with a twenty-four month term, and a few of our medical technology liability policies have a multi-year term. Tail coverage premiums are generally 100% earned in the period written because the policies insure only incidents that occurred in prior periods and are not cancellable. Retroactive coverage premiums are 100% earned at the inception of the contract, as all of the underlying loss events occurred in the past. Additionally, ceded premium changes due to changes to estimates of premiums owed under reinsurance agreements for prior accident years are fully earned in the period of change.

Net premiums earned were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums earned	\$ 580,796	\$ 580,022	\$ 774	0.1%
Less: Ceded premiums earned	81,738	88,235	(6,497)	(7.4%)
Net premiums earned	\$ 499,058	\$ 491,787	\$ 7,271	1.5%

Gross premiums earned during 2019 and 2018 included the effects of two different loss portfolio transfers which resulted in \$2.7 million and \$26.6 million, respectively, of one-time premium written and fully earned in the respective periods (see discussion under the heading "Gross Premiums Written"). After removing the impacts of the loss portfolio transfers from each period, gross premiums earned increased \$24.7 million due to the pro rata effect of an increase in the volume of written premium during the preceding twelve months, predominantly in our physicians and healthcare facilities lines of business driven by an increase in renewal pricing.

The decrease in ceded premiums earned during 2019 as compared to 2018 reflected the effect of adjustments made during 2019 and 2018 to ceded premiums owed under reinsurance agreements related to prior accident year losses. After removing the effect of prior accident year ceded premium adjustments from both years, ceded premiums earned decreased \$3.8 million in 2019 as compared to 2018. The remaining decrease was driven by the non-renewal of the quota share reinsurance agreement with Syndicate 1729, partially offset by the pro rata effect of an increase in premiums ceded under our shared risk arrangements during the preceding twelve months, predominantly in our CAPAssurance program.

Losses and Loss Adjustment Expenses

The determination of calendar year losses involves the actuarial evaluation of incurred losses for the current accident year and the actuarial re-evaluation of incurred losses for prior accident years, including an evaluation of the reserve amounts required for losses in excess of policy limits.

Accident year refers to the accounting period in which the insured event becomes a liability of the insurer. For claims-made policies, which represent the majority of the premiums written in our Specialty P&C segment, the insured event generally becomes a liability when the event is first reported to us. For occurrence policies, the insured event becomes a liability when the event takes place. For retroactive coverages, the insured event becomes a liability at inception of the underlying contract. We believe that measuring losses on an accident year basis is the best measure of the underlying profitability of the premiums earned in that period, since it associates policy premiums earned with the estimate of the losses incurred related to those policy premiums.

The following table summarizes calendar year net loss ratios by separating losses between the current accident year and all prior accident years. Additionally, the table shows our current accident year net loss ratios were affected by revisions to our estimate of premiums owed to reinsurers related to coverages provided in prior accident years. The net loss ratios for our Specialty P&C segment were as follows:

	Net Loss Ratios ⁽¹⁾		
	Year Ended December 31		
	2019	2018	Change
Calendar year net loss ratio	106.7%	78.2%	28.5 pts
Less impact of prior accident years on the net loss ratio	1.2%	(15.6%)	16.8 pts
Current accident year net loss ratio	105.5%	93.8 %	11.7 pts
Less estimated ratio increase (decrease) attributable to:			
Ceded premium adjustments, prior accident years ⁽²⁾	0.6%	1.0%	(0.4) pts
Current accident year net loss ratio, excluding the effect of prior year ceded premium ⁽³⁾	104.9%	92.8 %	12.1 pts

⁽¹⁾ Net losses, as specified, divided by net premiums earned.

⁽²⁾ During 2019 and 2018, we increased the premiums owed under reinsurance agreements for prior accident years which decreased net premiums earned (the denominator of the current accident year ratio). See the discussion in the Premiums section for our Specialty P&C segment under the heading "Ceded Premiums Written" for additional information.

⁽³⁾ The current accident year net loss ratio, excluding the effect of prior year ceded premium adjustments (as shown in the table above), increased 12.1 percentage points as compared to 2018. The change in the current accident year net loss ratio was primarily attributable to the following:

(In percentage points)	Increase 2019 versus 2018
Estimated ratio increase attributable to:	
Change in actuarial adjustments related to the current accident year reserve	6.0 pts
Change in DDR reserve adjustment	2.9 pts
PDR	1.9 pts
All other, net	1.3 pts
Increase in the current accident year net loss ratio, excluding the effect of prior year ceded premium	<u>12.1 pts</u>

We update and review the data underlying the estimation of our current accident year reserve each reporting period and make adjustments to current accident year net loss ratios that we believe best reflect emerging data. Both our internal and consulting actuaries perform an in-depth review of our current accident year reserve on at least a semi-annual basis. As a result of these analyses in both 2019 and 2018, we increased our current accident year net loss ratio; however, the adjustment was greater in 2019 as compared to 2018 which accounted for 6.0 percentage points of the increase in the current accident year net loss ratio. This increase in 2019 was driven by increased reserve estimates for a large national healthcare account and, to a lesser extent, in our broader HCPL excess and surplus lines of business.

Our broader HCPL excess and surplus lines of business include custom physicians, healthcare facilities, correctional healthcare and long-term care policies. Also as a result of our annual actuarial analysis, we increased our reserves related to DDR coverage endorsements in 2019 as compared to a decrease in 2018 which accounted for 2.9 percentage points of the increase in the current accident year net loss ratio. Furthermore, as part of our quarterly evaluation of the recoverability of DPAC, we recognized a PDR of \$9.2 million which accounted for 1.9 percentage points of the increase in the current accident year net loss ratio. The PDR represents an estimated premium deficiency associated with the unearned premium of the aforementioned large national healthcare account which is reflected as a component of our current accident year net losses; no such reserves were established in 2018. The remaining increase in our current accident year net loss ratio of 1.3 percentage points was primarily due to changes in the mix of business. Current accident year loss ratios for our core physicians, podiatric, chiropractic, legal professional liability and medical technology liability businesses were relatively unchanged as compared to 2018.

As a result of our re-evaluation of previously established reserves, we recognized net unfavorable prior year reserve development of \$5.7 million for the year ended December 31, 2019 as compared to net favorable prior year reserve development of \$77.0 million for the year ended December 31, 2018. Development recognized during 2019 principally related to accident years 2016 through 2018. Development recognized during 2018 principally related to accident years 2011 through 2014. Net unfavorable prior year reserve development in 2019 included \$51.5 million of unfavorable prior year reserve development related to our reserves for the previously mentioned large national healthcare account that has experienced losses far exceeding the assumptions we made when underwriting the account, beginning in 2016. Excluding the unfavorable development related to this account, the Specialty P&C segment recognized favorable prior year reserve development totaling \$45.8 million in 2019 which included favorable loss development in our medical technology liability line of business of \$12.8 million. Net favorable loss development in 2018 of \$77.0 million included \$13.3 million and \$10.9 million attributable to our medical technology liability and legal professional liability lines of business, respectively. While the majority of our reserves continue to develop favorably, the favorable development we recognized, excluding the large national healthcare account, was lower as compared to 2018 due to the observed increase in claim severity in the broader HCPL industry.

A detailed discussion of factors influencing our recognition of loss development is included in our Critical Accounting Estimates section under the heading "Reserve for Losses and Loss Adjustment Expenses." Assumptions used in establishing our reserve are regularly reviewed and updated by management as new data becomes available. Any adjustments necessary are reflected in the then current operations. Due to the size of our reserve, even a small percentage adjustment to the assumptions can have a material effect on our results of operations for the period in which the change is made, as was the case in both 2019 and 2018.

Underwriting, Policy Acquisition and Operating Expenses

Our Specialty P&C segment underwriting, policy acquisition and operating expenses for the years ended December 31, 2019 and 2018 were comprised as follows:

<i>(\$ in thousands)</i>	Year Ended December 31			
	2019	2018	<i>Change</i>	
DPAC amortization	\$ 56,604	\$ 52,253	\$ 4,351	8.3%
Management fees	6,742	6,968	(226)	(3.2%)
Other underwriting and operating expenses	56,964	53,198	3,766	7.1%
Total	\$ 120,310	\$ 112,419	\$ 7,891	7.0%

DPAC amortization increased during the year ended December 31, 2019 as compared to 2018 driven by an increase in earned premium, excluding the effects of the premium earned from the loss portfolio transfers in 2019 and 2018 as there were no deferred acquisition costs associated with those transactions (see discussion under the heading "Gross Premiums Written"). In addition, the increase in DPAC amortization also reflected a decrease in ceding commission income related to the reduction in premiums ceded to Syndicate 1729, partially offset by an increase in ceding commission income from certain of our shared risk arrangements.

Management fees are charged pursuant to a management agreement by the Corporate segment to the operating subsidiaries within our Specialty P&C segment for services provided based on the extent to which services are provided to the subsidiary and the amount of premium written by the subsidiary. While the terms of the management agreement were consistent between 2019 and 2018, fluctuations in the amount of premium written by each subsidiary can result in corresponding variations in the management fee charged to each subsidiary during a particular period.

Other underwriting and operating expenses increased during the year ended December 31, 2019 as compared to 2018 primarily driven by \$4.9 million of fees incurred in 2019 as compared to \$1.0 million in 2018 associated with a data analytics services agreement entered into during the fourth quarter of 2018, partially offset by a decrease in compensation related costs primarily due to lower bonuses. See Note 9 of the Notes to Consolidated Financial Statements for further information on the data analytics services agreement.

Underwriting Expense Ratio (the Expense Ratio)

Our expense ratio for the Specialty P&C segment for the year ended December 31, 2019 as compared to 2018 was as follows:

	Year Ended December 31		
	2019	2018	<i>Change</i>
Underwriting expense ratio	24.1%	22.9%	<i>1.2 pts</i>

Excluding the impacts of the loss portfolio transfers entered into during 2019 and 2018 (net premiums earned with minimal associated operating expenses), our underwriting expense ratio was relatively unchanged for the year ended December 31, 2019 as compared to 2018 as the increase in earned premium and the decrease in compensation related costs outpaced the increase in DPAC amortization and offset the effect of the fees incurred related to the data analytics services agreement, as previously discussed.

Segment Operating Results - Workers' Compensation Insurance

Our Workers' Compensation Insurance segment includes workers' compensation products provided to employers generally with 1,000 or fewer employees, as discussed in Note 17 of the Notes to Consolidated Financial Statements. Workers' compensation products offered include guaranteed cost policies, policyholder dividend policies, retrospectively-rated policies, deductible policies and alternative market solutions. Alternative market products include program design, fronting, claims administration, risk management, SPC rental, asset management and SPC management services. Alternative market program premiums are 100% ceded to either the SPCs within our Segregated Portfolio Cell Reinsurance segment or, to a limited extent, an unaffiliated captive insurer. Our Workers' Compensation Insurance segment operating results reflected pre-tax underwriting profit or loss from these workers' compensation products, exclusive of investment results, which are included in our Corporate segment. Segment operating results included the following:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Net premiums written	\$ 182,233	\$ 195,350	\$ (13,117)	(6.7%)
Net premiums earned	\$ 189,240	\$ 186,079	\$ 3,161	1.7%
Other income	2,399	2,412	(13)	(0.5%)
Net losses and loss adjustment expenses	(121,649)	(118,483)	(3,166)	2.7%
Underwriting, policy acquisition and operating expenses	(57,520)	(55,693)	(1,827)	3.3%
Segment operating results	\$ 12,470	\$ 14,315	\$ (1,845)	(12.9%)
Net loss ratio	64.3%	63.7%	0.6 pts	
Underwriting expense ratio	30.4%	29.9%	0.5 pts	

Premiums Written

Our workers' compensation premium volume is driven by five primary factors: (1) the amount of new business written, (2) retention of our existing book of business, (3) premium rates charged on our renewal book of business, (4) changes in payroll exposure and (5) audit premium.

Gross, ceded and net premiums written were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums written	\$ 278,442	\$ 293,230	\$ (14,788)	(5.0%)
Less: Ceded premiums written	96,209	97,880	(1,671)	(1.7%)
Net premiums written	\$ 182,233	\$ 195,350	\$ (13,117)	(6.7%)

Gross Premiums Written

Gross premiums written by product were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Traditional business:				
Guaranteed cost	\$ 158,246	\$ 163,138	\$ (4,892)	(3.0%)
Policyholder dividend	20,446	21,203	(757)	(3.6%)
Deductible	5,857	8,143	(2,286)	(28.1%)
Retrospective	2,985	6,911	(3,926)	(56.8%)
Other	8,660	9,413	(753)	(8.0%)
Alternative market business	82,248	84,422	(2,174)	(2.6%)
Total	\$ 278,442	\$ 293,230	\$ (14,788)	(5.0%)

Gross premiums written in our traditional business decreased during the year ended December 31, 2019 as compared to 2018, which reflected our response to underpricing that is occurring in a very competitive market. New business written, renewal pricing and the retention rate all declined during 2019. The decrease in deductible premiums written primarily reflects

the loss of three accounts. The decrease in retrospective policy premiums written primarily reflects the loss of two accounts and the impact of retrospective premium adjustments which are based on the loss experience of the underlying policies. Retrospective premium adjustments in 2019 decreased premiums written by \$2.1 million as compared to adjustments in 2018 that increased premiums written by \$0.8 million. Other premiums written primarily reflect our participation in residual market pools in the states in which we operate; premiums are based on information provided to us by the residual market.

New business opportunities, renewal pricing and retention continue to be a challenge as a result of intense competition, especially from multi-line carriers that are willing to underprice their workers' compensation products to offset other coverages. This has resulted in fewer new business opportunities, which is reflected in a 20% decline in submissions during 2019. The decrease in new business in 2019 as compared to 2018 also reflects the acquisition of the Great Falls renewal book of business in September 2017, which contributed \$11.7 million of new business for the year ended December 31, 2018. Excluding the Great Falls acquisition, submissions declined 12% during 2019. Renewal pricing decreases reflect the competitive market, as well as the impact of state loss cost decreases in the majority of the states in which we write business.

Gross premiums written in our alternative market business decreased for the year ended December 31, 2019 as compared to 2018. New business and renewal pricing trends in our alternative market business for 2019 were relatively consistent with the trends in our traditional business. We retained all 22 of the available workers' compensation alternative market programs up for renewal for the year ended December 31, 2019, including 6 programs available for renewal during the fourth quarter of 2019. Additionally, we wrote one new workers' compensation alternative market program in the third quarter of 2019.

New business, audit premium, retention and renewal price changes for both the traditional business and the alternative market business are shown in the table below:

(\$ in millions)	Year Ended December 31					
	2019			2018		
	Traditional Business	Alternative Market Business	Segment Results	Traditional Business	Alternative Market Business	Segment Results
New business	\$ 27.0	\$ 3.8	\$ 30.8	\$ 43.2	\$ 8.3	\$ 51.5
Audit premium (including EBUB)	\$ 3.7	\$ 2.0	\$ 5.7	\$ 4.3	\$ 1.6	\$ 5.9
Retention ⁽¹⁾	79%	91%	83%	84%	91%	86%
Change in renewal pricing ⁽²⁾	(4%)	(5%)	(4%)	(1%)	—%	(1%)

⁽¹⁾ We calculate our workers' compensation retention as annualized expiring renewed premium divided by all annualized expiring premium subject to renewal. Our retention can be impacted by various factors, including price or other competitive issues, insureds being acquired, or a decision not to renew based on our underwriting evaluation.

⁽²⁾ The pricing of our business includes an assessment of the underlying policy exposure and the effects of current market conditions. We continue to base our pricing on expected losses, as indicated by our historical loss data.

Ceded Premiums Written

Ceded premiums written were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Premiums ceded to SPCs	\$ 79,799	\$ 79,927	\$ (128)	(0.2%)
Premiums ceded to external reinsurers	13,633	13,515	118	0.9%
Premiums ceded to unaffiliated captive insurers	2,449	4,495	(2,046)	(45.5%)
Change in return premium estimate under external reinsurance	328	(57)	385	(675.4%)
Total ceded premiums written	\$ 96,209	\$ 97,880	\$ (1,671)	(1.7%)

Our Workers' Compensation Insurance segment cedes alternative market business under a 100% quota share reinsurance agreement, net of a ceding commission, to SPCs in our Segregated Portfolio Cell Reinsurance segment.

Under our external reinsurance agreement, we retain the first \$0.5 million in risk insured by us and cede losses in excess of this amount on each loss occurrence under our primary external reinsurance treaty. Effective May 1, 2019, our primary reinsurance layer was renewed with an AAD equal to the greater of \$3.9 million or 2.1% of subject premium, in excess of the \$0.5 million retention per loss occurrence, and the elimination of the return premium component of the contract. The addition of the AAD was partially offset by a reduction in the reinsurance rates under our renewed treaty. Per our reinsurance agreements, we cede premiums related to our traditional business on an earned premium basis. The increase in premiums ceded to external

reinsurers during the year ended December 31, 2019 primarily reflected an increase in earned premium, partially offset by the impact of lower reinsurance rates for the treaty year effective May 1, 2019.

The decrease in premiums ceded to unaffiliated captive insurers during the year ended December 31, 2019 reflected the impact of a novation of an unaffiliated captive program into an SPC at Inova Re during the fourth quarter of 2018. The premium ceded to this program is now reflected in premiums ceded to SPCs in the table above. For the year ended December 31, 2018, premiums related to this program that were ceded to the unaffiliated captive totaled \$1.8 million. For the year ended December 31, 2019, premiums ceded to unaffiliated captive insurers in the table above reflected business ceded to one unaffiliated captive program.

Changes in the return premium estimate reflected the loss experience under the reinsurance treaties during 2019 and 2018. The increase in the return premium estimate for the year ended December 31, 2019 reflected prior year unfavorable loss development on reinsured claims.

Ceded Premiums Ratio

Ceded premiums ratio was as follows:

	Year Ended December 31		
	2019	2018	Change
Ceded premiums ratio, as reported	34.2%	34.2%	— pts
Less the effect of:			
Premiums ceded to SPCs (100%)	26.2%	25.1%	1.1 pts
Retrospective premium adjustments	0.1%	—%	0.1 pts
Premiums ceded to unaffiliated captive insurers (100%)	1.1%	2.4%	(1.3) pts
Return premium estimated under external reinsurance	0.2%	—%	0.2 pts
Assumed premiums earned (not ceded to external reinsurers)	(0.3%)	(0.3%)	— pts
Ceded premiums ratio (related to external reinsurance), less the effects of above	6.9%	7.0%	(0.1) pts

The above table reflects ceded premiums earned as a percent of gross premiums earned. As discussed above, we cede premiums related to our traditional business to external reinsurers on an earned premium basis. For the year ended December 31, 2019, the ceded premiums ratio, excluding the effects in the table above, decreased slightly as compared to 2018 which primarily reflected the impact of lower reinsurance rates for the treaty year effective May 1, 2019.

Net Premiums Earned

Net premiums earned were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums earned	\$ 287,409	\$ 282,974	\$ 4,435	1.6%
Less: Ceded premiums earned	98,169	96,895	1,274	1.3%
Net premiums earned	\$ 189,240	\$ 186,079	\$ 3,161	1.7%

Net premiums earned consist of gross premiums earned less the portion of earned premiums that we cede to SPCs in our Segregated Portfolio Cell Reinsurance segment, external reinsurers or to any unaffiliated captive insurers. Because premiums are generally earned pro rata over the entire policy period, fluctuations in premiums earned tend to lag those of premiums written. Our workers' compensation policies are twelve month term policies, and premiums are earned on a pro rata basis over the policy period. Net premiums earned also include premium adjustments related to the audit of our insureds' payrolls. Payroll audits are conducted subsequent to the end of the policy period and any related adjustments are recorded as fully earned in the current period. In addition, we record an estimate for EBUB and evaluate the estimate on a quarterly basis. We did not adjust the EBUB estimate during the years ended December 31, 2019 or 2018. The increase in net premiums earned primarily reflected the pro rata effect of higher net premiums written during the preceding twelve months, partially offset by the retrospective policy premium adjustments, as previously discussed.

Losses and Loss Adjustment Expenses

We estimate our current accident year loss and loss adjustment expenses based on an expected loss ratio. Incurred losses and loss adjustment expenses for the current accident year are determined by applying the expected loss ratio to net premiums earned, which includes audit premium, for the respective period. The following table summarizes calendar year net loss ratios by separating losses between the current accident year and all prior accident years. Calendar year and current accident year net loss ratios by component were as follows:

	Year Ended December 31		
	2019	2018	Change
Calendar year net loss ratio	64.3%	63.7%	0.6 pts
Less impact of prior accident years on the net loss ratio	(4.1%)	(4.3%)	0.2 pts
Current accident year net loss ratio	68.4%	68.0%	0.4 pts

The 2019 current accident year net loss ratio reflects the impact of the AAD (see previous discussion under the heading "Ceded Premiums Written") and renewal rate decreases, largely offset by overall favorable trends in claim closing patterns during 2019.

Calendar year incurred losses (excluding IBNR) ceded to our external reinsurers decreased \$10.1 million for the year ended December 31, 2019 as compared to 2018. Current accident year ceded incurred losses decreased \$5.5 million as compared to 2018. The decrease in losses ceded to our external reinsurers primarily reflects the impact of the AAD, which reduced ceded losses by \$3.9 million, and a reduction in reported reinsured claims during 2019.

We recognized net favorable development related to our previously established reserves of \$7.8 million for the year ended December 31, 2019 as compared to \$8.0 million for 2018. The net favorable prior year development for the years ended December 31, 2019 and 2018 reflected overall favorable trends in claim closing patterns, primarily in the 2015 and 2016 accident years. For each of the years ended December 31, 2019 and 2018, the net favorable prior year development included \$1.6 million related to the amortization of the purchase accounting fair value adjustment. The fair value adjustment has been fully amortized as of December 31, 2019.

Underwriting, Policy Acquisition and Operating Expenses

Underwriting, policy acquisition and operating expenses includes the amortization of commissions, premium taxes and underwriting salaries, which are capitalized and deferred over the related workers' compensation policy period, net of ceding commissions earned. The capitalization of underwriting salaries can vary as they are subject to the success rate of our contract acquisition efforts. These expenses also include a management fee charged by our Corporate segment, which represents intercompany charges pursuant to a management agreement, and the amortization of intangible assets, primarily related to the acquisition of Eastern by ProAssurance. The management fee is based on the extent to which services are provided to the subsidiary and the amount of premium written by the subsidiary.

Our Workers' Compensation Insurance segment underwriting, policy acquisition and operating expenses were comprised as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
DPAC amortization	\$ 34,338	\$ 33,352	\$ 986	3.0%
Management fees	2,088	2,193	(105)	(4.8%)
Other underwriting and operating expenses	39,073	37,407	1,666	4.5%
SPC ceding commission offset	(17,979)	(17,259)	(720)	4.2%
Total	\$ 57,520	\$ 55,693	\$ 1,827	3.3%

The increase in DPAC amortization for the year ended December 31, 2019 as compared to 2018 primarily reflected the increase in net premiums earned. The increase in other underwriting and operating expenses for the year ended December 31, 2019 as compared to 2018 reflected an increase in compensation and benefit related costs, technology costs, including an increase in the allocation of technology costs charged by our Corporate segment, professional fees and bad debt expense.

As previously discussed, alternative market premiums written through our Workers' Compensation Insurance segment's alternative market business unit are 100% ceded, less a ceding commission, to either the SPCs in our Segregated Portfolio Cell Reinsurance segment or, to a limited extent, an unaffiliated captive insurer. The ceding commission consists of an amount for fronting fees, cell rental fees, commissions, premium taxes and risk management fees. The fronting fees, commissions, premium taxes and risk management fees are recorded as an offset to underwriting, policy acquisition and operating expenses. Cell rental fees are recorded as a component of other income and claims administration fees are recorded as ceded ULAE. The increase in SPC ceding commissions earned in 2019 as compared to 2018 primarily reflected the increase in alternative market earned premium.

Underwriting Expense Ratio (the Expense Ratio)

The underwriting expense ratio included the impact of the following:

	Year Ended December 31		
	2019	2018	Change
Underwriting expense ratio, as reported	30.4%	29.9%	0.5 pts
Less estimated ratio increase (decrease) attributable to:			
Impact of ceding commissions received from SPCs	2.8%	2.9%	(0.1) pts
Retrospective premium adjustment	0.2%	(0.1%)	0.3 pts
Impact of audit premium	(0.4%)	(0.4%)	— pts
Underwriting expense ratio, less listed effects	27.8%	27.5%	0.3 pts

The increase in the expense ratio for the year ended December 31, 2019, exclusive of the items noted in the table, primarily reflected the increase in other underwriting and operating expenses noted above.

Segment Operating Results - Segregated Portfolio Cell Reinsurance

The Segregated Portfolio Cell Reinsurance segment reflects the operating results (underwriting profit or loss, plus investment results, net of U.S. federal income taxes) of SPCs at Inova Re and Eastern Re, our Cayman Islands SPC operations, as discussed in Note 17 of the Notes to Consolidated Financial Statements. SPCs are segregated pools of assets and liabilities that provide an insurance facility for a defined set of risks. Assets of each SPC are solely for the benefit of that individual cell and each SPC is solely responsible for the liabilities of that individual cell. Assets of one SPC are statutorily protected from the creditors of the others. Each SPC is owned, fully or in part, by an agency, group or association and the operating results of the SPCs are attributable to the participants of that cell. We participate to a varying degree in the results of selected SPCs and, for the SPCs in which we participate, our participation interest ranges from a low of 20% to a high of 85%. SPC operating results attributable to external cell participants are reflected as an SPC dividend expense in our Segregated Portfolio Cell Reinsurance segment. In addition, our Segregated Portfolio Cell Reinsurance segment includes the SPC investment results as the investments are solely for the benefit of the cell participants, and investment results attributable to external cell participants are reflected in the SPC dividend expense. As of December 31, 2019, there were 27 (23 active) SPCs. The SPCs assume workers' compensation insurance, healthcare professional liability insurance or a combination of the two from our Workers' Compensation Insurance and Specialty P&C segments. As of December 31, 2019, there were two SPCs that assumed both workers' compensation insurance and healthcare professional liability insurance and one SPC that assumed only healthcare professional liability insurance. In addition, an SPC at Eastern Re assumed an errors and omissions liability policy from a captive insurer unaffiliated with ProAssurance during 2019.

Segment operating results reflects our share of the underwriting and investment results of the SPCs in which we participate, and included the following:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Net premiums written	\$ 77,639	\$ 75,547	\$ 2,092	2.8%
Net premiums earned	\$ 78,563	\$ 73,940	\$ 4,623	6.3%
Net investment income	1,578	1,566	12	0.8%
Net realized gains (losses)	4,020	(3,149)	7,169	(227.7%)
Other income	559	211	348	164.9%
Net losses and loss adjustment expenses	(52,412)	(38,726)	(13,686)	35.3%
Underwriting, policy acquisition and operating expenses ⁽¹⁾	(24,260)	(22,426)	(1,834)	8.2%
SPC net operating results	8,048	11,416	(3,368)	(29.5%)
SPC dividend (expense) income ⁽²⁾	(4,579)	(9,122)	4,543	(49.8%)
Segment operating results ⁽³⁾	\$ 3,469	\$ 2,294	\$ 1,175	51.2%
Net loss ratio	66.7%	52.4%	14.3 pts	
Underwriting expense ratio ⁽¹⁾	30.9%	30.3%	0.6 pts	

⁽¹⁾ Underwriting, policy acquisition and operating expenses in both 2019 and 2018 included a provision for U.S. federal income taxes of \$1.1 million and \$0.4 million, respectively, for SPCs at Inova Re that have elected to be taxed as U.S. taxpayers. The portion of U.S. federal income taxes attributable to external cell participants is reflected in SPC dividend (expense) income. See the section that follows under the heading "Underwriting, Policy Acquisition and Operating Expenses" for the impact the provision for U.S. federal income taxes had on the underwriting expense ratio in 2019 and 2018 as these U.S. federal income taxes do not represent underwriting expenses of the SPCs.

⁽²⁾ Represents the net operating (profit) loss attributable to external cell participants.

⁽³⁾ Represents our share of the net operating profit (loss) of the SPCs in which we participate.

Premiums Written

The majority of premiums in our Segregated Portfolio Cell Reinsurance segment are assumed from either our Workers' Compensation Insurance or Specialty P&C segments. Premium volume is driven by five primary factors: (1) the amount of new business written, (2) retention of the existing book of business, (3) premium rates charged on the renewal book of business and, for workers' compensation business, (4) changes in payroll exposure and (5) audit premium.

Gross, ceded and net premiums written were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums written	\$ 87,140	\$ 85,086	\$ 2,054	2.4%
Less: Ceded premiums written	9,501	9,539	(38)	(0.4%)
Net premiums written	\$ 77,639	\$ 75,547	\$ 2,092	2.8%

Gross Premiums Written

Gross premiums written reflected reinsurance premiums assumed by component as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Workers' compensation	\$ 79,799	\$ 79,927	\$ (128)	(0.2%)
Healthcare professional liability	6,860	5,159	1,701	33.0%
Other	481	—	481	nm
Gross Premiums Written	\$ 87,140	\$ 85,086	\$ 2,054	2.4%

Gross premiums written for the years ended December 31, 2019 and 2018 were primarily comprised of workers' compensation coverages assumed from our Workers' Compensation Insurance segment. Workers' compensation gross premiums written decreased during 2019, primarily reflecting the competitive workers' compensation market. The increase in healthcare professional liability gross premiums written during 2019 was driven primarily by the addition of one large policy and the renewal of certain policies in 2019 that were written on a short-term basis in 2018. We retained 100% of the available alternative market programs up for renewal during 2019, including 22 workers' compensation programs and 3 healthcare professional liability programs. Additionally, we added one new alternative market program at Inova Re during the third quarter of 2019.

New business, audit premium, retention and renewal price changes for the assumed workers' compensation premium is shown in the table below:

(\$ in millions)	Year Ended December 31	
	2019	2018
New business	\$ 3.8	\$ 8.3
Audit premium (including EBUB)	\$ 2.0	\$ 1.6
Retention rate ⁽¹⁾	91%	91%
Change in renewal pricing ⁽²⁾	(5%)	—%

⁽¹⁾ We calculate our workers' compensation retention rate as annualized expiring renewed premium divided by all annualized expiring premium subject to renewal. Our retention rate can be impacted by various factors, including price or other competitive issues, insureds being acquired, or a decision not to renew based on our underwriting evaluation.

⁽²⁾ The pricing of our business includes an assessment of the underlying policy exposure and the effects of current market conditions. We continue to base our pricing on expected losses, as indicated by our historical loss data.

Ceded Premiums Written

Ceded premiums written were as follows:

(\$ in thousands)	Year Ended December 31		
	2019	2018	Change
Ceded premiums written	\$ 9,501	\$ 9,539	\$ (38) (0.4%)

For the workers' compensation business, each SPC has in place its own external reinsurance arrangements. The healthcare professional liability business is assumed net of reinsurance from our Specialty P&C segment; therefore, there are no ceded premiums related to the healthcare professional liability business reflected in the table above. The risk retention for each loss occurrence for the workers' compensation business ranges from \$0.3 million to \$0.35 million based on the program, with limits up to \$119.7 million. In addition, each program has aggregate reinsurance coverage between \$1.1 million and \$2.1 million on a program year basis. Per the SPC external reinsurance agreements, premiums are ceded on a written premium basis and changes in ceded premiums written during 2019 primarily reflected changes in gross premiums written as compared to 2018. External reinsurance rates vary based on the alternative market program.

Ceded Premiums Ratio

Ceded premiums ratio was as follows:

	Year Ended December 31		
	2019	2018	Change
Ceded premiums ratio	11.9%	11.9%	— pts

The above table reflects ceded premiums as a percent of gross premiums written for the workers' compensation business only; healthcare professional liability business is assumed net of reinsurance, as discussed above. The ceded premiums ratio reflects the weighted average reinsurance rates of all SPC programs. The ceded premiums ratio remained unchanged for the year ended December 31, 2019 as compared to 2018.

Net Premiums Earned

Gross, ceded and net premiums earned were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums earned	\$ 88,304	\$ 83,264	\$ 5,040	6.1%
Less: Ceded premiums earned	9,741	9,324	417	4.5%
Net premiums earned	\$ 78,563	\$ 73,940	\$ 4,623	6.3%

Net premiums earned consist of gross premiums earned less the portion of earned premiums that the SPCs cede to external reinsurers. Because premiums are generally earned pro rata over the entire policy period, fluctuations in premiums earned tend to lag those of premiums written. Policies ceded to the SPCs are twelve month term policies and premiums are earned on a pro rata basis over the policy period. Net premiums earned also include premium adjustments related to the audit of workers' compensation insureds' payrolls. Payroll audits are conducted subsequent to the end of the policy period and any related adjustments are recorded as fully earned in the current period. The increase in net premiums earned primarily reflected the pro rata effect of higher net premiums written during the preceding twelve months.

Net Investment Income and Net Realized Investment Gains (Losses)

Net investment income for the years ended December 31, 2019 and 2018 was primarily attributable to interest earned on available-for-sale fixed maturity investments, which primarily includes investment-grade corporate debt securities. Net realized investment gains for the year ended December 31, 2019 primarily reflected realized gains from the sale of equity securities. Net realized investment losses for the year ended December 31, 2018 primarily reflected a decrease in the fair value of the equity securities portfolio.

Losses and Loss Adjustment Expenses

The following table summarizes the calendar year net loss ratios by separating losses between the current accident year and all prior accident years. The current accident year net loss ratio reflected the aggregate loss ratio for all programs. Loss reserves are estimated for each program on a quarterly basis. Due to the size of some of the programs, quarterly loss results can create volatility in the current accident year net loss ratio to fluctuate significantly from period to period.

For the year ended December 31, 2019, our Segregated Portfolio Cell Reinsurance segment's net loss ratio was affected by a \$10 million reserve that an SPC at Eastern Re established during the second quarter of 2019. This SPC previously assumed an errors and omissions policy that provides coverage for losses up to a lifetime maximum of \$10 million from a captive insurer unaffiliated with ProAssurance. During the second quarter of 2019, a claim was filed under this policy that met the lifetime maximum limit and, accordingly, a \$10 million reserve was recorded. We do not participate in the SPC that assumed this policy; therefore, these losses are the obligation of the external cell participants and are reflected as an offset in the SPC dividend expense (income) and have no effect on our Segregated Portfolio Cell Reinsurance segment net operating results for the year ended December 31, 2019. Given the significance of this one-time event, we have removed the impact of the policy from each of the ratios below (as shown in the columns labeled "Adjusted") in order to assist in the comparability between periods. Calendar year and current accident year net loss ratios for the years ended December 31, 2019 and 2018 were as follows:

	Year Ended December 31					
	2019			2018	Change	
	As reported	E&O reserve impact	Adjusted	As reported	As reported	Adjusted
Calendar year net loss ratio	66.7%	12.3 pts	54.4%	52.4%	14.3 pts	2.0 pts
Less impact of prior accident years on the net loss ratio	(12.9%)	— pts	(12.9%)	(12.1%)	(0.8) pts	(0.8) pts
Current accident year net loss ratio	79.6%	12.3 pts	67.3%	64.5%	15.1 pts	2.8 pts

Excluding the impact of the errors and omissions liability policy, as shown above, the current accident year net loss ratio increased in 2019 as compared to 2018 primarily due to an increase in severity-related claims activity.

Calendar year incurred losses ceded to our external reinsurers increased \$11.1 million for the year ended December 31, 2019 as compared to 2018. Current accident year ceded incurred losses increased \$9.1 million for the year ended December 31, 2019 as compared to 2018. The increase in current accident year ceded incurred losses primarily reflected the impact of four claims totaling \$11.2 million, of which \$8.3 million related to two claims, incurred in 2019.

We recognized net favorable prior year development of \$10.1 million and \$9.0 million for the years ended December 31, 2019 and 2018, respectively. The net favorable prior year reserve development for the year ended December 31, 2019 primarily reflected overall favorable trends in claim closing patterns, primarily in the 2015 through 2018 accident years. The net favorable prior year reserve development for the year ended December 31, 2018 also primarily reflected overall favorable trends in claim closing patterns, primarily in the 2015 through 2017 accident years.

Underwriting, Policy Acquisition and Operating Expenses

Our Segregated Portfolio Cell Reinsurance segment underwriting, policy acquisition and operating expenses were comprised as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
DPAC amortization	\$ 21,717	\$ 21,039	\$ 678	3.2%
Other underwriting and operating expenses	2,543	1,387	1,156	83.3%
Total	\$ 24,260	\$ 22,426	\$ 1,834	8.2%

DPAC amortization primarily represented ceding commissions, which vary by program and are paid to our Workers' Compensation Insurance and Specialty P&C segments for premiums assumed. Ceding commissions include an amount for fronting fees, commissions, premium taxes and risk management fees, which are reported as an offset to underwriting, policy acquisition and operating expenses within our Workers' Compensation Insurance and Specialty P&C segments. In addition, ceding commissions paid to our Workers' Compensation Insurance segment include cell rental fees which are recorded as other income within our Workers' Compensation Insurance segment.

Other underwriting and operating expenses primarily include bank fees, professional fees, bad debt expense and a provision for federal income taxes paid by the SPCs. The increase in other underwriting and operating expense for the year

ended December 31, 2019 as compared to 2018 primarily reflected an increase in the provision for federal income taxes and fees related to letters of credit posted as program collateral. The provision for federal income taxes totaled \$1.1 million and \$0.4 million in 2019 and 2018, respectively.

Underwriting Expense Ratio (the Expense Ratio)

The underwriting expense ratio included the impact of the following:

	Year Ended December 31		
	2019	2018	Change
Underwriting expense ratio, as reported	30.9%	30.3%	0.6 pts
Less:			
Impact of audit premium	(0.7%)	(0.7%)	— pts
Impact of provision for federal income taxes related to SPCs at Inova Re	1.4%	0.5%	0.9 pts
Underwriting expense ratio, less listed effects	30.2%	30.5%	(0.3) pts

Underwriting, policy acquisition and operating expenses in both 2019 and 2018 included a provision for U.S. federal income taxes of \$1.1 million and \$0.4 million, respectively, for SPCs at Inova Re that have elected to be taxed as U.S. tax payers. The increase in the federal income tax provision for the year ended December 31, 2019 as compared to 2018 reflects an increase in taxable income for the Inova Re SPCs. This provision for federal income taxes is included in the total SPC net operating results and the portion of federal income taxes attributable to external cell participants is reflected in the SPC dividend (expense) income. We have removed the impact of the provision for U.S. federal income taxes from the expense ratio as these expenses do not represent underwriting expenses of the SPCs.

Excluding the effects of audit premium and the provision for U.S. federal income taxes, the underwriting expense ratio primarily reflected the weighted average ceding commission percentage of all SPC programs.

Segment Operating Results - Lloyd's Syndicates

Our Lloyd's Syndicates segment includes operating results from our participation in certain Syndicates at Lloyd's of London. In addition to our participation in Syndicate operating results, we have investments in and other obligations to our Lloyd's Syndicates consisting of a Syndicate Credit Agreement and FAL requirements. For the 2019 underwriting year, our FAL was comprised of investment securities and cash and cash equivalents deposited with Lloyd's which at December 31, 2019 had a fair value of approximately \$137.1 million, as discussed in Note 3 of the Notes to Consolidated Financial Statements.

We normally report results from our involvement in Lloyd's Syndicates on a quarter lag, except when information is available that is material to the current period (see discussion that follows under the heading "Property and Natural Catastrophe Losses"). Furthermore, the investment results associated with our FAL investments and certain U.S. paid administrative expenses are reported concurrently as that information is available on an earlier time frame.

Lloyd's Syndicate 1729. We provide capital to Syndicate 1729, which covers a range of property and casualty insurance and reinsurance lines in both the U.S. and international markets. The remaining capital for Syndicate 1729 is provided by unrelated third parties, including private names and other corporate members. For the 2019 underwriting year, we slightly decreased our participation in the operating results of Syndicate 1729 from 62% to 61% which, due to the quarter lag, was not reflected in our Lloyd's Syndicates segment results until the second quarter of 2019. Syndicate 1729 had a maximum underwriting capacity of £128 million (approximately \$169.7 million at December 31, 2019) for the 2019 underwriting year, of which £78 million (\$103 million based on December 31, 2019 exchange rates) was our allocated underwriting capacity. To reduce our exposure and the associated earnings volatility, we decreased our participation in the operating results of Syndicate 1729 for the 2020 underwriting year from 61% to 29% which, due to the quarter lag, will not be reflected in our Lloyd's Syndicates segment results until the second quarter of 2020. Syndicate 1729's maximum underwriting capacity for the 2020 underwriting year is £135 million (approximately \$179 million at December 31, 2019), of which £39 million (approximately \$51 million at December 31, 2019) is our allocated underwriting capacity.

Lloyd's Syndicate 6131. We are the sole (100%) capital provider to an SPA, Syndicate 6131, which focuses on contingency and specialty property business in both the U.S. and international markets. As an SPA, Syndicate 6131 is only allowed to underwrite one quota share reinsurance contract with Syndicate 1729. Due to the quarter lag, our participation in Syndicate 6131 was not reflected in our Lloyd's Syndicates segment results until the second quarter of 2018, as Syndicate 6131 began writing business effective January 1, 2018. For the 2019 underwriting year Syndicate 6131 had a maximum underwriting capacity of £12 million (\$16 million based on December 31, 2019 exchange rates). For the 2020 underwriting year, Syndicate 6131 has a maximum underwriting capacity of £12 million (approximately \$16 million at December 31, 2019).

In addition to the results of our participation in Lloyd's Syndicates, as discussed above, our Lloyd's Syndicates segment also includes 100% of the operating results of our wholly owned subsidiaries that support our operations at Lloyd's. For the years ended December 31, 2019 and 2018, the results of our Lloyd's Syndicates segment were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums written	\$ 110,905	\$ 88,746	\$ 22,159	25.0%
Ceded premiums written	(23,802)	(18,877)	(4,925)	26.1%
Net premiums written	\$ 87,103	\$ 69,869	\$ 17,234	24.7%
Net premiums earned	\$ 80,671	\$ 67,047	\$ 13,624	20.3%
Net investment income	4,551	3,358	1,193	35.5%
Net realized gains (losses)	768	(460)	1,228	267.0%
Other income (loss)	(573)	322	(895)	(278.0%)
Net losses and loss adjustment expenses	(47,369)	(51,570)	4,201	(8.1%)
Underwriting, policy acquisition and operating expenses	(34,711)	(31,686)	(3,025)	9.5%
Income tax benefit (expense)	—	317	(317)	(100.0%)
Segment operating results	\$ 3,337	\$ (12,672)	\$ 16,009	126.3%
Net loss ratio	58.7%	76.9%	(18.2) pts	
Underwriting expense ratio	43.0%	47.3%	(4.3) pts	

Property and Natural Catastrophe Losses

As previously mentioned, we normally report results from our involvement in Lloyd's Syndicates on a quarter lag; however, during the fourth quarter of 2018, we accelerated our reporting of approximately \$6.8 million, net of reinsurance and reinstatement premiums, of storm-related losses in connection with Hurricane Michael, which affected the northwest portion of Florida during October 2018. These losses would have normally been reported in the first quarter of 2019 due to the aforementioned quarter delay. However, due to the availability and significance of these estimates, we accelerated our reporting of these storm-related losses into the fourth quarter of 2018, which is consistent with our policy of disclosing significant losses in the period in which they become known to us. No such adjustments were made during 2019.

Gross Premiums Written

Changes in our premium volume within our Lloyd's Syndicates segment are driven by four primary factors: (1) the amount of new business and the channels in which the business is written, (2) our retention of existing business, (3) the premium charged for business that is renewed, which is affected by rates charged and by the amount and type of coverage an insured chooses to purchase and (4) the timing of premium written through multi-period policies.

Gross premiums written in 2019 consisted of property insurance coverages (42% of total gross premiums written), casualty coverages (31%), catastrophe reinsurance coverages (16%), specialty property coverages (8%) and property reinsurance coverages (3%). The increase in gross premiums written during 2019 as compared to 2018 was primarily driven by volume increases on renewal business and renewal pricing increases, as well as new business written, primarily property insurance coverages.

As discussed in our Specialty P&C segment operating results, prior to January 1, 2018 Syndicate 1729 served as a reinsurer on a quota share basis for a wholly owned insurance subsidiary in our Specialty P&C segment. Premiums assumed from our Specialty P&C segment were approximately \$1.2 million during the year ended December 31, 2019. The 2017 and 2016 calendar year quota share arrangements with our Specialty P&C segment were commuted in December 2018 and 2017, respectively. Due to the quarter lag, the effects of the 2017 and 2016 commutations were reported in both segments' results during the first quarters of 2019 and 2018, respectively, and are reflected in the Lloyd's Syndicates segment results for the years ended December 31, 2019 and 2018, respectively. The commutations did not differ significantly from the previously recorded amounts.

Ceded Premiums Written

Syndicate 1729 utilizes reinsurance to provide the capacity to write larger limits of liability on individual risks, to provide protection against catastrophic loss and to provide protection against losses in excess of policy limits. Ceded premiums written increased for the year ended December 31, 2019 as compared to 2018 primarily due to the overall increase in gross premiums written.

Net Premiums Earned

Net premiums earned consist of gross premiums earned less the portion of earned premiums that we cede to our reinsurers for their assumption of a portion of our losses. Premiums written through open-market channels are generally earned pro rata over the entire policy period, which is predominately twelve months, whereas premiums written through delegated underwriting authority arrangements are earned over twenty-four months. Therefore, net premiums earned is affected by shifts in the mix of policies written between the open-market and delegated underwriting authority arrangements. Additionally, fluctuations in premiums earned tend to lag those of premiums written. Premiums for certain policies and assumed reinsurance contracts are reported subsequent to the coverage period and/or may be subject to adjustment based on loss experience. These premium adjustments are earned when reported, which can result in further fluctuation in earned premium.

Gross, ceded and net premiums earned were as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Gross premiums earned	\$ 101,222	\$ 83,307	\$ 17,915	21.5%
Less: Ceded premiums earned	20,551	16,260	4,291	26.4%
Net premiums earned	\$ 80,671	\$ 67,047	\$ 13,624	20.3%

The increase in gross premiums earned for the year ended December 31, 2019 as compared to 2018 was driven by the pro rata effect of higher premiums written during the preceding twelve months, primarily property insurance coverages and, to a greater extent for 2019, the pro rata effect of shifts in the mix of premiums written during the preceding twelve months; a larger proportion of premiums were written through the open-market, as compared to previous years, which are predominately earned

over twelve months. During 2019, the increase in gross premiums earned also reflected our participation in Syndicate 6131 at the beginning of 2018, which was not reflected in our Lloyd's Syndicates Segment results until the second quarter of 2018.

The increase in ceded premiums earned during 2019 was driven by the pro rata effect of an increase in premiums ceded under reinsurance arrangements during the preceding twelve months due to the increase in gross premiums earned, as previously discussed.

Gross and net premiums earned included a nominal amount of premium assumed from our Specialty P&C segment during 2019 as compared to approximately \$5.0 million of premium assumed during 2018.

Net Losses and Loss Adjustment Expenses

Losses for the year were primarily recorded using the loss assumptions by risk category incorporated into the business plans submitted to Lloyd's for Syndicate 1729 and Syndicate 6131 with consideration given to loss experience incurred to date. The assumptions used in each business plan were consistent with loss results reflected in Lloyd's historical data for similar risks. The loss ratios may fluctuate due to the timing of earned premium adjustments (see discussion in this section under the heading "Net Premiums Earned"). Premium and exposure for some of Syndicate 1729's insurance policies and reinsurance contracts are initially estimated and subsequently adjusted over an extended period of time as underlying premium reports are received from cedants and insureds. When reports are received, the premium, exposure and corresponding loss estimates are revised accordingly. Changes in loss estimates due to premium or exposure fluctuations are incurred in the accident year in which the premium is earned.

The following table summarizes calendar year net loss ratios by separating losses between the current accident year and all prior accident years. Net loss ratios for the period were as follows:

	Year Ended December 31		
	2019	2018	Change
Calendar year net loss ratio	58.7%	76.9%	(18.2) pts
Less impact of prior accident years on the net loss ratio	0.5%	2.9%	(2.4) pts
Current accident year net loss ratio	58.2%	74.0%	(15.8) pts

The decrease in the current accident year net loss ratio for the year ended December 31, 2019 as compared to the year ended December 31, 2018 was driven by an increase in estimated reinsurance recoveries related to property and catastrophe related losses as well as the increase in net premiums earned, as previously discussed.

We recognized \$0.4 million of unfavorable prior year development for the year ended December 31, 2019 as compared to \$2.0 million of unfavorable prior year development for the year ended December 31, 2018. The unfavorable prior year development for the year ended December 31, 2018 was driven by higher than expected losses and development on certain large claims which resulted in unfavorable development with respect to a previous year of account.

Underwriting, Policy Acquisition and Operating Expenses

Underwriting, policy acquisition and operating expenses increased by \$3.0 million for the year ended December 31, 2019 as compared to 2018 primarily due to an increase in DPAC amortization driven by an increase in net premiums earned, partially offset by the effect of higher operational expenses incurred associated with establishing Syndicate 6131 during 2018.

The decrease in the underwriting expense ratio for the year ended December 31, 2019 as compared to 2018 was primarily due to the increased volume of earned premium as a result of the growth of the Syndicates. In addition, the decrease in the underwriting expense ratio reflected the effect of higher operational expenses in 2018 associated with the establishment of Syndicate 6131.

Investments

Net investment income increased during the year ended December 31, 2019 as compared to 2018 due to an increase in interest earned on our FAL due to a higher average FAL balance in 2019 as compared to 2018. Our FAL primarily includes investment-grade corporate debt securities. Syndicate 1729's fixed maturities portfolio includes certain debt securities classified as trading securities. Investment results associated with these fixed maturity trading securities are reported on the same quarter lag.

Taxes

Operating results of this segment are subject to U.K. income tax law.

Segment Operating Results - Corporate

Our Corporate segment includes our investment operations, other than those reported in our Segregated Portfolio Cell Reinsurance and Lloyd's Syndicates segments, interest expense and U.S. income taxes, as discussed in Note 17 of the Notes to Consolidated Financial Statements. Our Corporate segment also includes non-premium revenues generated outside of our insurance entities and corporate expenses. Segment operating results for our Corporate segment were net earnings of \$129.7 million and \$42.3 million for the years ended December 31, 2019 and 2018, respectively, and included the following:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Net investment income	\$ 87,140	\$ 86,960	\$ 180	0.2%
Equity in earnings (loss) of unconsolidated subsidiaries	\$ (10,061)	\$ 8,948	\$ (19,009)	(212.4%)
Net realized gains (losses)	\$ 55,086	\$ (39,879)	\$ 94,965	238.1%
Operating expense	\$ 19,146	\$ 18,767	\$ 379	2.0%
Interest expense	\$ 16,636	\$ 16,163	\$ 473	2.9%
Income tax expense (benefit)	\$ (29,808)	\$ (17,715)	\$ (12,093)	(68.3%)

Net Investment Income, Equity in Earnings (Loss) of Unconsolidated Subsidiaries, Net Realized Investment Gains (Losses)

Net Investment Income

Net investment income is primarily derived from the income earned by our fixed maturity securities and also includes dividend income from equity securities, income from our short-term and cash equivalent investments, earnings from other investments and increases in the cash surrender value of BOLI contracts, net of investment fees and expenses.

Net investment income by investment category was as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Fixed maturities	\$ 66,862	\$ 64,523	\$ 2,339	3.6%
Equities	17,650	21,418	(3,768)	(17.6%)
Short-term investments, including Other	6,635	5,351	1,284	24.0%
BOLI	2,017	1,983	34	1.7%
Investment fees and expenses	(6,024)	(6,315)	291	(4.6%)
Net investment income	\$ 87,140	\$ 86,960	\$ 180	0.2%

Fixed Maturities

The increase in income from our fixed maturities during 2019 was primarily due to higher yields from certain asset classes in our fixed maturity portfolio. In addition, on an overall basis, our average investment in fixed maturity securities was approximately 2% higher for the year ended December 31, 2019 as compared to 2018.

Average yields for our fixed maturity portfolio were as follows:

	Year Ended December 31	
	2019	2018
Average income yield	3.4%	3.3%
Average tax equivalent income yield	3.4%	3.4%

Equities

Income from our equity portfolio decreased during 2019 as compared to 2018 which reflected a decrease in our allocation to this asset category as well as a different mix of equities owned.

Short-term Investments and Other Investments

Short-term investments, which have a maturity at purchase of one year or less, are carried at fair value, which approximates their cost basis, and are primarily composed of investments in U.S. treasury obligations, commercial paper and money market funds. Income from our short-term and other investments increased during 2019 primarily attributable to higher yields as compared to 2018.

Equity in Earnings (Loss) of Unconsolidated Subsidiaries

Equity in earnings (loss) of unconsolidated subsidiaries was as follows:

<i>(\$ in thousands)</i>	Year Ended December 31			
	2019	2018	<i>Change</i>	
All other investments, primarily investment fund LPs/LLCs	\$ 10,842	\$ 33,270	\$ (22,428)	<i>(67.4%)</i>
Tax credit partnerships	(20,903)	(24,322)	3,419	<i>(14.1%)</i>
Equity in earnings (loss) of unconsolidated subsidiaries	\$ (10,061)	\$ 8,948	\$ (19,009)	<i>(212.4%)</i>

We hold interests in certain LPs/LLCs that generate earnings from trading portfolios, secured debt, debt securities, multi-strategy funds and private equity investments. The performance of the LPs/LLCs is affected by the volatility of equity and credit markets. For our investments in LPs/LLCs, we record our allocable portion of the partnership operating income or loss as the results of the LPs/LLCs become available. Our investment results from our portfolio of investments in LPs/LLCs decreased for the year ended December 31, 2019 driven by lower reported earnings from two LP investments which accounted for \$20.5 million of the decrease as compared to 2018.

Our tax credit partnership investments are designed to generate returns in the form of tax credits and tax-deductible project operating losses and are comprised of qualified affordable housing project tax credit partnerships and historic tax credit partnerships. We account for our tax credit partnership investments under the equity method and record our allocable portion of the operating losses of the underlying properties based on estimates provided by the partnerships. For our qualified affordable housing project tax credit partnerships, we adjust our estimates of our allocable portion of operating losses periodically as actual operating results of the underlying properties become available. Our historic tax credit partnerships are short-term in nature and the majority of the remaining operating losses are expected to be recognized in 2020. The results from our tax credit partnership investments for the year ended December 31, 2019 reflected lower partnership operating losses as compared to 2018. Based on operating results received, we increased our estimate of partnership operating losses by \$3.0 million in each of the years ended December 31, 2019 and 2018.

The tax benefits received from our tax credit partnerships, which are not reflected in our investment results above, reduced our tax expenses in 2019 and 2018 as follows:

<i>(In millions)</i>	Year Ended December 31	
	2019	2018
Tax credits recognized during the period	\$ 21.9	\$ 21.0
Tax benefit of tax credit partnership operating losses	\$ 4.4	\$ 5.1

Due to our consolidated loss before income taxes recognized for the year ended December 31, 2019, the tax credits generated in 2019 from our tax credit partnership investments of \$18.1 million were deferred and are expected to be utilized in future periods. Tax credits in the above table recognized during the year ended December 31, 2019 included tax credits of \$3.8 million that were carried forward from 2018, which had previously been carried back to the 2017 tax year; however because we expect to carryback our tax loss for the year ended December 31, 2019 to the 2017 tax year, a portion of those tax credits have been recaptured. Of the \$3.8 million of tax credits recaptured and recognized during the year ended December 31, 2019, \$0.2 million was recognized as a current income tax benefit and \$3.6 million was recognized as a deferred income tax benefit in 2019. See Note 6 of the Notes to Consolidated Financial Statements for further information.

Tax credits provided by the underlying projects of the historic tax credit partnerships are typically available in the tax year in which the project is put into active service, whereas the tax credits provided by qualified affordable housing project tax credit partnerships are provided over approximately a ten year period. The increase in tax credits recognized in 2019 was primarily attributable to our historic tax credit partnership investments.

Non-GAAP Financial Measure – Tax Equivalent Investment Result

We believe that to fully understand our investment returns it is important to consider the current tax benefits associated with certain investments as the tax benefit received represents a portion of the return provided by our tax-exempt bonds, BOLI, common and preferred stocks, and tax credit partnership investments (collectively, our tax-preferred investments). We impute a pro forma tax-equivalent result by estimating the amount of fully-taxable income needed to achieve the same after-tax result as is currently provided by our tax-preferred investments. We believe this better reflects the economics behind our decision to invest in certain asset classes that are either taxed at lower rates and/or result in reductions to our current federal income tax expense. Our pro forma tax-equivalent investment result is shown in the table that follows as well as a reconciliation of our GAAP net investment result to our tax equivalent result.

<i>(In thousands)</i>	Year Ended December 31	
	2019	2018
GAAP net investment result:		
Net investment income	\$ 87,140	\$ 86,960
Equity in earnings (loss) of unconsolidated subsidiaries	(10,061)	8,948
GAAP net investment result	\$ 77,079	\$ 95,908
Pro forma tax-equivalent investment result	\$ 78,946	\$ 125,533
Reconciliation of pro forma and GAAP tax-equivalent investment result:		
GAAP net investment result	\$ 77,079	\$ 95,908
Taxable equivalent adjustments, calculated using the 21% federal statutory tax rate		
State and municipal bonds	842	1,693
BOLI	536	527
Dividends received	489	772
Tax credit partnerships*	—	26,633
Pro forma tax-equivalent investment result	\$ 78,946	\$ 125,533

*Due to our consolidated pre-tax loss in 2019, the tax credits recognized from our tax credit partnership investments were deferred to be utilized in future periods; therefore, there is no tax-equivalent adjustment required as tax credits had no impact on our current tax expense in 2019.

Net Realized Investment Gains (Losses)

The following table provides detailed information regarding our net realized investment gains (losses).

<i>(In thousands)</i>	Year Ended December 31	
	2019	2018
OTTI losses, total:		
Corporate debt	\$ (978)	\$ (490)
Portion of OTTI losses recognized in other comprehensive income before taxes:		
Corporate debt	227	—
Net impairment losses recognized in earnings	(751)	(490)
Gross realized gains, available-for-sale fixed maturities	3,628	5,940
Gross realized (losses), available-for-sale fixed maturities	(551)	(5,715)
Net realized gains (losses), equity investments	16,612	12,030
Net realized gains (losses), other investments	1,626	1,340
Change in unrealized holding gains (losses), equity investments	30,801	(49,398)
Change in unrealized holding gains (losses), convertible securities, carried at fair value as a part of other investments	3,653	(3,849)
Other	68	263
Net realized investment gains (losses)	\$ 55,086	\$ (39,879)

During 2019, we recognized credit-related OTTI in earnings of \$0.8 million and non-credit OTTI in OCI of \$0.2 million, both of which related to three corporate bonds in the energy and consumer sectors. We recognized OTTI in earnings of \$0.5 million during 2018 related to debt instruments from two issuers in the energy sector.

We recognized \$55.1 million of net realized investment gains during 2019, driven by both realized gains from the sale of equity investments and unrealized holding gains on our equity portfolio due to the improvement in the market since December 31, 2018, which caused our equity securities to increase in value. The most significant sectors that benefited from the improvement in the market were the financial and energy sectors.

We recognized \$39.9 million of net realized investment losses during 2018, primarily driven by unrealized holding losses on our equity trading portfolio and, to a lesser extent, unrealized losses on convertible securities. The primary driver of these unrealized holding losses was market volatility throughout 2018, which caused our securities to decline in value. The most significant sectors impacted by the market volatility were the financial and energy sectors, although all sectors were impacted.

Operating Expenses

Corporate segment operating expenses were comprised as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Operating expenses	\$ 34,717	\$ 34,437	\$ 280	0.8%
Management fee offset	(15,571)	(15,670)	99	(0.6%)
Segment Total	\$ 19,146	\$ 18,767	\$ 379	2.0%

The increase in operating expenses during 2019 as compared to 2018 was primarily driven by an increase in employee benefits, primarily medical costs associated with employee health plans, and other one-time compensation related expenses as well as professional fees, largely offset by a decrease in share-based compensation expenses and, to a lesser extent, technology-related expenses. The decrease in share-based compensation expenses in 2019 was attributable to a decrease in value of the projected awards based on the decline of one of the associated performance metrics as well as fewer awards outstanding as compared to 2018. The decrease in technology expenses was due to an increase in the allocation of technology costs to the operating subsidiaries within our Specialty P&C and Workers' Compensation Insurance segments from our Corporate segment.

Operating subsidiaries within our Specialty P&C and Workers' Compensation Insurance segments are charged a management fee by the Corporate segment for services provided to these subsidiaries. The management fee is based on the extent to which services are provided to the subsidiary and the amount of premium written by the subsidiary. Under the arrangement, the expenses associated with such services are reported as expenses of the Corporate segment, and the management fees charged are reported as an offset to Corporate operating expenses. While the terms of the arrangement were consistent between 2018 and 2019, fluctuations in the amount of premium written by each subsidiary can result in corresponding variations in the management fee charged to each subsidiary during a particular period.

Interest Expense

Consolidated interest expense for the years ended December 31, 2019 and 2018 was comprised as follows:

(\$ in thousands)	Year Ended December 31			
	2019	2018	Change	
Senior Notes due 2023	\$ 13,429	\$ 13,429	\$ —	—%
Revolving Credit Agreement (including fees and amortization)	645	1,388	(743)	(53.5%)
Mortgage Loans (including amortization)*	1,438	1,425	13	0.9%
(Gain)/loss on interest rate cap	1,124	(153)	1,277	(834.6%)
Other	—	28	(28)	nm
Interest expense	\$ 16,636	\$ 16,117	\$ 519	3.2%

* During 2019, we received nominal cash payments associated with our interest rate cap which were recorded as a reduction to interest expense associated with our Mortgage Loans.

Consolidated interest expense increased during 2019 as compared to 2018 driven by the change in the fair value of our interest rate cap. The interest rate cap is designated as an economic hedge of interest rate risk associated with our variable rate Mortgage Loans. Excluding the impact of the change in fair value of our interest rate cap, consolidated interest expense decreased during 2019 as compared to 2018 driven by lower interest expense on our Revolving Credit Agreement as we did not have any outstanding borrowings during the year ended December 31, 2019 compared to weighted average outstanding borrowings of \$41 million for the year ended December 31, 2018. Interest expense on our Revolving Credit Agreement for the year ended December 31, 2019 primarily reflected unused commitment fees as there were no outstanding borrowings during the period. See further discussion of our outstanding debt in Note 11 and further discussion of our interest rate cap agreement in Note 12 of the Notes to Consolidated Financial Statements.

Taxes

Tax expense allocated to our Corporate segment includes U.S. tax only, which would include U.S. tax expense incurred from our corporate membership in Lloyd's of London and tax expense incurred from SPCs at Inova Re, one of our Cayman Islands reinsurance subsidiaries, as those SPCs elected to be taxed as U.S. taxpayers. The U.K. tax expense incurred by the U.K. based subsidiaries of our Lloyd's Syndicates segment is allocated to that segment. Consolidated tax expense reflects tax expense of both segments, as shown in the table below:

<i>(In thousands)</i>	Year Ended December 31	
	2019	2018
Corporate segment income tax expense (benefit)	\$ (29,808)	\$ (17,715)
Lloyd's Syndicates segment income tax expense (benefit)	—	(317)
Consolidated income tax expense (benefit)	\$ (29,808)	\$ (18,032)

Below we list the primary factors affecting our consolidated effective tax rate in 2019 and 2018. The comparability of each factor's impact on our effective tax rate is affected by the consolidated pre-tax loss recognized in 2019 as compared to the consolidated pre-tax income recognized in 2018. Factors that have the same directional impact on income tax expense in each year have an opposite impact on our effective tax rate due to the effective tax rate being calculated based upon on a pre-tax loss in 2019 versus pre-tax income in 2018. These factors include the following:

	Year Ended December 31			
	2019		2018	
	Income tax (benefit) expense	Rate Impact	Income tax (benefit) expense	Rate Impact
Computed "expected" tax expense (benefit) at statutory rate	\$ (6,049)	21.0%	\$ 6,095	21.0%
Tax-exempt income*	(1,528)	5.3%	(2,505)	(8.6%)
Tax credits	(21,933)	76.1%	(21,059)	(72.6%)
Non-U.S. operating results	(1,447)	5.0%	2,269	7.8%
Excess tax benefit on share-based compensation	99	(0.3%)	(275)	(0.9%)
Tax rate differential on loss carryback	(3,400)	11.8%	—	—%
Provision-to-return differences	3,595	(12.4%)	(2,309)	(8.0%)
Change in uncertain tax positions	1,956	(6.8%)	(51)	(0.2%)
State income taxes	(376)	1.3%	129	0.4%
Benefit from amended returns	(550)	1.9%	—	—%
Other	(175)	0.6%	(326)	(1.0%)
Total income tax expense (benefit)	\$ (29,808)	103.5%	\$ (18,032)	(62.1%)

*Includes tax-exempt interest, dividends received deduction and change in cash surrender value of BOLI.

Our effective tax rates for 2019 and 2018, as shown in the table above, resulted in an income tax benefit in both years and differs from the statutory federal income tax rate of 21% primarily due to the recognition of a tax benefit from credits transferred to us from our tax credit partnership investments in both 2019 and 2018 and, to a lesser extent, portions of our income that are exempt from federal income taxes. Our effective tax rate in 2019 was also affected by the tax rate differential on the carryback of our current year tax loss to the 2017 tax year when the federal statutory tax rate was 35% as compared to the current tax rate of 21%. Additionally, our effective tax rates in both 2019 and 2018 were impacted by provision-to-return differences. For 2019, these differences primarily reflected a lower amount of tax credits utilized in 2018 than the previously estimated tax benefit. For 2018, these differences primarily reflected the impact of the change in the federal corporate tax rate on our temporary provision-to-return differences as well as higher tax credits received for the 2017 tax year than the previously estimated tax benefit.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We believe that we are principally exposed to three types of market risk; interest rate risk, credit risk and equity price risk. We have limited exposure to foreign currency risk as we issue few insurance contracts denominated in currencies other than the U.S. dollar and we have few monetary assets or obligations denominated in foreign currencies.

Interest Rate Risk

Investments

Our fixed maturities portfolio is exposed to interest rate risk. Fluctuations in interest rates have a direct impact on the market valuation of these securities. As interest rates rise, market values of fixed income portfolios fall and vice versa. Certain of the securities are held in an unrealized loss position; we do not intend to sell and believe we will not be required to sell any debt security held in an unrealized loss position before its anticipated recovery.

The following tables summarize estimated changes in the fair value of our available-for-sale fixed maturity securities for specific hypothetical changes in interest rates by asset class at December 31, 2019 and December 31, 2018. There are principally two factors that determine interest rates on a given security: changes in the level of yield curves and credit spreads. As different asset classes can be affected in different ways by movements in those two factors, we have separated our portfolio by asset class in the following tables.

<i>(\$ in millions)</i>	Interest Rate Shift in Basis Points				
	December 31, 2019				
	(200)	(100)	Current	100	200
Fair Value:					
Fixed maturities, available for sale:					
U.S. Treasury obligations	\$ 117	\$ 113	\$ 111	\$ 108	\$ 105
U.S. Government-sponsored enterprise obligations	18	17	17	17	16
State and municipal bonds	320	308	296	285	274
Corporate debt	1,425	1,382	1,340	1,300	1,261
Asset-backed securities	548	537	525	511	497
Total fixed maturities, available for sale	\$ 2,428	\$ 2,357	\$ 2,289	\$ 2,221	\$ 2,153
Duration:					
Fixed maturities, available for sale:					
U.S. Treasury obligations	2.78	2.71	2.64	2.58	2.52
U.S. Government-sponsored enterprise obligations	0.75	0.71	0.98	3.07	3.87
State and municipal bonds	3.91	3.84	3.82	3.89	3.93
Corporate debt	3.10	3.04	3.02	3.01	2.99
Asset-backed securities	2.12	2.21	2.46	2.73	2.87
Total fixed maturities, available for sale	2.95	2.92	2.96	3.04	3.07

Interest Rate Shift in Basis Points

December 31, 2018

<i>(\$ in millions)</i>	Interest Rate Shift in Basis Points				
	(200)	(100)	Current	100	200
Fair Value:					
Fixed maturities, available for sale:					
U.S. Treasury obligations	\$ 127	\$ 124	\$ 120	\$ 117	\$ 114
U.S. Government-sponsored enterprise obligations	36	36	35	34	33
State and municipal bonds	316	305	294	283	273
Corporate debt	1,300	1,261	1,224	1,187	1,153
Asset-backed securities	443	432	421	409	396
Total fixed maturities, available for sale	<u>\$ 2,222</u>	<u>\$ 2,158</u>	<u>\$ 2,094</u>	<u>\$ 2,030</u>	<u>\$ 1,969</u>
Duration:					
Fixed maturities, available for sale:					
U.S. Treasury obligations	2.77	2.70	2.63	2.57	2.50
U.S. Government-sponsored enterprise obligations	0.66	0.98	2.65	3.77	4.18
State and municipal bonds	3.61	3.58	3.59	3.64	3.73
Corporate debt	2.98	2.97	2.93	2.89	2.83
Asset-backed securities	2.18	2.46	2.86	3.11	3.23
Total fixed maturities, available for sale	2.86	2.91	2.99	3.04	3.04

Computations of prospective effects of hypothetical interest rate changes are based on numerous assumptions, including the maintenance of the existing level and composition of fixed income security assets, and should not be relied on as indicative of future results.

Certain shortcomings are inherent in the method of analysis presented in the computation of the fair value of fixed rate instruments. Actual values may differ from the projections presented should market conditions vary from assumptions used in the calculation of the fair value of individual securities, including non-parallel shifts in the term structure of interest rates and changing individual issuer credit spreads.

At December 31, 2019, our fixed maturities portfolio includes fixed maturities classified as trading securities which do not have a significant amount of exposure to market interest rates or credit spreads.

Our cash and short-term investments at December 31, 2019 are carried at fair value which approximates their cost basis due to their short-term nature. Our cash and short-term investments lack significant interest rate sensitivity due to their short duration.

Debt

Our Mortgage Loans are exposed to interest rate risk as they accrue interest at three-month LIBOR plus 1.325%. However, a 1% change in LIBOR will not materially impact our annualized interest expense. Additionally, we have economically hedged the risk of a change in interest rates in excess of 1% on the Mortgage Loans through the purchase of an interest rate cap derivative instrument, which effectively caps our annual interest rate on the Mortgage Loans at a maximum of 3.675% (see Note 12 of the Notes to Consolidated Financial Statements for additional information). The fair value of the interest rate cap is not materially impacted by a 1% change in LIBOR; however, the carrying value of the interest rate cap is impacted by future expectations for LIBOR as well as estimations of volatility in the future yield curve.

Our Revolving Credit Agreement is exposed to interest rate risk as it is LIBOR based and a 1% change in LIBOR will impact annual interest expense only to the extent that there is an outstanding balance. For every \$100 million drawn on our Revolving Credit Agreement, a 1% change in interest rates will change our annual interest expense by \$1 million. Any outstanding balances on the Revolving Credit Agreement can be repaid on each maturity date, which has typically ranged from one to three months. As of December 31, 2019, no borrowings were outstanding under our Revolving Credit Agreement.

Credit Risk

We have exposure to credit risk primarily as a holder of fixed income securities. We control this exposure by emphasizing investment grade credit quality in the fixed income securities we purchase.

As of December 31, 2019, 94% of our fixed maturity securities were rated investment grade as determined by NRSROs, such as Fitch, Moody's and Standard & Poor's. We believe that this concentration in investment grade securities reduces our exposure to credit risk on our fixed income investments to an acceptable level. However, investment grade securities, in spite of their rating, can rapidly deteriorate and result in significant losses. Ratings published by the NRSROs are one of the tools used to evaluate the creditworthiness of our securities. The ratings reflect the subjective opinion of the rating agencies as to the creditworthiness of the securities; therefore, we may be subject to additional credit exposure should the ratings prove to be unreliable.

We also have exposure to credit risk related to our premiums receivable and receivables from reinsurers; however, to-date we have not experienced any significant amount of credit losses. At December 31, 2019, our premiums receivable was approximately \$250 million and the allowance for credit losses was \$1.6 million and estimated credit losses and actual credit write-offs, net of recoveries, was \$0.3 million during the year ended December 31, 2019. At December 31, 2019, our receivables from reinsurers (with regard to both paid and unpaid losses) was approximately \$403 million. We monitor the credit risk associated with our reinsurers using publicly available financial and rating agency data. As of December 31, 2019, we had no allowance for credit losses related to our reinsurance receivables as all reinsurance balances were considered collectible and no reinsurance balances were written off for credit reasons during 2019.

Equity Price Risk

At December 31, 2019, the fair value of our equity investments, excluding our equity investments in bond investment funds as discussed in the following paragraph, was \$170 million. These equity securities are subject to equity price risk, which is defined as the potential for loss in fair value due to a decline in equity prices. The weighted average beta of this group of securities was 0.92. Beta measures the price sensitivity of an equity security or group of equity securities to a change in the broader equity market, in this case the S&P 500 Index. If the value of the S&P 500 Index increased by 10%, the fair value of these securities would be expected to increase by 9.2% to \$186 million. Conversely, a 10% decrease in the S&P 500 Index would imply a decrease of 9.2% in the fair value of these securities to \$154 million. The selected hypothetical changes of plus or minus 10% do not reflect what could be considered the best or worst case scenarios and are used for illustrative purposes only.

Our equity investments include equity investments in certain bond investment funds which are not subject to significant equity price risk, and thus we have excluded these investments from the above analysis.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

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The Supplementary Financial Information required by Item 302 of Regulation S-K is included in Note 20 of the Notes to Consolidated Financial Statements of ProAssurance and its subsidiaries.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

Not Applicable.

ITEM 9A. CONTROLS AND PROCEDURES.

Disclosure Controls

Under the supervision and with the participation of management, including the principal executive and principal financial officers, the Company has evaluated the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the fiscal year ended December 31, 2019. Based on that evaluation, the principal executive and principal financial officers have concluded that these controls and procedures are effective.

Disclosure controls and procedures are defined in Exchange Act Rule 13a-15(e) and include the Company's controls and other procedures that are designed to ensure that information, required to be disclosed by the Company in the reports that it files or submits under the Exchange Act, is accumulated and communicated to management, including the principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive and principal financial officers, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019 based on the framework in Internal Control-Integrated Framework issued by the COSO (2013 Framework). Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2019 and that there was no change in the Company's internal controls during the fiscal year then ended that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Ernst & Young LLP, an independent registered public accounting firm, has audited the effectiveness of our internal controls over financial reporting as of December 31, 2019 as stated in their report which is included elsewhere herein.

ITEM 9B. OTHER INFORMATION

None.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of ProAssurance Corporation

Opinion on Internal Control Over Financial Reporting

We have audited ProAssurance Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control- Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, ProAssurance Corporation and subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets as of December 31, 2019 and 2018, the related consolidated statements of income and comprehensive income, changes in capital and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and financial statement schedules listed in the Index at Item 15(c) (collectively referred to as the "financial statements") of the Company and our report dated February 20, 2020, expressed an unqualified opinion thereon.

Basis for Opinion

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

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

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

Definition and Limitations of Internal Control Over Financial Reporting

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

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

/s/ Ernst & Young LLP

Birmingham, Alabama
February 20, 2020

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE OF THE REGISTRANT.

The information required by this Item regarding executive officers is included in Part I of the Form 10-K in accordance with Instruction 3 of the Instructions to Paragraph (b) of Item 401 of Regulation S-K.

The information required by this Item regarding directors is incorporated by reference pursuant to General Instruction G (3) of Form 10-K from ProAssurance's definitive proxy statement for the 2020 Annual Meeting of its Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A on or about April 10, 2020.

ITEM 11. EXECUTIVE COMPENSATION.

The information required by this Item is incorporated by reference pursuant to General Instruction G (3) of Form 10-K from ProAssurance's definitive proxy statement for the 2020 Annual Meeting of its Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A on or about April 10, 2020.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The information required by this Item is incorporated by reference pursuant to General Instruction G (3) of Form 10-K from ProAssurance's definitive proxy statement for the 2020 Annual Meeting of its Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A on or about April 10, 2020.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

The information required by this Item is incorporated by reference pursuant to General Instruction G (3) of Form 10-K from ProAssurance's definitive proxy statement for the 2020 Annual Meeting of its Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A on or about April 10, 2020.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

The information required by this Item is incorporated by reference pursuant to General Instruction G (3) of Form 10-K from ProAssurance's definitive proxy statement for the 2020 Annual Meeting of its Stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A on or about April 10, 2020.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

- (a) Financial Statements. The following consolidated financial statements of ProAssurance Corporation and subsidiaries are included herein in accordance with Item 8 of Part II of this report.

Report of Registered Public Accounting Firm

Consolidated Balance Sheets – December 31, 2019 and 2018

Consolidated Statements of Changes in Capital – years ended December 31, 2019, 2018 and 2017

Consolidated Statements of Income and Comprehensive Income – years ended December 31, 2019, 2018 and 2017

Consolidated Statements of Cash Flows – years ended December 31, 2019, 2018 and 2017

Notes to Consolidated Financial Statements

- (b) The exhibits required to be filed by Item 15(b) are listed herein in the Exhibit Index.
- (c) Financial Statement Schedules. The following consolidated financial statement schedules of ProAssurance Corporation and subsidiaries are included herein in accordance with Rule 14a-3(b):

Schedule I – Summary of Investments – Other than Investments in Related Parties

Schedule II – Condensed Financial Information of ProAssurance Corporation (Registrant Only)

Schedule III – Supplementary Insurance Information

Schedule IV – Reinsurance

All other schedules to the consolidated financial statements required by Article 7 of Regulation S-X are not required under the related instructions or are inapplicable and therefore have been omitted.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of ProAssurance Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of ProAssurance Corporation and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of income and comprehensive income, changes in capital and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and financial statement schedules listed in the Index at Item 15(c) (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 20, 2020, expressed an unqualified opinion thereon.

Basis for Opinion

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

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

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of reserve for losses and loss adjustment expenses

Description of the Matter At December 31, 2019, the Company's gross reserve for losses and loss adjustment expenses was \$2.3 billion. As explained in Notes 1 and 8 to the financial statements, the reserve for losses and loss adjustment expenses represents the estimated ultimate costs of all reported and unreported losses and loss adjustment expenses incurred and unpaid as of the reporting date. The reserve for losses and loss adjustment expenses is determined based on individual claims and payments thereon as well as actuarially determined estimates of ultimate losses. The Company updates the data underlying the estimation of the reserve for losses each reporting period and adjusts loss estimation assumptions that best reflect emerging data. Both internal and consulting actuaries perform an in-depth review of the reserve for losses on at least a semi-annual basis using the Company's loss and exposure data. The actuarial process is highly judgmental, both as to the selection of the various actuarial methodologies, and the significant assumptions within those methodologies, which are based on historical paid and incurred development trends, and in the interpretation of the output of the various methods used.

Auditing management's reserve for losses and loss adjustment expenses required the involvement of our actuarial specialists and was complex and highly judgmental due to the sensitivity of the significant assumptions which have a significant impact on the valuation of the reserve for losses and loss adjustment expenses.

*How We
Addressed the
Matter in Our
Audit*

We obtained an understanding, evaluated the design and tested controls that address the risks of material misstatement related to the valuation of the reserve for losses and loss adjustment expenses. This included testing management's controls over the review and approval processes that management has in place for the methods and significant assumptions used in estimating the reserve.

To test the reserve for losses and loss adjustment expenses, we performed audit procedures that included, among others, evaluating, with the assistance of our actuarial specialists, the Company's selection of methods against those used in prior periods and used in the industry for similar types of insurance. We evaluated assumptions, based on historical paid and incurred loss development trends, relative to the Company's historical experience and to the extent required compared to industry experience. We involved our actuarial specialists to independently calculate a range of reasonable losses and loss adjustment expense reserve estimates and compared this range to the Company's recorded reserve for losses and loss adjustment expense. We also performed a review of the development of prior years' reserve estimates.

/s/ Ernst & Young, LLP

We have served as the Company's auditor since 1977.
Birmingham, Alabama
February 20, 2020

ProAssurance Corporation and Subsidiaries
Consolidated Balance Sheets
(In thousands, except share data)

	December 31, 2019	December 31, 2018
Assets		
Investments		
Fixed maturities, available for sale, at fair value; amortized cost, \$2,241,304 and \$2,116,825, respectively	\$ 2,288,785	\$ 2,093,798
Fixed maturities, trading, at fair value; cost, \$46,772 and \$38,445, respectively	47,284	38,188
Equity investments, at fair value; cost, \$227,873 and \$450,931, respectively	250,552	442,937
Short-term investments	339,907	308,319
Business owned life insurance	66,112	64,096
Investment in unconsolidated subsidiaries	358,820	367,757
Other investments, \$36,018 and \$31,344 at fair value, respectively, otherwise at cost or amortized cost	38,949	34,287
Total Investments	<u>3,390,409</u>	3,349,382
Cash and cash equivalents	175,369	80,471
Premiums receivable	249,540	261,466
Receivable from reinsurers on paid losses and loss adjustment expenses	12,739	11,558
Receivable from reinsurers on unpaid losses and loss adjustment expenses	390,708	343,820
Prepaid reinsurance premiums	42,796	40,631
Deferred policy acquisition costs	55,567	54,116
Deferred tax asset, net	44,387	29,108
Real estate, net	30,410	31,114
Operating lease ROU assets	21,074	—
Intangible assets, net	70,757	76,776
Goodwill	210,725	210,725
Other assets	111,118	111,559
Total Assets	<u><u>\$ 4,805,599</u></u>	<u><u>\$ 4,600,726</u></u>
Liabilities and Shareholders' Equity		
Liabilities		
Policy liabilities and accruals		
Reserve for losses and loss adjustment expenses	\$ 2,346,526	\$ 2,119,847
Unearned premiums	413,086	415,211
Reinsurance premiums payable	52,946	55,614
Total Policy Liabilities	<u>2,812,558</u>	2,590,672
Operating lease liabilities	22,051	—
Other liabilities	173,256	199,295
Debt less unamortized debt issuance costs	285,821	287,757
Total Liabilities	<u>3,293,686</u>	3,077,724
Shareholders' Equity		
Common shares, par value \$0.01 per share, 100,000,000 shares authorized, 63,117,235 and 62,989,421 shares issued, respectively	631	630
Additional paid-in capital	384,551	384,713
Accumulated other comprehensive income (loss), net of deferred tax expense (benefit) of \$9,795 and (\$4,355), respectively	36,955	(16,911)
Retained earnings	1,505,738	1,571,847
Treasury shares, at cost, 9,325,180 shares and 9,352,373 shares, respectively	(415,962)	(417,277)
Total Shareholders' Equity	<u>1,511,913</u>	1,523,002
Total Liabilities and Shareholders' Equity	<u><u>\$ 4,805,599</u></u>	<u><u>\$ 4,600,726</u></u>

See accompanying notes.

ProAssurance Corporation and Subsidiaries
Consolidated Statements of Changes in Capital
(In thousands)

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Treasury Stock	Total
Balance at January 1, 2017	\$ 627	\$ 376,518	\$ 17,399	\$ 1,824,088	\$(419,930)	\$ 1,798,702
Cumulative-effect adjustment- ASU 2016-09 adoption	—	425	—	(276)	—	149
Common shares issued for compensation and effect of shares reissued to stock purchase plan	—	957	—	—	1,923	2,880
Share-based compensation	—	10,615	—	—	—	10,615
Net effect of restricted and performance shares issued	1	(5,438)	—	—	—	(5,437)
Dividends to shareholders	—	—	—	(316,890)	—	(316,890)
Other comprehensive income (loss)	—	—	(2,488)	—	—	(2,488)
Net income	—	—	—	107,264	—	107,264
Balance at December 31, 2017	628	383,077	14,911	1,614,186	(418,007)	1,594,795
Cumulative-effect adjustment- ASU 2016-01 adoption	—	—	—	8,334	—	8,334
Cumulative-effect adjustment- ASU 2018-02 adoption	—	—	3,416	(3,416)	—	—
Common shares issued for compensation and effect of shares reissued to stock purchase plan	—	314	—	—	730	1,044
Share-based compensation	—	5,258	—	—	—	5,258
Net effect of restricted and performance shares issued	2	(3,936)	—	—	—	(3,934)
Dividends to shareholders	—	—	—	(94,314)	—	(94,314)
Other comprehensive income (loss)	—	—	(35,238)	—	—	(35,238)
Net income	—	—	—	47,057	—	47,057
Balance at December 31, 2018	630	384,713	(16,911)	1,571,847	(417,277)	1,523,002
Cumulative-effect adjustment- ASU 2018-07 adoption*	—	—	—	(444)	—	(444)
Common shares issued for compensation and effect of shares reissued to stock purchase plan	—	(965)	—	—	1,315	350
Share-based compensation	—	3,512	—	—	—	3,512
Net effect of restricted and performance shares issued	1	(2,709)	—	—	—	(2,708)
Dividends to shareholders	—	—	—	(66,669)	—	(66,669)
Other comprehensive income (loss)	—	—	53,866	—	—	53,866
Net income	—	—	—	1,004	—	1,004
Balance at December 31, 2019	\$ 631	\$ 384,551	\$ 36,955	\$ 1,505,738	\$(415,962)	\$ 1,511,913

* See Note 1 of the Notes to Consolidated Financial Statements for discussion of accounting guidance adopted during the year.

See accompanying notes.

ProAssurance Corporation and Subsidiaries
Consolidated Statements of Income and Comprehensive Income
(In thousands, except per share data)

	Year Ended December 31		
	2019	2018	2017
Revenues			
Net premiums earned	\$ 847,532	\$ 818,853	\$ 738,531
Net investment income	93,269	91,884	95,662
Equity in earnings (loss) of unconsolidated subsidiaries	(10,061)	8,948	8,033
Net realized investment gains (losses):			
OTTI losses	(978)	(490)	(13,200)
Portion of OTTI losses recognized in other comprehensive income before taxes	227	—	248
Net impairment losses recognized in earnings	(751)	(490)	(12,952)
Other net realized investment gains (losses)	60,625	(42,998)	29,361
Total net realized investment gains (losses)	59,874	(43,488)	16,409
Other income	9,220	9,833	7,514
Total revenues	999,834	886,030	866,149
Expenses			
Net losses and loss adjustment expenses	753,915	593,210	469,158
Underwriting, policy acquisition and operating expenses:			
Operating expense	138,178	134,055	140,002
DPAC amortization	115,330	104,501	95,751
Segregated portfolio cells dividend expense (income)	4,579	9,122	15,771
Interest expense	16,636	16,117	16,844
Total expenses	1,028,638	857,005	737,526
Income (loss) before income taxes	(28,804)	29,025	128,623
Provision for income taxes:			
Current expense (benefit)	(1,165)	(6,208)	19,666
Deferred expense (benefit)	(28,643)	(11,824)	1,693
Total income tax expense (benefit)	(29,808)	(18,032)	21,359
Net income	1,004	47,057	107,264
Other comprehensive income (loss), after tax, net of reclassification adjustments	53,866	(35,238)	(2,488)
Comprehensive income (loss)	\$ 54,870	\$ 11,819	\$ 104,776
Earnings per share			
Basic	\$ 0.02	\$ 0.88	\$ 2.01
Diluted	\$ 0.02	\$ 0.88	\$ 2.00
Weighted average number of common shares outstanding:			
Basic	53,740	53,598	53,393
Diluted	53,841	53,749	53,611
Cash dividends declared per common share	\$ 1.24	\$ 1.74	\$ 5.93

See accompanying notes.

ProAssurance Corporation and Subsidiaries
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31		
	2019	2018	2017
Operating Activities			
Net income	\$ 1,004	\$ 47,057	\$ 107,264
Adjustments to reconcile income to net cash provided by operating activities:			
Depreciation and amortization, net of accretion	18,665	21,255	28,796
(Increase) decrease in cash surrender value of BOLI	(2,016)	(1,983)	(1,979)
Net realized investment (gains) losses	(59,874)	43,488	(16,409)
Share-based compensation	3,527	5,321	10,615
Deferred income tax expense (benefit)	(28,643)	(11,824)	1,693
Policy acquisition costs, net of amortization (net deferral)	(1,451)	(3,855)	(3,452)
Equity in (earnings) loss of unconsolidated subsidiaries	10,061	(8,948)	(8,033)
Distributed earnings from unconsolidated subsidiaries	25,849	31,219	24,392
Other	2,175	1,168	108
Other changes in assets and liabilities:			
Premiums receivable	11,926	(23,381)	(14,605)
Reinsurance related assets and liabilities	(52,902)	4,697	(56,449)
Other assets	(13,481)	(4,206)	(792)
Reserve for losses and loss adjustment expenses	226,679	71,466	54,953
Unearned premiums	(2,125)	16,327	26,321
Other liabilities	8,772	(10,536)	20,965
Net cash provided (used) by operating activities	148,166	177,265	173,388
Investing Activities			
Purchases of:			
Fixed maturities, available for sale	(695,552)	(780,698)	(614,440)
Fixed maturities, trading	(8,254)	(38,544)	—
Equity investments	(116,092)	(203,157)	(207,857)
Other investments	(28,851)	(32,153)	(50,362)
Funding of qualified affordable housing project tax credit partnerships	(357)	—	(507)
Investment in unconsolidated subsidiaries	(69,411)	(78,141)	(42,183)
Proceeds from sales or maturities of:			
Fixed maturities, available for sale	568,572	914,021	932,070
Equity investments	359,727	210,481	146,356
Other investments	29,017	29,815	25,372
Return of invested capital from unconsolidated subsidiaries	42,478	84,534	32,539
Net sales or maturities (purchases) of short-term investments	(30,718)	123,886	4,167
Unsettled security transactions, net change	(6,455)	(4,022)	(2,031)
Purchases of capital assets	(9,586)	(9,636)	(10,485)
Repayments (advances) under Syndicate Credit Agreement	16,009	(184)	(10,339)
Other	(5)	(1,305)	(2,025)
Net cash provided (used) by investing activities	50,522	214,897	200,275

Continued on following page.

Year Ended December 31

	2019	2018	2017
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Continued from the previous page.

Financing Activities

Borrowings (repayments) under Revolving Credit Agreement	—	(123,000)	(77,000)
Proceeds (repayments) of Mortgage Loans	(1,447)	(1,396)	40,460
Dividends to shareholders	(93,204)	(316,476)	(315,228)
Capital contribution received from (return of capital to) external segregated portfolio cell participants	(5,024)	(1,005)	2,936
Other	(4,115)	(4,309)	(7,683)
Net cash provided (used) by financing activities	(103,790)	(446,186)	(356,515)
Increase (decrease) in cash and cash equivalents	94,898	(54,024)	17,148
Cash and cash equivalents at beginning of period	80,471	134,495	117,347
Cash and cash equivalents at end of period	\$ 175,369	\$ 80,471	\$ 134,495

Supplemental Disclosure of Cash Flow Information

Cash paid during the year for income taxes, net of refunds	\$ 2,748	\$ 5,726	\$ 17,193
Cash paid during the year for interest	\$ 14,294	\$ 16,165	\$ 15,892

Significant Non-Cash Transactions

Operating ROU assets obtained in exchange for operating lease liabilities	\$ 5,436	\$ —	\$ —
Dividends declared and not yet paid	\$ 16,676	\$ 43,446	\$ 267,292

See accompanying notes.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

1. Accounting Policies

Organization and Nature of Business

ProAssurance Corporation (ProAssurance, PRA or the Company), a Delaware corporation, is an insurance holding company primarily for wholly owned specialty property and casualty insurance entities including an entity that provides capital to Syndicate 1729 and is the sole (100%) capital provider of an SPA, Syndicate 6131, at Lloyd's. Risks insured are primarily liability risks located within the U.S.

ProAssurance operates in five reportable segments as follows: Specialty P&C, Workers' Compensation Insurance, Segregated Portfolio Cell Reinsurance, Lloyd's Syndicates and Corporate. For more information on the Company's segment reporting, including the nature of products and services provided and financial information by segment, refer to Note 17.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of ProAssurance Corporation and its wholly owned subsidiaries. Investments in entities where ProAssurance holds a greater than minor interest but does not hold a controlling interest are accounted for using the equity method. All significant intercompany accounts and transactions are eliminated in consolidation. ProAssurance subsidiaries located in the U.K. are normally reported on a quarter lag due to timing issues regarding the availability of information, except when information is available that is material to the current period. Furthermore, investment results associated with ProAssurance's FAL investments and certain U.S. paid administrative expenses are reported concurrently as that information is available on an earlier time frame.

Basis of Presentation

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, revenues and expenses, and disclosures related to these amounts at the date of the financial statements. Actual results could differ from those estimates.

Certain insignificant prior year amounts have been reclassified to conform to the current year presentation.

Accounting Policies

The significant accounting policies followed by ProAssurance in making estimates that materially affect financial reporting are summarized in these Notes to Consolidated Financial Statements.

Recognition of Revenues

Insurance premiums are recognized as revenues pro rata over the terms of the policies, which are principally one year in duration.

Credit Losses

ProAssurance's premium and agency receivables are exposed to credit losses but to-date have not experienced any significant amount of credit losses. Recorded allowances for credit losses were \$1.6 million and \$1.3 million for the years ended December 31, 2019 and 2018, respectively. Estimated credit losses and actual credit write-offs, net of recoveries, were \$0.3 million during the year ended December 31, 2019 and nominal in amount during the year ended December 31, 2018.

Earned But Unbilled Premiums

Workers' compensation premiums are determined based upon the payroll of the insured, the applicable premium rates and an experience-based modification factor, where applicable. An audit of the policyholders' records is conducted after policy expiration to make a final determination of applicable premiums. Audit premium due from or due to a policyholder as a result of an audit is reflected in net premiums written and earned when billed. ProAssurance tracks, by policy, the amount of additional premium billed in final audit invoices as a percentage of payroll exposure and uses this information to estimate the probable additional amount of EBUB premium as of the balance sheet date. Changes to the EBUB estimate are included in net premiums written and earned in the period recognized. As of December 31, 2019 and 2018, ProAssurance carried EBUB of \$4.3 million as a part of premiums receivable.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

Losses and Loss Adjustment Expenses

ProAssurance establishes its reserve for losses and LAE ("reserve for losses" or "reserve") based on estimates of the future amounts necessary to pay claims and expenses associated with the investigation and settlement of claims. The reserve for losses is determined on the basis of individual claims and payments thereon as well as actuarially determined estimates of future losses based on past loss experience, available industry data and projections as to future claims frequency, severity, inflationary trends, judicial trends, legislative changes and settlement patterns.

Management establishes the reserve for losses after taking into consideration a variety of factors including premium rates, claims frequency and severity, historical paid and incurred loss development trends, the expected effect of inflation, general economic and social trends, the legal and political environment and the conclusions reached by internal and consulting actuaries. Management updates and reviews the data underlying the estimation of the reserve for losses each reporting period and makes adjustments to loss estimation assumptions that best reflect emerging data. Both internal and consulting actuaries perform an in-depth review of the reserve for losses on at least a semi-annual basis using the loss and exposure data of ProAssurance's subsidiaries. Consulting actuaries provide reports to management regarding the adequacy of reserves.

Estimating casualty insurance reserves, and particularly long-tailed insurance reserves, is a complex process. Long-tailed insurance is characterized by the extended period of time typically required both to assess the viability of a claim and potential damages, if any, and to reach a resolution of the claim. For a high proportion of the risks insured or reinsured by ProAssurance, the period of time required to resolve a claim is often five years or more, and claims may be subject to litigation. Estimating losses for these long-tailed claims requires ProAssurance to make and revise judgments and assessments regarding multiple uncertainties over an extended period of time. As a result, reserve estimates may vary significantly from the eventual outcome. Reserve estimates and the assumptions on which these estimates are predicated are regularly reviewed and updated as new information becomes available. Any adjustments necessary are reflected in then current operations. Due to the size of ProAssurance's reserve for losses, even a small percentage adjustment to these estimates could have a material effect on earnings in the period in which the adjustment is made, as was the case in 2019, 2018 and 2017.

The effect of adjustments made to reinsured losses is mitigated by the corresponding adjustment that is made to reinsurance recoveries. Thus, in any given year, ProAssurance may make significant adjustments to gross losses that have little effect on its net losses.

Reinsurance Receivables

ProAssurance enters into reinsurance agreements whereby other insurance entities agree to assume a portion of the risk associated with certain policies issued by ProAssurance. In return, ProAssurance agrees to pay a premium to the reinsurer. ProAssurance uses reinsurance to provide capacity to write larger limits of liability, to provide reimbursement for losses incurred under the higher limit coverages the Company offers, to provide protection against losses in excess of policy limits, and, in the case of risk sharing arrangements, to align the Company's objectives with those of its strategic business partners and to provide custom insurance solutions for large customer groups.

Receivable from reinsurers on paid losses and LAE is the estimated amount of losses already paid that will be recoverable from reinsurers. Receivable from reinsurers on unpaid losses and LAE is the estimated amount of future loss payments that will be recoverable from reinsurers. Reinsurance recoveries are the portion of losses incurred during the period that are estimated to be allocable to reinsurers. Premiums ceded are the estimated premiums that will be due to reinsurers with respect to premiums earned and losses incurred during the period.

These estimates are based upon management's estimates of ultimate losses and the portion of those losses that are allocable to reinsurers under the terms of the related reinsurance agreements. Given the uncertainty of the ultimate amounts of losses, these estimates may vary significantly from the ultimate outcome. Management regularly reviews these estimates and any adjustments necessary are reflected in the period in which the estimate is changed. Due to the size of the receivable from reinsurers, even a small adjustment to the estimates could have a material effect on ProAssurance's results of operations for the period in which the change is made.

Reinsurance contracts do not relieve ProAssurance from its obligations to policyholders. ProAssurance continually monitors its reinsurers to minimize its exposure to significant losses from reinsurer insolvencies. Any amount determined to be uncollectible is written off in the period in which the uncollectible amount is identified. See Note 5 for further information.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

Retroactive Insurance Contracts

In certain instances, ProAssurance's insurance contracts cover losses both on a prospective basis and retroactive basis, and accordingly, ProAssurance bifurcates the prospective and retroactive provisions of these contracts and accounts for each component separately, where practicable.

Under the retroactive provisions of a contract, all premiums received and losses assumed are recognized immediately in earnings at the inception of the contract as all of the underlying loss events occurred in the past. If the estimated losses assumed differ from the premium received related to the retroactive provision of a contract, the resulting difference is deferred and recognized over the estimated claim payment period with the periodic amortization reflected in earnings as a component of net losses and LAE. Deferred gains are included as a component of the reserve for losses and LAE, and deferred losses are included as a component of other assets on the Consolidated Balance Sheet. Subsequent changes to the estimated timing or amount of future loss payments in relation to the losses assumed under retroactive provisions also produce changes in deferred balances. Changes in such estimates are applied retrospectively, and the resulting changes in deferred balances, together with periodic amortization, are included in earnings in the period of change.

Lloyd's Premium Estimates

For certain insurance policies and reinsurance contracts written in the Lloyd's Syndicates segment, premiums are initially recognized based upon estimates of ultimate premium. Estimated ultimate premium consists primarily of premium written under delegated underwriting authority arrangements, which consist primarily of binding authorities, and certain assumed reinsurance agreements. These estimates of ultimate premium are judgmental and are dependent upon certain assumptions, including historical premium trends for similar agreements. As reports are received from programs, ultimate premium estimates are revised, if necessary, with changes reflected in current operations.

Deferred Policy Acquisition Costs; Ceding Commission Income

Costs that vary with and are directly related to the successful production of new and renewal premiums (primarily premium taxes, commissions and underwriting salaries) are deferred to the extent they are recoverable against unearned premiums and are amortized as related premiums are earned. Unearned ceding commission income is reported as an offset to DPAC, and ceding commission earned is reported as an offset to DPAC amortization.

ProAssurance evaluates the recoverability of DPAC typically at the segment level each reporting period, or in a manner that is consistent with the way the Company manages its business. Any amounts estimated to be unrecoverable are charged to expense in the current period. As part of the evaluation of the recoverability of DPAC, ProAssurance also evaluates unearned premium for premium deficiencies. A premium deficiency is recognized if the sum of anticipated losses and loss adjustment expenses, unamortized DPAC and maintenance costs, net of anticipated investment income, exceeds the related unearned premium. If a premium deficiency is identified, the associated DPAC is written off, and a PDR is recorded for the excess deficiency as a component of net losses and loss adjustment expenses in the Consolidated Statement of Income and Comprehensive Income and as a component of the reserve for losses on the Consolidated Balance Sheet.

Investments

Recurring Fair Value Measurements

Fair values of investment securities are primarily provided by independent pricing services. The pricing services provide an exchange-traded price, if available, or provide an estimated price determined using multiple observable inputs, including exchange-traded prices for similar assets. Management reviews valuations of securities obtained from the pricing services for accuracy based upon the specifics of the security, including class, maturity, credit rating, durations, collateral and comparable markets for similar securities. Multiple observable inputs are not available for certain of the Company's investments, including corporate debt not actively traded, other asset-backed securities and investments in LPs/LLCs. Management values the corporate debt not actively traded and the other asset-backed securities either using dealer quotes for similar securities or discounted cash flow models using yields currently available for similar securities. Management values certain investment funds, primarily LPs/LLCs, based on the NAV of the interest held, as provided by the fund.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

Nonrecurring Fair Value Measurements

Management measures the fair value of certain assets on a nonrecurring basis either quarterly, annually or when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. These assets include investments carried principally at cost, investments in tax credit partnerships and equity method investments that do not provide a NAV, fixed assets, goodwill and other intangible assets.

Fixed Maturities

Fixed maturities are considered as either available-for-sale or trading securities.

Available-for-sale securities are carried at fair value, determined as described above and in Note 2. Exclusive of OTTI losses, discussed in a separate section that follows, unrealized holding gains and losses on available-for-sale securities are included, net of related tax effects, as a component of OCI in the Consolidated Statement of Income and Comprehensive Income during the period of change and as a component AOCI in shareholders' equity on the Consolidated Balance Sheet.

Investment income includes amortization of premium and accretion of discount related to available-for-sale debt securities acquired at other than par value. Debt securities and mandatorily redeemable preferred stock with maturities beyond one year when purchased are classified as fixed maturities.

Trading securities are carried at fair value, determined as described above, with the unrealized holding gains and losses included as a component of net realized investment gains (losses) in the Consolidated Statement of Income and Comprehensive Income during the period of change.

Equity Investments

Equity investments are carried at fair value, as described above, with the holding gains and losses included as a component of net realized investment gains (losses) in the Consolidated Statement of Income and Comprehensive Income during the period of change. Equity investments are primarily comprised of stocks, bond funds and investment funds.

Short-term Investments

Short-term investments, which have a maturity at purchase of one year or less, are primarily comprised of investments in U.S. Treasury obligations, commercial paper and money market funds. All balances are carried at fair value which approximates the cost of the securities due to their short-term nature.

Other Investments

Investments in convertible bond securities are carried at fair value as permitted by the accounting guidance for hybrid financial instruments, with changes in fair value recognized in income as a component of net realized investment gains (losses) during the period of change. Interest on convertible bond securities is recorded on an accrual basis based on contractual interest rates and is included in net investment income.

Investment in Unconsolidated Subsidiaries

Equity investments, primarily investments in LPs/LLCs, where ProAssurance is deemed to have influence because it holds a greater than a minor interest are accounted for using the equity method. Under the equity method, the recorded basis of the investment is adjusted each period for the investor's pro rata share of the investee's income or loss. Investments in unconsolidated subsidiaries include tax credit partnerships accounted for using the equity method, whereby ProAssurance's proportionate share of income or loss is included in equity in earnings (loss) of unconsolidated subsidiaries. Tax credits received from the partnerships are recognized in the period received in the Consolidated Statement of Income and Comprehensive Income as either a reduction to current tax expense or as a component of deferred tax expense if they cannot be utilized in the period received.

Business Owned Life Insurance

ProAssurance owns life insurance contracts on certain management employees. The life insurance contracts are carried at their current cash surrender value. Changes in the cash surrender value are included in income in the current period as investment income. Death proceeds from the contracts are recorded when the proceeds become payable under the policy terms.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

Realized Gains and Losses

Realized investment gains and losses are recognized on the first-in, first-out basis for GAAP purposes and on the specific identification basis for tax purposes.

Other-than-temporary Impairments

ProAssurance evaluates its available-for-sale investment securities, which at December 31, 2019 and 2018 consisted entirely of fixed maturity securities, on at least a quarterly basis for the purpose of determining whether declines in fair value below recorded cost basis represent OTTI. The Company considers an OTTI to have occurred:

- if there is intent to sell the security;
- if it is more likely than not that the security will be required to be sold before full recovery of its amortized cost basis; or
- if the entire amortized basis of the security is not expected to be recovered.

The assessment of whether the amortized cost basis of a security, particularly an asset-backed debt security, is expected to be recovered requires management to make assumptions regarding various matters affecting future cash flows. The choice of assumptions is subjective and requires the use of judgment. Actual credit losses experienced in future periods may differ from management's estimates of those credit losses. Methodologies used to estimate the present value of expected cash flows are:

For non-structured fixed maturities (obligations of states, municipalities and political subdivisions and corporate debt) the estimate of expected cash flows is determined by projecting a recovery value and a recovery time frame and assessing whether further principal and interest will be received. ProAssurance considers various factors in projecting recovery values and recovery time frames, including the following:

- third-party research and credit rating reports;
- the current credit standing of the issuer, including credit rating downgrades, whether before or after the balance sheet date;
- the extent to which the decline in fair value is attributable to credit risk specifically associated with the security or its issuer;
- internal assessments and the assessments of external portfolio managers regarding specific circumstances surrounding an investment, which indicate the investment is more or less likely to recover its amortized cost than other investments with a similar structure;
- for asset-backed securities, the origination date of the underlying loans, the remaining average life, the probability that credit performance of the underlying loans will deteriorate in the future and the Company's assessment of the quality of the collateral underlying the loan;
- failure of the issuer of the security to make scheduled interest or principal payments;
- any changes to the rating of the security by a rating agency; and
- recoveries or additional declines in fair value subsequent to the balance sheet date.

For structured securities (primarily asset-backed securities), ProAssurance estimates the present value of the security's cash flows using the effective yield of the security at the date of acquisition (or the most recent implied rate used to accrete the security if the implied rate has changed as a result of a previous impairment or changes in expected cash flows). ProAssurance considers the most recently available six month averages of the levels of delinquencies, defaults, severities and prepayments for the collateral (loans) underlying the securitization or, if historical data is not available, sector based assumptions to estimate expected future cash flows of these securities.

Exclusive of securities where there is an intent to sell or where it is not more likely than not that the security will be required to be sold before recovery of its amortized cost basis, OTTI for debt securities is separated into a credit component and a non-credit component. The credit component of an OTTI is the difference between the security's amortized cost basis and the present value of its expected future cash flows, while the non-credit component is the remaining difference between the security's fair value and the present value of expected future cash flows. The credit component of the OTTI is recognized in earnings while the non-credit component is recognized in OCI.

Investments in tax credit partnerships are evaluated for OTTI by considering both qualitative and quantitative factors. These factors include, but are not limited to:

- ProAssurance's ability and intent to hold the investment until the recovery of its carrying value; and
- in situations where there was not a previous OTTI for the investment, whether the current expected cash flows from the investment, primarily tax benefits, are less than those expected at the time the investment was acquired due to various factors, such as a change in the statutory tax rate; or

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

- in situations where there was a previous OTTI for the investment, whether the expected cash flows from the investment at the time of the OTTI, primarily tax benefits, are less than its current carrying value.

Investments which are accounted for under the equity method are evaluated for impairment whenever events or changes in circumstances indicate that the carrying value of the investment might not be recoverable. These circumstances include, but are not limited to, evidence of the inability to recover the carrying value of the investment, the inability of the investee to sustain an earnings capacity that would justify the carrying value of the investment or the current fair value of the investment is less than the carrying value.

ProAssurance recognizes OTTI, exclusive of non-credit OTTI, in earnings as a part of net realized investment gains (losses). In subsequent periods, any measurement of gain, loss or impairment is based on the revised amortized basis of the security. Non-credit OTTI on debt securities and declines in fair value of available-for-sale securities not considered to be other-than-temporary are recognized in OCI.

Asset-backed debt securities that have been impaired due to credit reasons or are below investment grade quality are accounted for under the effective yield method. Under the effective yield method, estimates of cash flows expected over the life of asset-backed securities are used to recognize income on the investment balance for subsequent accounting periods.

Derivatives

ProAssurance records derivative instruments at fair value in the Consolidated Balance Sheets. ProAssurance accounts for the changes in fair value of derivatives depending on whether the derivative is designated as a hedging instrument and if so, the type of hedging relationship. For derivative instruments not designated as hedging instruments, ProAssurance recognizes the change in fair value of the derivative in earnings during the period of change. As of December 31, 2019, ProAssurance has not designated any derivative instruments as hedging instruments and does not use derivative instruments for trading purposes.

Foreign Currency

The functional currency of all ProAssurance foreign subsidiaries is the U.S. dollar. In recording foreign currency transactions, revenue and expense items are converted to U.S. dollars at the exchange rate prevailing at the transaction date. Monetary assets and liabilities originating in currencies other than the U.S. dollar are remeasured to U.S. dollars at the rates of exchange in effect as of the balance sheet date. The resulting foreign currency gains or losses are recognized in the Consolidated Statements of Income and Comprehensive Income as a component of other income. Monetary assets and liabilities include investments, cash and cash equivalents, accrued expenses and other liabilities. In addition, monetary assets and liabilities include certain premiums receivable and reserve for losses and LAE as a result of reinsurance transactions conducted with foreign cedants denominated in their local functional currencies.

Cash and Cash Equivalents

For purposes of the Consolidated Balance Sheets and Consolidated Statements of Cash Flows, ProAssurance considers all demand deposits and overnight investments to be cash equivalents.

Income Taxes/Deferred Taxes

ProAssurance files a consolidated federal income tax return. Tax-related interest and penalties are recognized as components of tax expense.

ProAssurance evaluates tax positions taken on tax returns and recognizes positions in the financial statements when it is more likely than not that the position will be sustained upon resolution with a taxing authority. If recognized, the benefit is measured as the largest amount of benefit that has a greater than fifty percent probability of being realized. Uncertain tax positions are reviewed each period by considering changes in facts and circumstances, such as changes in tax law, interactions with taxing authorities and developments in case law, and adjustments would be made if considered necessary. Adjustments to unrecognized tax benefits may affect income tax expense, and the settlement of uncertain tax positions may require the use of cash. Other than differences related to timing, no significant adjustments were considered necessary during the years ended December 31, 2019 or 2018.

Deferred federal income taxes arise from the recognition of temporary differences between the basis of assets and liabilities determined for financial reporting purposes and the basis determined for income tax purposes. ProAssurance's temporary differences principally relate to loss reserves, unearned premium, DPAC, tax credit carryforwards, unrealized investment gains (losses) and basis differentials in fixed assets and investments. Deferred tax assets and liabilities are measured using the enacted tax rates expected to be in effect when such benefits are realized. ProAssurance reviews its deferred tax assets

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quarterly for impairment. If management determines that it is more likely than not that some or all of a deferred tax asset will not be realized, a valuation allowance is recorded to reduce the carrying value of the asset. In assessing the need for a valuation allowance, management is required to make certain judgments and assumptions about the future operations of ProAssurance based on historical experience and information as of the measurement date regarding reversal of existing temporary differences, carryback capacity, future taxable income, including its capital and operating characteristics, and tax planning strategies.

A valuation allowance has been established against the full value of the deferred tax asset related to the NOL carryforwards for the U.K. operations, as management concluded that it was more likely than not that the deferred tax asset will not be realized. ProAssurance has also established a valuation allowance against the deferred tax assets of certain SPCs at its wholly owned Cayman Islands reinsurance subsidiary, Inova Re, as these SPCs are in a cumulative pre-tax loss position, and management concluded that a valuation allowance was required based upon the weight of this negative evidence. See further discussion in Note 6.

Changes in tax laws and rates could also affect recorded deferred tax assets and liabilities in the future. On December 22, 2017, the TCJA was signed into law and contains several key provisions that impact ProAssurance, including the reduction of the corporate tax rate to 21% effective January 1, 2018, the reduction in the amount of executive compensation that could qualify as a tax deduction, a minimum tax on payments made to related foreign entities, a change in how property and casualty taxpayers discount loss reserves, a minimum tax on payments made to related foreign entities and a new tax on certain income of controlled foreign corporations. See Note 6 for further discussion of the TCJA.

Leases

ProAssurance is involved in a number of leases, primarily for office facilities. The Company determines if an arrangement is a lease at the inception date of the contract and classifies all leases as either financing or operating. Due to the adoption of ASU 2016-02 (see further discussion that follows), operating leases are included in operating lease ROU assets and operating lease liabilities on the Consolidated Balance Sheet as of December 31, 2019. The ROU asset represents the right to use the underlying asset for the lease term. As of December 31, 2019, ProAssurance has no leases that are classified as financing leases.

Operating ROU assets and operating lease liabilities are initially recognized as of the lease commencement date based on the present value of the remaining lease payments, discounted over the term of the lease using a discount rate determined based on information available as of the commencement date. As the majority of ProAssurance's lessors do not provide an implicit discount rate, the Company uses its collateralized incremental borrowing rate in determining the present value of remaining lease payments. Due to the adoption of ASU 2016-02 (see further discussion that follows), the Company used its collateralized incremental borrowing rate as of January 1, 2019 for operating leases that commenced prior to that date. Subsequent to the initial recognition, the operating ROU asset and operating lease liability are amortized and accreted, respectively, over the lease term in a manner that results in a straight-line operating lease expense. Operating lease expense is included as a component of operating expense on the Consolidated Statements of Income and Comprehensive Income for the year ended December 31, 2019 and 2018. Leases with an initial term of twelve months or less are considered short-term and are not recorded on the Consolidated Balance Sheet; lease expense for these leases is also recognized on a straight-line basis over the lease term. Additionally, for leases entered into or reassessed after the adoption of ASU 2016-02, ProAssurance accounts for lease and non-lease components of a contract as a single lease component.

Operating lease ROU assets are evaluated for impairment at the asset group level whenever events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable. The carrying amount of an asset group, which includes the operating lease ROU asset and the related operating lease liability, is not recoverable if the carrying amount exceeds the sum of the undiscounted cash flows expected to result from the use of the asset group over the life of the primary asset in the asset group. That assessment is based on the carrying amount of the asset group, including the operating lease ROU asset and the related operating lease liability, at the date it is tested for recoverability and an impairment loss is measured and recognized as the amount by which the carrying amount of the asset group exceeds its fair value. Any impairment loss is allocated to each asset in the asset group, including the operating ROU asset.

When a lease of an office facility is to be abandoned and will not be subleased, the Company first evaluates whether or not the operating lease ROU asset's inclusion in an existing asset group continues to be appropriate and if the commitment to abandon the lease constitutes a change in circumstances requiring the operating lease ROU asset, or the larger asset group, to be tested for impairment. If an impairment test is required, it is performed in the same manner as discussed above. Any remaining carrying value of the operating lease ROU asset is amortized from the date the Company commits to a plan to abandon the lease to the expected date that the Company will cease to use the leased property. Leases to be abandoned in which the Company has the intent or practical ability to sublease continue to be accounted for under a held and use model, with no change to the amortization period of the operating lease ROU asset, and are evaluated for impairment as a separate asset group at the date the sublease is executed.

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Real Estate

Real Estate balances are reported at cost or, for properties acquired in business combinations, estimated fair value on the date of acquisition, less accumulated depreciation. Real estate principally consists of properties in use as corporate offices. Depreciation is computed over the estimated useful lives of the related property using the straight-line method. Excess office capacity is leased or made available for lease; rental income is included in other income, and real estate expenses are included in operating expense.

Real estate accumulated depreciation was approximately \$25.7 million and \$25.2 million at December 31, 2019 and 2018, respectively. Real estate depreciation expense was \$1.0 million, \$1.2 million and \$1.1 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Intangible Assets

Intangible assets with definite lives are amortized over the estimated useful life of the asset. Amortizable intangible assets primarily consist of policyholder relationships, renewal rights and trade names. Intangible assets with an indefinite life, primarily state licenses, are not amortized. All intangible assets are evaluated for impairment on an annual basis or upon the occurrence of certain triggering events or substantive changes in circumstances that indicate the fair value of the asset may be impaired. The following table provides additional information regarding ProAssurance's intangible assets.

<i>(In millions)</i>	Gross Carrying Value		Accumulated Amortization		Amortization Expense		
	December 31		December 31		Year Ended December 31		
	2019	2018	2019	2018	2019	2018	2017
Intangible Assets							
Non-amortizable	\$ 25.8	\$ 25.8					
Amortizable	97.7	97.5	\$ 52.7	\$ 46.5	\$ 6.1	\$ 6.2	\$ 5.8
Total Intangible Assets	\$ 123.5	\$ 123.3					

Aggregate amortization expense for intangible assets is estimated to be \$6.1 million for the year ended December 31, 2020, \$6.0 million for each of the years ended December 31, 2021, 2022 and 2023 and \$5.7 million for the year ended December 31, 2024.

Goodwill

Goodwill is recognized in conjunction with business acquisitions as the excess of the purchase consideration for the business acquisition over the fair value of identifiable assets acquired and liabilities assumed. The fair value of identifiable assets and liabilities, and thus goodwill, is subject to redetermination within a measurement period of up to one year following completion of a business acquisition.

Management evaluates goodwill for impairment annually on October 1, upon the occurrence of certain triggering events or substantive changes in circumstances that indicate the fair value of goodwill may be impaired and immediately before and after a reorganization that affects the composition of one or more of the Company's reporting units. Impairment of goodwill is tested at the reporting unit level, which is consistent with the reportable segments identified in Note 17. Of the five reporting units, three have goodwill: Specialty P&C, Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance.

Annual Goodwill Impairment Test

When testing goodwill for impairment, management has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the estimated fair value of a reporting unit is less than its carrying amount. If management elects to perform a qualitative assessment and determines that an impairment is more likely than not, management is then required to perform the two-step quantitative impairment test; otherwise, no further analysis is required. Management also may elect not to perform the qualitative assessment and, instead, proceed directly to the two-step quantitative impairment test.

In the first step of the two-step quantitative impairment test, the fair value of a reporting unit is determined using income and market approaches and is compared to its carrying value, as described above. The estimate of fair value derived from the income approach is based on the present value of expected future cash flows, including terminal value, utilizing a market based weighted average cost of capital determined separately for each reporting unit. The estimate of fair value derived from the market approach is based on earnings multiple data derived from market information. The determination of fair value involves

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the use of significant estimates and assumptions, including revenue growth rates, operating margins, capital expenditures, working capital requirements, tax rates, terminal growth rates, discount rates, comparable public companies and synergistic benefits available to market participants. In addition, management makes certain judgments and assumptions in allocating shared assets and liabilities to individual reporting units to determine the carrying amount of each reporting unit. To corroborate the reporting units' valuation, management performs a reconciliation of the estimate of the aggregate fair value of the reporting units to ProAssurance's market capitalization, including consideration of a control premium. Because not all of ProAssurance's reporting units have goodwill, management makes certain assumptions regarding the fair value of the Company's other reporting units in reconciling to ProAssurance's market capitalization.

If the carrying value of a reporting unit exceeds its fair value, the second step of the impairment test is performed for purposes of measuring the impairment of goodwill, if any. In the second step, the fair value of the reporting unit is allocated to all of the assets and liabilities of the reporting unit to determine an implied fair value of goodwill. If the carrying amount of the reporting unit's goodwill exceeds the implied fair value of goodwill, an impairment loss will be recognized in an amount equal to that excess.

As of the most recent evaluation date on October 1, 2019, management performed a qualitative goodwill impairment test for the Specialty P&C, Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance segments. The Specialty P&C, Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance segments have historically had an excess of fair value over book value and based on current operations are expected to continue to have an excess of fair value over book value; therefore, management's annual impairment test for the three segments was performed qualitatively. In applying the qualitative approach, management considered macroeconomic factors, industry and market conditions, cost factors that could have a negative impact on the reporting units, actual financial performance of the reporting units versus expectations and management's future business expectations. As a result of the qualitative assessments, management concluded that it was not more likely than not that the fair value of the reporting unit was less than its carrying value as of the testing date; therefore, no further impairment testing was required. No goodwill impairment was recorded in 2019, 2018 or 2017.

Other Liabilities

Other liabilities at December 31, 2019 and 2018 consisted of the following:

<i>(In thousands)</i>	<u>2019</u>	<u>2018</u>
SPC dividends payable	\$ 55,763	\$ 53,604
Unpaid shareholder dividends	16,676	43,446
All other	100,817	102,245
Total other liabilities	<u>\$ 173,256</u>	<u>\$ 199,295</u>

SPC dividends payable represents the undistributed equity contractually payable to the external cell participants of SPCs operated by ProAssurance's Cayman Islands subsidiaries, Inova Re and Eastern Re.

Unpaid dividends represent common stock dividends declared by ProAssurance's Board that had not yet been paid. Unpaid dividends at December 31, 2018 included a special dividend declared in the fourth quarter of 2018 that was paid in January 2019.

Treasury Shares

Treasury shares are reported at cost and are reflected on the Consolidated Balance Sheets as an unallocated reduction of total equity.

Share-Based Payments

Compensation cost for share-based payments is measured based on the grant-date fair value of the award, recognized over the period in which the employee is required to provide service in exchange for the award. Excess tax benefits (tax deductions realized in excess of the compensation costs recognized for the exercise of the awards, multiplied by the incremental tax rate) are reported as operating cash inflows.

Subsequent Events

ProAssurance evaluates events that occurred subsequent to December 31, 2019 for recognition or disclosure in its Consolidated Financial Statements. See Note 21 for further discussion of subsequent events.

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Accounting Changes Adopted

Leases (ASU 2016-02)

Effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, the FASB issued guidance that requires a lessee to recognize for all leases (with the exception of short-term leases) a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis, and a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. ProAssurance adopted the guidance as of January 1, 2019 using a modified retrospective application and elected the transition option provided that allows companies to continue to apply legacy GAAP in comparative periods. Also, ProAssurance elected the package of practical expedients permitted under the guidance, which allowed the Company to carryforward its historical lease classification, its assessment on whether a contract is or contains a lease and its initial direct costs for any leases that existed prior to adoption of the new standard. Furthermore, ProAssurance elected to combine lease and non-lease components and to keep leases with an initial term of 12 months or less off the Consolidated Balance Sheet and recognize the associated lease payments in the Consolidated Statements of Income and Comprehensive Income on a straight-line basis over the lease term. ProAssurance recognized total ROU assets and total lease liabilities of approximately \$19 million on the Consolidated Balance Sheet as of January 1, 2019 which relate to ProAssurance's real estate operating leases; the Company does not consider these leases to be material to its financial position. Adoption of this guidance had no material impact on ProAssurance's results of operation or cash flows.

ProAssurance's Revolving Credit Agreement contains a financial covenant regarding permitted leverage ratios based upon Consolidated Funded Indebtedness to Consolidated Total Capitalization; however, adoption of this guidance had no material impact on this covenant. ProAssurance's Mortgage Loans also contain a financial covenant regarding permitted leverage ratios, principally based upon SAP Consolidated Net Worth; however, as the NAIC did not adopt the principles found in ASU 2016-02, adoption of the guidance had no impact on this covenant.

Premium Amortization on Purchased Callable Debt Securities (ASU 2017-08)

Effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, the FASB issued guidance that requires the premium for certain callable debt securities to be amortized over a shorter period than was previously required. Previously, amortization was permitted over the contractual life of the instrument, and the guidance shortened the amortization to the earliest call date. The purpose of the guidance is to more closely align the amortization period of premiums to expectations incorporated in market pricing on the underlying securities. ProAssurance adopted the guidance as of January 1, 2019. As ProAssurance amortizes the premium on callable debt securities to the earliest call date, adoption of the guidance had no material effect on ProAssurance's results of operations, financial position or cash flows.

Derivatives and Hedging (ASU 2017-12)

Effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, the FASB issued guidance to improve financial reporting of hedging relationships to better portray the entity's risk management activities in the consolidated financial statements. The new guidance eliminated the requirement to separately measure and report hedge ineffectiveness and requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. ProAssurance adopted the guidance as of January 1, 2019. ProAssurance's derivative instrument at December 31, 2019 is not designated as a hedging instrument; therefore, adoption had no material effect on ProAssurance's results of operations, financial position or cash flows.

Improvements to Nonemployee Share-Based Payment Accounting (ASU 2018-07)

Effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, the FASB issued guidance which reduces the complexity in accounting for nonemployee share-based payment awards. The new guidance substantially aligns the accounting for nonemployee share-based payment awards with the accounting guidance for employee share-based payment awards with certain exceptions, including the inputs used in estimating the fair value of the nonemployee awards and the period of time and pattern of expense recognition. ProAssurance adopted the guidance as of January 1, 2019 using a modified retrospective application and recorded a cumulative-effect adjustment of approximately \$0.4 million to beginning retained earnings in the consolidated Statement of Changes in Capital for the year ended December 31, 2019. Adoption had no material effect on ProAssurance's results of operations, financial position or cash flows.

Derivatives and Hedging - Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap as a Benchmark Interest Rate for Hedge Accounting Purposes (ASU 2018-16)

Effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years, the FASB issued new guidance that permits the use of the Overnight Index Swap Rate based on the Secured Financing Rate as a U.S.

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benchmark interest rate for hedge accounting purposes. ProAssurance adopted the guidance as of January 1, 2019. As of December 31, 2019, ProAssurance's derivative instrument is not designated as a hedging instrument; therefore, adoption had no material effect on ProAssurance's results of operations, financial position or cash flows.

Accounting Changes Not Yet Adopted

Improvements to Financial Instruments - Credit Losses (ASU 2016-13)

Effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years, the FASB issued guidance that replaces the incurred loss impairment methodology, which delays recognition of credit losses until a probable loss has been incurred, with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Under the new guidance, credit losses are required to be recorded through an allowance for credit losses account and the income statement will reflect the initial recognition of lifetime expected credit losses for any newly recognized financial assets, as well as increases or decreases of expected credit losses that have taken place during the period. Credit losses on available-for-sale fixed maturity securities will be required to be presented as an allowance, rather than as a write-down of the asset, limited to the amount by which the fair value is below amortized cost. Adoption of this guidance is not expected to have a material impact on ProAssurance's available-for-sale fixed maturity portfolio. In addition, ProAssurance's premiums receivable and receivables from reinsurers are also included in the scope of this new guidance; however, ProAssurance has not historically experienced material credit losses due to the financial condition of an insured or reinsurer. Subsequent to issuing ASU 2016-13, the FASB has issued additional standards for the purpose of clarifying certain aspects of ASU 2016-13, as well as providing codification improvements and targeted transition relief under the standard. ProAssurance plans to adopt this guidance beginning January 1, 2020 using a modified retrospective application for the portion of the new guidance that relates to its premiums and reinsurance receivables and a prospective application for the portion of the new guidance that relates to its available-for-sale fixed maturity securities. Upon adoption, ProAssurance estimates that it will record a cumulative-effect adjustment of between \$4 million to \$6 million, net of related tax impacts, to beginning retained earnings as of January 1, 2020 to increase its consolidated allowance for credit losses related to its premiums receivable, which was \$1.6 million at December 31, 2019. The Company does not consider this adjustment to its allowance to be material to its financial position. In addition, ProAssurance had no allowance for credit losses related to its reinsurance receivables at December 31, 2019, and expects that its allowance for credit losses associated with its reinsurance receivables upon adoption of this new guidance will be nominal.

Simplifying the Test for Goodwill Impairment (ASU 2017-04)

Effective for the fiscal years beginning after December 15, 2019 and interim periods within those fiscal years, the FASB issued guidance that simplifies the requirements to test goodwill for impairment for business entities that have goodwill reported in their financial statements. The guidance eliminates the second step of the impairment test which measures a goodwill impairment loss by comparing the implied fair value of a reporting unit's goodwill with the carrying amount which is expected to reduce the complexity and cost of future tests of goodwill for impairment. In addition, the guidance also eliminates the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment. ProAssurance plans to adopt the guidance beginning January 1, 2020. Adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

Changes to the Disclosure Requirements for Fair Value Measurement (ASU 2018-13)

Effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years, the FASB issued guidance that eliminates, modifies and adds certain disclosure requirements related to fair value measurements. The new guidance eliminates the requirements to disclose the transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for the timing of transfers between levels of the fair value hierarchy and the valuation process for Level 3 fair value measurements while it modifies existing disclosure requirements related to measurement uncertainty and the requirement to disclose the timing of liquidation of an investee's assets for investments in certain entities that calculate NAV. The new guidance also adds requirements to disclose changes in unrealized gains and losses included in OCI for recurring Level 3 fair value measurements as well as the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. An entity is permitted to early adopt any eliminated or modified disclosure requirements and delay adoption of the additional disclosure requirements until the guidance is effective. During the third quarter of 2018, ProAssurance elected to early adopt the provisions that eliminate and modify certain disclosure requirements within Note 2 on a retrospective basis and adoption of these certain provisions had no material effect on ProAssurance's results of operations, financial position or cash flows as it affected disclosures only. ProAssurance plans to adopt the additional disclosure requirements beginning January 1, 2020, and adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

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Intangibles - Goodwill and Other-Internal-Use Software (ASU 2018-15)

Effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years, the FASB amended the new standard regarding accounting for implementation costs in cloud computing arrangements. The amended guidance substantially aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. ProAssurance plans to adopt the guidance beginning January 1, 2020. Adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

Targeted Improvements to Related Party Guidance for VIEs (ASU 2018-17)

Effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years, the FASB amended guidance which improves the consistency of the application of the VIE guidance for common control arrangements. The amended guidance requires an entity to consider indirect interests held through related parties under common control on a proportional basis rather than as the equivalent of a direct interest in its entirety when determining whether a decision-making fee is a variable interest. ProAssurance plans to adopt the guidance beginning January 1, 2020. As of December 31, 2019, ProAssurance does not have any material indirect interests held through related parties under common control; therefore, adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

Collaborative Arrangements (ASU 2018-18)

Effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years, the FASB issued new guidance which clarifies how to assess whether certain transactions between participants in a collaborative arrangement should be accounted for under the revenue from contracts with customers accounting standard when the counterpart is a customer. In addition, the guidance precludes an entity from presenting consideration from a transaction in a collaborative arrangement as revenue from contracts with customers if the counterpart is not a customer for that transaction. ProAssurance plans to adopt the guidance beginning January 1, 2020, and adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

Simplifying the Accounting for Income Taxes (ASU 2019-12)

Effective for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years, the FASB issued new guidance which is intended to simplify various aspects related to accounting for income taxes. In addition, it removes certain exceptions to the general principles in the income tax guidance in the codification and also clarifies and amends existing guidance to improve consistent application. ProAssurance plans to adopt the guidance beginning January 1, 2021, and adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

Clarifying the Interactions between Investments - Equity Securities, Investments - Equity Method and Joint Ventures, and Derivatives and Hedging (ASU 2020-01)

Effective for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years, the FASB amended guidance that clarifies the accounting for the transition into and out of the equity method and measuring certain purchased options and forward contracts to acquire investments. ProAssurance plans to adopt the guidance beginning January 1, 2021, and adoption is not expected to have a material effect on ProAssurance's results of operations, financial position or cash flows.

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2. 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. A three level hierarchy has been established for valuing assets and liabilities based on how transparent (observable) the inputs are that are used to determine fair value, with the inputs considered most observable categorized as Level 1 and those that are the least observable categorized as Level 3. Hierarchy levels are defined as follows:

- Level 1: quoted (unadjusted) market prices in active markets for identical assets and liabilities. For ProAssurance, Level 1 inputs are generally quotes for debt or equity securities actively traded in exchange or over-the-counter markets.
- Level 2: market data obtained from sources independent of the reporting entity (observable inputs). For ProAssurance, Level 2 inputs generally include quoted prices in markets that are not active, quoted prices for similar assets or liabilities, and results from pricing models that use observable inputs such as interest rates and yield curves that are generally available at commonly quoted intervals.
- Level 3: the reporting entity's own assumptions about market participant assumptions based on the best information available in the circumstances (non-observable inputs). For ProAssurance, Level 3 inputs are used in situations where little or no Level 1 or 2 inputs are available or are inappropriate given the particular circumstances. Level 3 inputs include results from pricing models for which some or all of the inputs are not observable, discounted cash flow methodologies, single non-binding broker quotes and adjustments to externally quoted prices that are based on management judgment or estimation.

Fair values of assets measured at fair value on a recurring basis as of December 31, 2019 and December 31, 2018 are shown in the following tables. Where applicable, the tables also indicate the fair value hierarchy of the valuation techniques utilized to determine those fair values. For some assets, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. When this is the case, the asset is categorized based on the level of the most significant input to the fair value measurement. Assessments of the significance of a particular input to the fair value measurement require judgment and consideration of factors specific to the assets being valued.

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<i>(In thousands)</i>	December 31, 2019			Total Fair Value
	Fair Value Measurements Using			
	Level 1	Level 2	Level 3	
Assets:				
Fixed maturities, available for sale				
U.S. Treasury obligations	\$ —	\$ 110,467	\$ —	\$ 110,467
U.S. Government-sponsored enterprise obligations	—	17,340	—	17,340
State and municipal bonds	—	296,093	—	296,093
Corporate debt, multiple observable inputs	—	1,335,285	—	1,335,285
Corporate debt, limited observable inputs	—	—	5,079	5,079
Residential mortgage-backed securities	—	208,408	—	208,408
Agency commercial mortgage-backed securities	—	8,221	—	8,221
Other commercial mortgage-backed securities	—	71,868	—	71,868
Other asset-backed securities	—	233,032	2,992	236,024
Fixed maturities, trading	—	47,284	—	47,284
Equity investments				
Financial	40,294	—	—	40,294
Utilities/Energy	21,195	—	—	21,195
Consumer oriented	29,288	—	—	29,288
Industrial	26,440	—	—	26,440
Bond funds	58,346	—	—	58,346
All other	52,512	—	—	52,512
Short-term investments	317,313	22,594	—	339,907
Other investments	219	32,713	3,086	36,018
Other assets	—	760	—	760
Total assets categorized within the fair value hierarchy	\$ 545,607	\$ 2,384,065	\$ 11,157	2,940,829
Assets carried at NAV, which approximates fair value and which are not categorized within the fair value hierarchy, reported as a part of:				
Equity investments				22,477
Investment in unconsolidated subsidiaries				270,524
Total assets at fair value				\$ 3,233,830

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(In thousands)	December 31, 2018			
	Fair Value Measurements Using			Total
	Level 1	Level 2	Level 3	Fair Value
Assets:				
Fixed maturities, available for sale				
U.S. Treasury obligations	\$ —	\$ 120,201	\$ —	\$ 120,201
U.S. Government-sponsored enterprise obligations	—	35,354	—	35,354
State and municipal bonds	—	293,772	—	293,772
Corporate debt, multiple observable inputs	2,319	1,216,834	—	1,219,153
Corporate debt, limited observable inputs	—	—	4,322	4,322
Residential mortgage-backed securities	—	181,238	—	181,238
Agency commercial mortgage-backed securities	—	13,108	—	13,108
Other commercial mortgage-backed securities	—	30,993	—	30,993
Other asset-backed securities	—	191,807	3,850	195,657
Fixed maturities, trading	—	38,188	—	38,188
Equity investments				
Financial	62,344	—	—	62,344
Utilities/Energy	46,533	—	—	46,533
Consumer oriented	47,462	—	—	47,462
Industrial	41,487	—	—	41,487
Bond funds	174,753	—	—	174,753
All other	50,066	—	—	50,066
Short-term investments	265,910	42,409	—	308,319
Other investments	—	31,341	3	31,344
Other assets	—	1,884	—	1,884
Total assets categorized within the fair value hierarchy	<u>\$ 690,874</u>	<u>\$ 2,197,129</u>	<u>\$ 8,175</u>	<u>2,896,178</u>
Assets carried at NAV, which approximates fair value and which are not categorized within the fair value hierarchy, reported as a part of:				
Equity investments				20,292
Investment in unconsolidated subsidiaries				268,436
Total assets at fair value				<u>\$ 3,184,906</u>

The fair values for securities included in the Level 2 category, with the few exceptions described below, were developed by one of several third party, nationally recognized pricing services, including services that price only certain types of securities. Each service uses complex methodologies to determine values for securities and subject the values they develop to quality control reviews. Management selected a primary source for each type of security in the portfolio and reviewed the values provided for reasonableness by comparing data to alternate pricing services and to available market and trade data. Values that appeared inconsistent were further reviewed for appropriateness. Any value that did not appear reasonable was discussed with the service that provided the value and adjusted, if necessary. There were no material changes to the values supplied by the pricing services during the years ended December 31, 2019 and 2018.

Level 2 Valuations

Below is a summary description of the valuation methodologies primarily used by the pricing services for securities in the Level 2 category, by security type:

U.S. Treasury obligations were valued based on quoted prices for identical assets, or, in markets that are not active, quotes for similar assets, taking into consideration adjustments for variations in contractual cash flows and yields to maturity.

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U.S. Government-sponsored enterprise obligations were valued using pricing models that consider current and historical market data, normal trading conventions, credit ratings and the particular structure and characteristics of the security being valued, such as yield to maturity, redemption options, and contractual cash flows. Adjustments to model inputs or model results were included in the valuation process when necessary to reflect recent regulatory, government or corporate actions or significant economic, industry or geographic events affecting the security's fair value.

State and municipal bonds were valued using a series of matrices that considered credit ratings, the structure of the security, the sector in which the security falls, yields and contractual cash flows. Valuations were further adjusted, when necessary, to reflect the expected effect on fair value of recent significant economic or geographic events or ratings changes.

Corporate debt, multiple observable inputs consisted primarily of corporate bonds, but also included a small number of bank loans. The methodology used to value Level 2 corporate bonds was the same as the methodology previously described for U.S. Government-sponsored enterprise obligations. Bank loans were valued based on an average of broker quotes for the loans in question, if available. If quotes were not available, the loans were valued based on quoted prices for comparable loans or, if the loan was newly issued, by comparison to similar seasoned issues. Broker quotes were compared to actual trade prices to permit assessment of the reliability of the quotes; unreliable quotes were not considered in quoted averages.

Residential and commercial mortgage-backed securities were valued using a pricing matrix which considers the issuer type, coupon rate and longest cash flows outstanding. The matrix used was based on the most recently available market information. Agency and non-agency collateralized mortgage obligations were both valued using models that consider the structure of the security, current and historical information regarding prepayment speeds, ratings and ratings updates, and current and historical interest rate and interest rate spread data.

Other asset-backed securities were valued using models that consider the structure of the security, monthly payment information, current and historical information regarding prepayment speeds, ratings and ratings updates, and current and historical interest rate and interest rate spread data. Spreads and prepayment speeds consider collateral type.

Fixed maturities, trading, are held by the Lloyd's Syndicates segment and include U.S. Treasury obligations, corporate debt with multiple observable inputs and residential mortgage-backed securities. These securities were valued using the respective valuation methodologies discussed above for each security type.

Short-term investments were securities maturing within one year, carried at fair value which approximated the cost of the securities due to their short-term nature.

Other investments consisted primarily of convertible bonds valued using a pricing model that incorporated selected dealer quotes as well as current market data regarding equity prices and risk free rates. If dealer quotes were unavailable for the security being valued, quotes for securities with similar terms and credit status were used in the pricing model. Dealer quotes selected for use were those considered most accurate based on parameters such as underwriter status and historical reliability.

Other assets consisted of an interest rate cap derivative instrument, which is discussed in Note 12, valued using a model which considers the volatilities from other instruments with similar maturities, strike prices, durations and forward yield curves.

Level 3 Valuations

Below is a summary description of the valuation methodologies used as well as quantitative information regarding securities in the Level 3 category, by security type:

Level 3 Valuation Methodologies

Corporate debt, limited observable inputs consisted of corporate bonds valued using dealer quotes for similar securities or discounted cash flow models using yields currently available for similar securities. Similar securities are defined as securities of comparable credit quality that have like terms and payment features. Assessments of credit quality were based on NRSRO ratings, if available, or were determined by management if not available. At December 31, 2019, 66% of the securities were rated and the average rating was BBB-. At December 31, 2018, 54% of the securities were rated and the average rating was BBB+.

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Other asset-backed securities consisted of securitizations of receivables valued using dealer quotes for similar securities or discounted cash flow models using yields currently available for similar securities. Similar securities are defined as securities of comparable credit quality that have like terms and payment features. Assessments of credit quality were based on NRSRO ratings, if available, or were subjectively determined by management if not available. At December 31, 2019, 100% of the securities were rated and the average rating was AA. At December 31, 2018, 25% of the securities were rated and the average rating was AAA.

Other investments consisted of convertible securities for which limited observable inputs were available at December 31, 2019 and December 31, 2018. The securities were valued internally based on expected cash flows, including the expected final recovery, discounted at a yield that considered the lack of liquidity and the financial status of the issuer.

Quantitative Information Regarding Level 3 Valuations

<i>(\$ in thousands)</i>	Fair Value at		Valuation Technique	Unobservable Input	Range (Weighted Average)
	December 31, 2019	December 31, 2018			
Assets:					
Corporate debt, limited observable inputs	\$5,079	\$4,322	Market Comparable Securities	Comparability Adjustment	0% - 5% (2.5%)
			Discounted Cash Flows	Comparability Adjustment	0% - 5% (2.5%)
Other asset-backed securities	\$2,992	\$3,850	Market Comparable Securities	Comparability Adjustment	0% - 5% (2.5%)
			Discounted Cash Flows	Comparability Adjustment	0% - 5% (2.5%)
Other investments	\$3,086	\$3	Discounted Cash Flows	Comparability Adjustment	0% - 10% (5%)

The significant unobservable inputs used in the fair value measurement of the above listed securities were the valuations of comparable securities with similar issuers, credit quality and maturity. Changes in the availability of comparable securities could result in changes in the fair value measurements.

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Fair Value Measurements - Level 3 Assets

The following tables (the Level 3 Tables) present summary information regarding changes in the fair value of assets measured at fair value using Level 3 inputs.

<i>(In thousands)</i>	December 31, 2019			
	Level 3 Fair Value Measurements – Assets			
	Corporate Debt	Asset-backed Securities	Other investments	Total
Balance December 31, 2018	\$ 4,322	\$ 3,850	\$ 3	\$ 8,175
Total gains (losses) realized and unrealized:				
Included in earnings, as a part of:				
Net investment income	2	(204)	—	(202)
Net realized investment gains (losses)	—	—	151	151
Included in other comprehensive income	37	202	—	239
Purchases	3,575	—	3,091	6,666
Sales	(3,702)	(494)	(172)	(4,368)
Transfers in	3,095	2,216	418	5,729
Transfers out	(2,250)	(2,578)	(405)	(5,233)
Balance December 31, 2019	\$ 5,079	\$ 2,992	\$ 3,086	\$ 11,157
Change in unrealized gains (losses) included in earnings for the above period for Level 3 assets held at period-end	\$ —	\$ —	\$ 164	\$ 164

<i>(In thousands)</i>	December 31, 2018			
	Level 3 Fair Value Measurements – Assets			
	Corporate Debt	Asset-backed Securities	Other investments	Total
Balance December 31, 2017	\$ 13,703	\$ 4,986	\$ 409	\$ 19,098
Total gains (losses) realized and unrealized:				
Included in earnings, as a part of:				
Net investment income	(148)	2	—	(146)
Net realized investment gains (losses)	(8)	—	(40)	(48)
Included in other comprehensive income	(233)	(105)	—	(338)
Purchases	8,005	20,093	—	28,098
Sales	(6,406)	(438)	(366)	(7,210)
Transfers in	2,627	—	—	2,627
Transfers out	(13,218)	(20,688)	—	(33,906)
Balance December 31, 2018	\$ 4,322	\$ 3,850	\$ 3	\$ 8,175
Change in unrealized gains (losses) included in earnings for the above period for Level 3 assets held at period-end	\$ —	\$ —	\$ —	\$ —

Transfers

Transfers shown in the preceding Level 3 tables were as of the end of the quarter in which the transfer occurred. All transfers during both 2019 and 2018 were to or from Level 2.

All transfers in and out of Level 3 during 2019 and 2018 related to securities held for which the level of market activity for identical or nearly identical securities varies from period to period. The securities were valued using multiple observable inputs when those inputs were available; otherwise the securities were valued using limited observable inputs.

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Fair Values Not Categorized

At December 31, 2019 and 2018, certain LPs/LLCs and investment funds measure fund assets at fair value on a recurring basis and provide a NAV for ProAssurance's interest. The carrying value of these interests is based on the NAV provided and was considered to approximate the fair value of the interests. For investment in unconsolidated subsidiaries, ProAssurance recognizes any changes in the NAV of its interests in equity in earnings (loss) of unconsolidated subsidiaries during the period of change. In accordance with GAAP, the fair value of these investments was not classified within the fair value hierarchy. The amount of ProAssurance's unfunded commitments related to these investments as of December 31, 2019 and fair values of these investments as of December 31, 2019 and 2018 was as follows:

<i>(In thousands)</i>	Unfunded Commitments	Fair Value	
	December 31, 2019	December 31, 2019	December 31, 2018
Equity investments:			
Mortgage fund (1)	\$ —	\$ 22,477	\$ 20,292
Investment in unconsolidated subsidiaries:			
Private debt funds (2)	\$ 11,886	19,011	18,196
Long equity fund (3)	None	5,293	6,561
Long/short equity funds (4)	None	30,542	28,805
Non-public equity funds (5)	\$ 73,366	120,343	114,811
Multi-strategy fund of funds (6)	None	1,951	9,322
Credit funds (7)	\$ 2,048	42,415	29,164
Long/short commodities fund (8)	None	14,519	12,958
Strategy focused funds (9)	\$ 44,135	36,450	48,619
		270,524	268,436
Total investments carried at NAV		\$ 293,001	\$ 288,728

Below is additional information regarding each of the investments listed in the table above as of December 31, 2019.

- (1) This investment fund is focused on the structured mortgage market. The fund will primarily invest in U.S. Agency mortgage-backed securities. Redemptions are allowed at the end of any calendar quarter with a prior notice requirement of 65 days and are paid within 45 days at the end of the redemption dealing day.
- (2) This investment is comprised of interests in three unrelated LP funds that are structured to provide interest distributions primarily through diversified portfolios of private debt instruments. One LP allows redemption by special consent; the other two do not permit redemption. Income and capital are to be periodically distributed at the discretion of the LPs over an anticipated time frame that spans from three to eight years.
- (3) This fund is a LP that holds long equities of public international companies. Redemptions are allowed at the end of any calendar month with a prior notice requirement of 15 days and are paid within 10 days of the end of the calendar month of the redemption request.
- (4) This investment is comprised of interests in multiple unrelated LP funds. The funds hold primarily long and short North American equities and target absolute returns using strategies designed to take advantage of market opportunities. The funds generally permit quarterly or semi-annual capital redemptions subject to notice requirements of 30 to 90 days. For some funds, redemptions above specified thresholds (lowest threshold is 90%) may be only partially payable until after a fund audit is completed and are then payable within 30 days.
- (5) This investment is comprised of interests in multiple unrelated LP funds, each structured to provide capital appreciation through diversified investments in private equity, which can include investments in buyout, venture capital, debt including senior, second lien and mezzanine, distressed debt, collateralized loan obligations and other private equity-oriented LPs. Two of the LPs allow redemption by terms set forth in the LP agreements; the others do not permit redemption. Income and capital are to be periodically distributed at the discretion of the LP over time frames that are anticipated to span up to ten years.

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- (6) This fund is a LLC structured to build and manage low volatility, multi-manager portfolios that have little or no correlation to the broader fixed income and equity security markets. Redemptions are not permitted but offers to repurchase units of the LLC may be extended periodically.
- (7) This investment is comprised of four unrelated LP funds. Two funds seek to obtain superior risk-adjusted absolute returns through a diversified portfolio of debt securities, including bonds, loans and other asset-backed instruments. A third fund focuses on private middle market company mezzanine loans, while the remaining fund seeks event driven opportunities across the corporate credit spectrum. Two funds are allowed redemptions at any quarter-end with a prior notice requirement of 90 days; one fund permits redemption at any quarter-end with a prior notice requirement of 180 days and one fund does not allow redemptions. For the fund that does not allow redemptions, income and capital are to be periodically distributed at the discretion of the LP over time frames that are anticipated to span up to twelve years.
- (8) This fund is a LLC invested across a broad range of commodities and focuses primarily on market neutral, relative value strategies, seeking to generate absolute returns with low correlation to broad commodity, equity and fixed income markets. Following an initial one-year lock-up period, redemptions are allowed with a prior notice requirement of 30 days and are payable within 30 days.
- (9) This investment is comprised of multiple unrelated LPs/LLCs funds. One fund is a LLC focused on investing in North American consumer products companies, comprised of equity and equity-related securities, as well as debt instruments. A second fund is focused on aircraft investments, along with components and assets related to aircrafts. For both funds, redemptions are not permitted. Another fund is a LP focused on North American energy infrastructure assets that allows redemption with consent of the General Partner. The remaining funds are real estate focused LPs, one of which allows for redemption with prior notice.

ProAssurance may not sell, transfer or assign its interest in any of the above LPs/LLCs without special consent from the LPs/LLCs.

Nonrecurring Fair Value Measurement

At December 31, 2019 and 2018, ProAssurance did not have any assets or liabilities that were measured at fair value on a nonrecurring basis.

Financial Instruments - Methodologies Other Than Fair Value

The following table provides the estimated fair value of the Company's financial instruments that, in accordance with GAAP for the type of investment, are measured using a methodology other than fair value. Fair values provided primarily fall within the Level 3 fair value category.

<i>(In thousands)</i>	December 31, 2019		December 31, 2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Financial assets:				
BOLI	\$ 66,112	\$ 66,112	\$ 64,096	\$ 64,096
Other investments	\$ 2,931	\$ 2,931	\$ 2,943	\$ 2,943
Other assets	\$ 28,645	\$ 28,650	\$ 35,921	\$ 35,468
Financial liabilities:				
Senior notes due 2023*	\$ 250,000	\$ 273,865	\$ 250,000	\$ 264,810
Mortgage Loans*	\$ 37,617	\$ 37,617	\$ 39,064	\$ 39,064
Other liabilities	\$ 27,953	\$ 27,953	\$ 21,300	\$ 21,300

* Carrying value excludes unamortized debt issuance costs.

The fair value of the BOLI was equal to the cash surrender value associated with the policies on the valuation date.

Other investments listed in the table above include FHLB common stock carried at cost and an annuity investment carried at amortized cost. Two of ProAssurance's insurance subsidiaries are members of an FHLB. The estimated fair value of the FHLB common stock was based on the amount the subsidiaries would receive if their memberships were canceled, as the memberships cannot be sold. The fair value of the annuity represents the present value of the expected future cash flows discounted using a rate available in active markets for similarly structured instruments.

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Other assets and other liabilities primarily consisted of related investment assets and liabilities associated with funded deferred compensation agreements. The fair value of the funded deferred compensation assets was based upon quoted market prices, which is categorized as a Level 1 valuation, and had a fair value of \$26.9 million and \$24.1 million at December 31, 2019 and 2018, respectively. The deferred compensation liabilities are adjusted to match the fair value of the deferred compensation assets. Other assets also included a secured note receivable and unsecured note receivable under two separate line of credit agreements. Fair value of these notes receivable was based on the present value of expected cash flows from the notes receivable, discounted at market rates on the valuation date for receivables with similar credit standings and similar payment structures.

The fair value of the debt was estimated based on the present value of expected future cash outflows, discounted at rates available on the valuation date for similar debt issued by entities with a similar credit standing to ProAssurance.

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3. Investments

Available-for-sale fixed maturities at December 31, 2019 and December 31, 2018 included the following:

<i>(In thousands)</i>	December 31, 2019			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Fixed maturities, available for sale				
U.S. Treasury obligations	\$ 109,060	\$ 1,533	\$ 126	\$ 110,467
U.S. Government-sponsored enterprise obligations	17,215	125	—	17,340
State and municipal bonds	287,658	9,110	675	296,093
Corporate debt	1,308,889	33,050	1,575	1,340,364
Residential mortgage-backed securities	205,588	3,139	319	208,408
Agency commercial mortgage-backed securities	8,054	182	15	8,221
Other commercial mortgage-backed securities	70,621	1,468	221	71,868
Other asset-backed securities	234,219	1,958	153	236,024
	\$ 2,241,304	\$ 50,565	\$ 3,084	\$ 2,288,785
<i>(In thousands)</i>	December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Fixed maturities, available for sale				
U.S. Treasury obligations	\$ 121,274	\$ 331	\$ 1,404	\$ 120,201
U.S. Government-sponsored enterprise obligations	35,758	25	429	35,354
State and municipal bonds	289,544	4,877	649	293,772
Corporate debt	1,244,577	3,328	24,430	1,223,475
Residential mortgage-backed securities	184,463	814	4,039	181,238
Agency commercial mortgage-backed securities	13,296	12	200	13,108
Other commercial mortgage-backed securities	31,330	38	375	30,993
Other asset-backed securities	196,583	254	1,180	195,657
	\$ 2,116,825	\$ 9,679	\$ 32,706	\$ 2,093,798

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The recorded cost basis and estimated fair value of available-for-sale fixed maturities at December 31, 2019, by contractual maturity, are shown below. Actual maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

<i>(In thousands)</i>	Amortized Cost	Due in one year or less	Due after one year through five years	Due after five years through ten years	Due after ten years	Total Fair Value
Fixed maturities, available for sale						
U.S. Treasury obligations	\$ 109,060	\$ 28,954	\$ 64,881	\$ 16,210	\$ 422	\$ 110,467
U.S. Government-sponsored enterprise obligations	17,215	2,501	5,995	8,700	144	17,340
State and municipal bonds	287,658	14,393	120,928	126,448	34,324	296,093
Corporate debt	1,308,889	147,624	778,833	385,984	27,923	1,340,364
Residential mortgage-backed securities	205,588					208,408
Agency commercial mortgage-backed securities	8,054					8,221
Other commercial mortgage-backed securities	70,621					71,868
Other asset-backed securities	234,219					236,024
	<u>\$ 2,241,304</u>					<u>\$ 2,288,785</u>

Excluding obligations of the U.S. Government, U.S. Government-sponsored enterprises and a U.S. Government obligations money market fund, no investment in any entity or its affiliates exceeded 10% of shareholders' equity at December 31, 2019.

Cash and securities with a carrying value of \$45.5 million at December 31, 2019 were on deposit with various state insurance departments to meet regulatory requirements.

As a member of Lloyd's, ProAssurance is required to maintain capital at Lloyd's, referred to as FAL, to support underwriting by Syndicate 1729 and Syndicate 6131. At December 31, 2019, ProAssurance's FAL investments were comprised of available-for-sale fixed maturities with a fair value of \$129.9 million and cash and cash equivalents of \$7.2 million on deposit with Lloyd's in order to satisfy these FAL requirements.

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Investments Held in a Loss Position

The following tables provide summarized information with respect to investments held in an unrealized loss position at December 31, 2019 and December 31, 2018, including the length of time the investment had been held in a continuous unrealized loss position.

<i>(In thousands)</i>	December 31, 2019					
	Total		Less than 12 months		12 months or longer	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Fixed maturities, available for sale						
U.S. Treasury obligations	\$ 25,959	\$ 126	\$ 15,305	\$ 103	\$ 10,654	\$ 23
State and municipal bonds	36,565	675	35,621	674	944	1
Corporate debt	128,254	1,575	88,582	932	39,672	643
Residential mortgage-backed securities	59,291	319	28,048	63	31,243	256
Agency commercial mortgage-backed securities	459	15	158	—	301	15
Other commercial mortgage-backed securities	18,339	221	16,924	206	1,415	15
Other asset-backed securities	48,912	153	37,322	145	11,590	8
	\$ 317,779	\$ 3,084	\$ 221,960	\$ 2,123	\$ 95,819	\$ 961

<i>(In thousands)</i>	December 31, 2018					
	Total		Less than 12 months		12 months or longer	
	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Fixed maturities, available for sale						
U.S. Treasury obligations	\$ 97,969	\$ 1,405	\$ 20,221	\$ 119	\$ 77,748	\$ 1,286
U.S. Government-sponsored enterprise obligations	33,677	429	20,479	126	13,198	303
State and municipal bonds	63,094	648	30,924	143	32,170	505
Corporate debt	938,651	24,429	447,891	8,804	490,760	15,625
Residential mortgage-backed securities	157,120	4,039	27,311	209	129,809	3,830
Agency commercial mortgage-backed securities	9,822	200	4,566	22	5,256	178
Other commercial mortgage-backed securities	22,924	375	13,348	164	9,576	211
Other asset-backed securities	142,470	1,181	70,218	236	72,252	945
	\$ 1,465,727	\$ 32,706	\$ 634,958	\$ 9,823	\$ 830,769	\$ 22,883

As of December 31, 2019, excluding U.S. Government or U.S. Government-sponsored enterprise obligations, there were 263 debt securities (12.1% of all available-for-sale fixed maturity securities held) in an unrealized loss position representing 204 issuers. The greatest and second greatest unrealized loss positions among those securities were approximately \$0.2 million and \$0.1 million, respectively. The securities were evaluated for OTTI as of December 31, 2019.

As of December 31, 2018, excluding U.S. Government or U.S. Government-sponsored enterprise obligations, there were 1,044 debt securities (50.6% of all available-for-sale fixed maturity securities held) in an unrealized loss position representing 550 issuers. The greatest and second greatest unrealized loss positions among those securities were approximately \$0.6 million and \$0.5 million, respectively. The securities were evaluated for OTTI as of December 31, 2018.

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Each quarter, ProAssurance performs a detailed analysis for the purpose of assessing whether any of the securities it holds in an unrealized loss position has suffered an OTTI. A detailed discussion of the factors considered in the assessment is included in Note 1.

Fixed maturity securities held in an unrealized loss position at December 31, 2019, excluding asset-backed securities, have paid all scheduled contractual payments and are expected to continue doing so. Expected future cash flows of asset-backed securities, excluding those issued by GNMA, FNMA and FHLMC, held in an unrealized loss position were estimated as part of the December 31, 2019 OTTI evaluation using the most recently available six-month historical performance data for the collateral (loans) underlying the security or, if historical data was not available, sector based assumptions, and equaled or exceeded the current amortized cost basis of the security.

Other information regarding sales and purchases of fixed maturity available-for-sale securities is as follows:

<i>(In millions)</i>	Year Ended December 31		
	2019	2018	2017
Proceeds from sales (exclusive of maturities and paydowns)	\$ 177.1	\$ 599.6	\$ 530.2
Purchases	\$ 695.6	\$ 780.7	\$ 614.4

Equity Investments

ProAssurance's equity investments are carried at fair value with changes in fair value recognized in income as a component of net realized investment gains (losses) during the period of change. Equity investments on the Consolidated Balance Sheet as of December 31, 2019 primarily included stocks, bond funds and investment funds.

Short-term Investments

ProAssurance's short-term investments, which have a maturity at purchase of one year or less, are primarily comprised of investments in U.S. treasury obligations, commercial paper and money market funds. Short-term investments are carried at fair value which approximates the cost of the securities due to their short-term nature.

BOLI

ProAssurance holds BOLI policies that are carried at the current cash surrender value of the policies (original cost \$33 million). All insured individuals were members of ProAssurance management at the time the policies were acquired. The primary purpose of the program is to offset future employee benefit expenses through earnings on the cash value of the policies. ProAssurance is the owner and beneficiary of these policies.

Net Investment Income

Net investment income by investment category was as follows:

<i>(In thousands)</i>	Year Ended December 31		
	2019	2018	2017
Fixed maturities	\$ 72,593	\$ 69,515	\$ 75,669
Equities	17,650	21,418	17,198
Short-term investments, including Other	7,493	5,649	7,793
BOLI	2,017	1,983	1,979
Investment fees and expenses	(6,484)	(6,681)	(6,977)
Net investment income	\$ 93,269	\$ 91,884	\$ 95,662

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Investment in Unconsolidated Subsidiaries

ProAssurance's investment in unconsolidated subsidiaries were as follows:

<i>(In thousands)</i>	December 31, 2019	Carrying Value	
	Percentage Ownership	December 31, 2019	December 31, 2018
Qualified affordable housing project tax credit partnerships	See below	\$ 46,421	\$ 65,677
Other tax credit partnerships	See below	2,085	3,757
All other investments, primarily investment fund LPs/LLCs	See below	310,314	298,323
		\$ 358,820	\$ 367,757

Qualified affordable housing project tax credit partnership interests held by ProAssurance generate investment returns by providing tax benefits to fund investors in the form of tax credits and project operating losses. The carrying value of these investments reflects ProAssurance's total commitments (both funded and unfunded) to the partnerships, less any amortization. ProAssurance's ownership percentage relative to two of the tax credit partnership interests is almost 100%; these interests had a carrying value of \$17.2 million and \$25.0 million at December 31, 2019 and 2018, respectively. ProAssurance's ownership percentage relative to the remaining tax credit partnership interests is less than 20%; these interests had a carrying value of \$29.2 million and \$40.7 million at December 31, 2019 and 2018, respectively. Since ProAssurance has the ability to exert influence over the partnerships but does not control them, all are accounted for using the equity method. See further discussion of the entities in which ProAssurance holds passive interests in Note 15.

Other tax credit partnerships are comprised entirely of investments in historic tax credit partnerships. The historic tax credit partnerships generate investment returns by providing benefits to fund investors in the form of tax credits, tax deductible project operating losses and positive cash flows. The carrying value of these investments reflects ProAssurance's total funded commitments less any amortization. ProAssurance's ownership percentage relative to the historic tax credit partnerships is almost 100%. Since ProAssurance has the ability to exert influence over the partnerships but does not control them, all are accounted for using the equity method. See further discussion of the entities in which ProAssurance holds passive interests in Note 15.

ProAssurance holds interests in investment fund LPs/LLCs and other equity method investments and LPs/LLCs which are not considered to be investment funds. ProAssurance's ownership percentage relative to three of the LPs/LLCs is greater than 25%, which is expected to be reduced as the funds mature and other investors participate in the funds; these investments had a carrying value of \$41.0 million at December 31, 2019 and \$25.9 million at December 31, 2018. ProAssurance's ownership percentage relative to the remaining investments and LPs/LLCs is less than 25%; these interests had a carrying value of \$269.3 million at December 31, 2019 and \$272.4 million at December 31, 2018. ProAssurance does not have the ability to exert control over any of these funds.

Equity in Earnings (Loss) of Unconsolidated Subsidiaries

Equity in earnings (loss) of unconsolidated subsidiaries included losses from qualified affordable housing project tax credit partnerships and historic tax credit partnerships. Losses recorded reflect ProAssurance's allocable portion of partnership operating losses. Tax credits reduce income tax expense in the period they are recognized. Losses recorded and tax credits recognized related to ProAssurance's tax credit partnership investments were as follows:

<i>(In thousands)</i>	Year Ended December 31		
	2019	2018	2017
Qualified affordable housing project tax credit partnerships			
Losses recorded	\$ 19,231	\$ 18,889	\$ 14,297
Tax credits recognized	\$ 21,933	\$ 18,474	\$ 17,774
Historic tax credit partnerships			
Losses recorded	\$ 1,672	\$ 5,434	\$ 6,355
Tax credits recognized	\$ —	\$ 2,567	\$ 5,337

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Due to the consolidated loss before income taxes recognized for the year ended December 31, 2019, the tax credits generated in 2019 from tax credit partnership investments of \$18.1 million were deferred and are expected to be utilized in future periods. Tax credits in the previous table recognized during the year ended December 31, 2019 included tax credits of \$3.8 million that were carried forward from 2018, which had previously been carried back to the 2017 tax year; however because the Company expects to carryback the tax loss for the year ended December 31, 2019 to the 2017 tax year, a portion of those tax credits have been recaptured. Of the \$3.8 million of tax credits recaptured and recognized during the year ended December 31, 2019, \$0.2 million was recognized as a current income tax benefit and \$3.6 million was recognized as a deferred income tax benefit in 2019. See Note 6 for further information.

Net Realized Investment Gains (Losses)

Realized investment gains and losses are recognized on the first-in, first-out basis. The following table provides detailed information regarding net realized investment gains (losses):

<i>(In thousands)</i>	Year Ended December 31		
	2019	2018	2017
Total OTTI losses:			
State and municipal bonds	\$ —	\$ —	\$ (850)
Corporate debt	(978)	(490)	(419)
Investment in unconsolidated subsidiaries	—	—	(11,931)
Portion of OTTI losses recognized in other comprehensive income before taxes:			
Corporate debt	227	—	248
Net impairment losses recognized in earnings	(751)	(490)	(12,952)
Gross realized gains, available-for-sale fixed maturities	3,786	5,942	6,653
Gross realized (losses), available-for-sale fixed maturities	(538)	(5,799)	(3,123)
Net realized gains (losses), short-term investments	3	(1)	(2)
Net realized gains (losses), trading fixed maturities	74	(100)	—
Net realized gains (losses), equity investments	20,577	12,230	10,724
Net realized gains (losses), other investments	1,626	1,340	2,963
Change in unrealized holding gains (losses), trading fixed maturities	705	(317)	—
Change in unrealized holding gains (losses), equity investments	30,674	(52,707)	11,243
Change in unrealized holding gains (losses), convertible securities, carried at fair value	3,653	(3,849)	896
Other	65	263	7
Net realized investment gains (losses)	\$ 59,874	\$ (43,488)	\$ 16,409

During 2019, ProAssurance recognized credit-related OTTI in earnings of \$0.8 million and non-credit OTTI in OCI of \$0.2 million, both of which related to three corporate bonds in the energy and consumer sectors.

During 2018, ProAssurance recognized OTTI in earnings of \$0.5 million related to debt instruments from two issuers in the energy sector.

During 2017, ProAssurance recognized OTTI in earnings of \$13.0 million, including an \$8.5 million impairment related to an early stage business investment accounted for under the equity method. The impairment charge represented the difference between the investment's carrying value and fair value, which was measured as ProAssurance's ownership percentage in the projected earnings expected to be generated by the investment. In addition, ProAssurance recognized OTTI in earnings of \$3.4 million related to qualified affordable housing project tax credit investments. The current estimated tax benefits expected to be received from ProAssurance's allocable portion of the operating losses of the underlying properties have declined, due to the newly enacted corporate tax rate of 21%, as compared to those at the time the investments were acquired. During 2017, ProAssurance also recognized credit-related OTTI of \$0.2 million and non-credit OTTI of \$0.2 million in OCI, both of which related to corporate bonds.

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The following table presents a roll forward of cumulative credit losses recorded in earnings related to impaired debt securities for which a portion of the OTTI was recorded in OCI.

<i>(In thousands)</i>	2019	2018	2017
Balance beginning of period	\$ 93	\$ 1,313	\$ 1,158
Additional credit losses recognized during the period, related to securities for which:			
No OTTI has been previously recognized	377	—	171
OTTI has been previously recognized	—	—	—
Reductions due to:			
Securities sold during the period (realized)	—	(1,220)	(16)
Balance December 31	\$ 470	\$ 93	\$ 1,313

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4. Retroactive Insurance Contracts

ProAssurance offers custom alternative risk solutions including loss portfolio transfers for healthcare entities that, most commonly, are exiting a line of business, changing an insurance approach or simply preferring to transfer risk. A loss portfolio transfer is a form of retroactive insurance coverage as the Company is assuming and accepting an entity's existing open and future claim liabilities through the transfer of the entity's loss reserves. If the contract includes both prospective (tail) coverage and retroactive coverage, ProAssurance bifurcates the provisions of the contract and accounts for each component separately. Retroactive and prospective (tail) coverages are fully written and earned as of the contract effective date. For additional information regarding ProAssurance's accounting policy for retroactive insurance contracts, see Note 1.

During 2019, ProAssurance entered into a loss portfolio transfer with a regional hospital group to cover a specific inventory of existing claims as well as provide tail coverage. During 2018, ProAssurance entered into a loss portfolio transfer with a large healthcare organization to also cover a specific inventory of existing claims as well as provide tail coverage. The impact of each of these loss portfolio transfers on the Consolidated Statements of Income and Comprehensive Income for the years ended December 31, 2019 and 2018 is as follows:

<i>(In millions)</i>	Year Ended December 31	
	2019	2018
Retroactive coverage	\$ 0.9	\$ 18.7
Prospective (tail) coverage	1.8	7.9
Net premiums earned	\$ 2.7	\$ 26.6
Net losses and loss adjustment expenses	\$ 2.1	\$ 25.4

For the loss portfolio transfer entered into during 2018, ProAssurance recorded a deferred gain of \$0.6 million which is included as a component of the reserve for losses and loss adjustment expenses on the Consolidated Balance Sheet. This deferred gain represented the excess of premiums received over losses assumed related to the retroactive coverage which is amortized into earnings over the estimated claim payment period. Amortization of this deferred gain was insignificant during each of the years ended December 31, 2019 and 2018.

5. Reinsurance

ProAssurance purchases reinsurance from third-party reinsurers and insurance enterprises in order to reduce its net exposure to losses, to provide capacity to write larger limits of liability, to provide reimbursement for losses incurred under the higher limit coverages the Company offers and as a mechanism for providing custom insurance solutions. ProAssurance also uses reinsurance arrangements as a mechanism for sharing risk with insureds or their affiliates.

The effects of reinsurance for the years ended December 31, 2019, 2018 and 2017 were as follows:

<i>(In thousands)</i>	Year Ended December 31		
	2019	2018	2017
Direct	\$ 919,799	\$ 910,198	\$ 842,968
Assumed	47,691	47,113	31,908
Ceded	(124,765)	(122,397)	(110,858)
Net premiums written	\$ 842,725	\$ 834,914	\$ 764,018
Direct	\$ 926,035	\$ 903,354	\$ 821,249
Assumed	45,668	41,535	27,629
Ceded	(124,171)	(126,036)	(110,347)
Net premiums earned	\$ 847,532	\$ 818,853	\$ 738,531
Losses and loss adjustment expenses	\$ 871,780	\$ 675,784	\$ 592,218
Reinsurance recoveries	(117,865)	(82,574)	(123,060)
Net losses and loss adjustment expenses	\$ 753,915	\$ 593,210	\$ 469,158

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The receivable from reinsurers on unpaid losses and LAE represents management's estimated amount of future loss payments that will be recoverable under ProAssurance reinsurance agreements. Certain of the Company's reinsurance agreements base the amount of premium that is due to the reinsurer in part on losses reimbursed or to be reimbursed under the agreement, and terms may also include maximum and minimum amounts of ceded premium. Ceded premium amounts are estimated based on management's expectation of ultimate losses and the portion of those losses that are allocable to reinsurers according to the terms of the agreements, including any minimums or maximums. Given the uncertainty of the ultimate amounts of losses, management's estimates of losses and related amounts recoverable may vary significantly from the eventual outcome. Due to changes in management's estimates of amounts due to reinsurers related to prior accident year loss recoveries, ProAssurance increased premiums ceded in its Specialty P&C segment by \$2.8 million and \$5.5 million during the years ended December 31, 2019 and 2018, respectively, and reduced premiums ceded by \$1.2 million during the year ended December 31, 2017.

Reinsurance contracts do not relieve ProAssurance from its obligations to policyholders, and ProAssurance remains liable to its policyholders whether or not reinsurers honor their contractual obligations. ProAssurance continually monitors its reinsurers to minimize its exposure to significant losses from reinsurer insolvencies.

At December 31, 2019, the net total amounts due from reinsurers was \$393.3 million (receivables related to paid and unpaid losses and LAE and prepaid reinsurance premiums, less reinsurance premiums payable). No single reinsurer had an individual balance which exceeded \$40.0 million.

At December 31, 2019 reinsurance recoverables totaling approximately \$92.6 million were collateralized by letters of credit or funds withheld. ProAssurance had no allowance for credit losses related to its reinsurance receivables at December 31, 2019 or 2018 as all reinsurance balances were considered collectible. During the years ended December 31, 2019 and 2018, no reinsurance balances were written off for credit reasons. During the year ended December 31, 2017, reinsurance balances written off for credit reasons were nominal in amount.

During the fourth quarter of 2018, 2017 and 2016, ProAssurance commuted the 2017, 2016 and 2015 calendar year quota share reinsurance arrangements, respectively, between the Specialty P&C segment and Syndicate 1729. Due to the quarter lag, the effects of the 2017, 2016 and 2015 commutations were reported in both the Specialty P&C and Lloyd's Syndicates segments results during the first quarter of 2019, 2018 and 2017, respectively, which resulted in a net cash receipt of approximately \$3.1 million, \$6.1 million and \$6.3 million, respectively. The commutations reduced the receivable from reinsurers on unpaid losses and LAE, combined, by approximately \$3.8 million, \$6.7 million and \$6.6 million during the years ended December 31, 2019, 2018 and 2017, respectively.

During 2017, ProAssurance commuted an outstanding DDR reinsurance arrangement with one of its reinsurers which resulted in a net cash receipt of approximately \$7.8 million and reduced its receivable from reinsurers on unpaid losses and LAE by approximately \$5.4 million.

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6. Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of ProAssurance's deferred tax assets and liabilities were as follows:

<i>(In thousands)</i>	December 31	
	2019	2018
Deferred tax assets		
Unpaid loss discount	\$ 34,455	\$ 30,629
Unearned premium adjustment	16,346	16,620
Compensation related	10,041	9,879
Unrealized losses on investments, net	—	4,403
Basis differentials—investments	—	912
Intangibles	591	433
Operating lease liabilities	4,631	—
Basis differentials - foreign operations	126	—
Tax credit carryforward	21,778	—
Net operating loss carryforward	7,682	6,795
Total gross deferred tax assets	<u>95,650</u>	69,671
Valuation allowance	<u>(5,479)</u>	(7,074)
Total deferred tax assets, net of valuation allowance	<u>90,171</u>	62,597
Deferred tax liabilities		
Deferred policy acquisition costs	(9,889)	(9,972)
Unpaid loss discount—transition	(7,557)	(10,128)
Unrealized gains on investments, net	(9,753)	—
Fixed assets	(1,263)	(542)
Operating lease ROU assets	(4,439)	—
Basis differentials—investments	(2,377)	—
Intangibles	(10,382)	(11,243)
Other	(124)	(1,604)
Total deferred tax liabilities	<u>(45,784)</u>	(33,489)
Net deferred tax assets (liabilities)	<u>\$ 44,387</u>	<u>\$ 29,108</u>

As of December 31, 2019, ProAssurance had U.S. federal, state, and U.K. income tax NOL carryforwards of approximately \$10.1 million, \$7.9 million, and \$28.6 million, respectively. The federal and U.K. NOL carryforwards do not expire while the state NOL carryforwards will begin to expire in 2031.

ProAssurance had \$21.8 million of available tax credit carryforwards generated from the Company's investments in tax credit partnerships, of which \$3.7 million and \$18.1 million may be carried forward until December 31, 2038 and 2039, respectively. These tax credits have been deferred and carried forward due to the Company's consolidated pre-tax loss in 2019.

In 2019 and 2018, management evaluated the realizability of the deferred tax asset related to the U.K. NOL carryforwards and concluded that it was more likely than not that the deferred tax asset will not be realized; therefore, a valuation allowance was recorded against the full value of the deferred tax asset related to the U.K. NOL carryforwards in both 2019 and 2018 of \$4.9 million and \$6.8 million, respectively. The decrease in the valuation allowance of \$1.9 million related to the U.K. NOL carryforward in 2019 as compared to 2018 was primarily due to a reduction in the U.K. tax rate from 19% to the current tax rate of 17%.

Deferred tax assets and liabilities include SPCs the Company participates in at Inova Re, net of a valuation allowance of \$0.6 million and \$0.3 million at December 31, 2019 and 2018, respectively. Due to the limited operations of these SPCs as of December 31, 2019 and 2018, management concluded that a valuation allowance was required against the DTAs of certain SPCs. The increase in the valuation allowance of \$0.3 million related to the SPCs at Inova Re is due to current year activity.

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ProAssurance files income tax returns in various states, the U.S. federal jurisdiction and the U.K. ProAssurance had a receivable for U.S. federal and U.K. income taxes of \$8.0 million at December 31, 2019 and \$3.5 million at December 31, 2018, both carried as a part of other assets.

The statute of limitations is now closed for all tax years prior to 2016.

A reconciliation of the beginning and ending amounts of unrecognized tax benefits for 2019, 2018 and 2017, were as follows:

<i>(In thousands)</i>	2019	2018	2017
Balance at January 1	\$ 3,601	\$ 5,341	\$ 8,353
Increases for tax positions taken during the current year	1,749	—	—
(Decreases) for tax positions taken during the current year	—	(777)	(3,500)
(Decreases)/increases for tax positions taken during prior years	—	(800)	700
(Decreases) relating to a lapse of the applicable statute of limitations	(280)	(163)	(212)
Balance at December 31	<u>\$ 5,070</u>	<u>\$ 3,601</u>	<u>\$ 5,341</u>

At both December 31, 2019 and 2018, approximately \$1.2 million of ProAssurance's uncertain tax positions, if recognized, would affect the effective tax rate. As with any uncertain tax position, there is a possibility that the ultimate benefit realized could differ from the estimate management has established. Management believes that it is reasonably possible that a portion of unrecognized tax benefits at December 31, 2019 may change during the next twelve months. However, an estimate of the change cannot be made at this time.

ProAssurance recognizes interest and/or penalties related to income tax matters as a component of income tax expense. Interest and penalties recognized in the Consolidated Statements of Income and Comprehensive Income was nominal for each of the years ended December 31, 2019 and 2018 and was approximately \$0.3 million for the year ended December 31, 2017. The accrued liability for interest was approximately \$0.6 million at both December 31, 2019 and 2018.

Income tax expense (benefit) for each of the years ended December 31, 2019, 2018 and 2017 consisted of the following:

<i>(In thousands)</i>	2019	2018	2017
Provision for income taxes:			
Current expense (benefit)			
Federal and foreign	\$ (2,147)	\$ (6,509)	\$ 19,546
State	982	301	120
Total current expense (benefit)	<u>(1,165)</u>	<u>(6,208)</u>	<u>19,666</u>
Deferred expense (benefit)			
Federal and foreign	(27,404)	(11,765)	1,331
State	(1,239)	(59)	362
Total deferred expense (benefit)	<u>(28,643)</u>	<u>(11,824)</u>	<u>1,693</u>
Total income tax expense (benefit)	<u>\$ (29,808)</u>	<u>\$ (18,032)</u>	<u>\$ 21,359</u>

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A reconciliation of “expected” income tax expense (benefit) (21% of income (loss) before income taxes for 2019 and 2018; 35% of income before income taxes for 2017) to actual income tax expense (benefit) for each of the years ended December 31, 2019, 2018 and 2017 were as follows:

<i>(In thousands)</i>	2019	2018	2017
Computed “expected” tax expense (benefit)	\$ (6,049)	\$ 6,095	\$ 45,018
Tax-exempt income	(1,528)	(2,505)	(8,356)
Tax credits	(21,933)	(21,059)	(23,111)
Non-U.S. operating results	(1,447)	2,269	918
Excess tax benefit on share-based compensation	99	(275)	(2,762)
Change in federal corporate tax rate	—	—	6,541
Tax rate differential on loss carryback	(3,400)	—	—
Change in limitation of future deductibility of certain executive compensation	—	—	3,497
Provision-to-return differences	3,595	(2,309)	(1,979)
Change in uncertain tax positions	1,956	(51)	345
State income taxes	(376)	129	589
Benefit from amended returns	(550)	—	—
Other	(175)	(326)	659
Total income tax expense (benefit)	<u>\$ (29,808)</u>	<u>\$ (18,032)</u>	<u>\$ 21,359</u>

For the year ended December 31, 2019, tax credits include \$0.2 million recognized as a current income tax benefit and \$21.8 million that have been recognized as a deferred income tax benefit. The tax rate differential on loss carryback for the year ended December 31, 2019 represents the impact of the carryback of the Company’s tax loss in 2019 to the 2017 tax year when the federal statutory tax rate was 35% as compared to the current tax rate of 21%.

Tax Cuts and Jobs Act

The TCJA was signed into law on December 22, 2017 and contains several key provisions that impact the Company’s business, including the reduction of the U.S. federal corporate tax rate from 35% to 21% effective January 1, 2018, the reduction in the amount of executive compensation that could qualify as a tax deduction, a change in how property and casualty taxpayers discount loss reserves, a minimum tax on payments made to related foreign entities and a new tax on certain income of controlled foreign corporations.

Effective January 1, 2018, the TCJA introduced a minimum tax on payments made to related foreign entities referred to as the BEAT. The BEAT is imposed by adding back into the U.S. tax base any base erosion payment made by the U.S. taxpayer to a related foreign entity and applying a minimum tax rate to this newly calculated modified taxable income. Base erosion payments represent any amount paid or accrued by the U.S. taxpayer to a related foreign entity for which a deduction is allowed. Premiums the Company cedes to the SPCs at its wholly owned Cayman Islands reinsurance subsidiary, Inova Re, do not fall within the scope of base erosion payments as the SPCs at Inova Re have elected to be taxed as U.S. taxpayers. However, premiums the Company cedes to any active SPC at its wholly owned Cayman Islands reinsurance subsidiary, Eastern Re, fall within the scope of base erosion payments and therefore could be significantly impacted by the BEAT. See further discussion on the Company’s subsidiary, Inova Re, and its Cayman Islands SPC operations in Note 17. Management has evaluated its exposure to the BEAT and has concluded that the Company’s expected outbound deductible payments to related foreign entities are below the threshold for application of the BEAT; therefore, ProAssurance has not recognized any incremental tax expense for the BEAT provision of the TCJA for the year ended December 31, 2019.

The TCJA also requires a U.S. shareholder of a controlled foreign corporation to include its GILTI in U.S. taxable income. The GILTI amount is based on the U.S. shareholder’s aggregate share of the gross income of the controlled foreign corporation reduced by certain exceptions and a net deemed tangible income return. The net deemed tangible income return is based on the controlled foreign corporation’s basis in the tangible depreciable business property. Cell rental fee income earned by Inova Re and Eastern Re fall within the scope of the GILTI provisions of the TCJA. Management has evaluated the new GILTI provisions of the TCJA and has made an accounting policy election to treat the taxes due on inclusions of GILTI in U.S. taxable income as a current period expense when incurred. ProAssurance recognized a nominal amount of tax expense for the GILTI provision of the TCJA during year ended December 31, 2019.

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Under current accounting guidance, the effects of changes in tax rates and laws are recognized in the period in which the new legislation is enacted. However, due to the timing of the enactment of the TCJA and its proximity to December 31, 2017, the SEC issued SAB 118 which provided a framework for companies to account for uncertainties in applying the provisions of the TCJA. SAB 118 allowed companies to record a provisional amount in situations where a company did not have the necessary information available but could make a reasonable estimate. In situations where companies could not make a reasonable estimate due to various factors, including lack of information, a provisional amount was not recorded. Instead, companies continued to apply current accounting guidance based on the provision of the tax laws that were in effect immediately prior to the TCJA being enacted. The measurement period, as defined in SAB 118 for the TCJA, began on the enactment date of the TCJA and ended when a company obtained, prepared and analyzed the information that was needed in order to complete the accounting requirements under current accounting guidance. However, under no circumstances would the measurement period extend beyond one year from the enactment date of the TCJA.

Other than the areas discussed below, ProAssurance was able to complete its accounting for all areas of the TCJA during the period of enactment and recognized a charge of \$6.5 million, which was included as a component of income tax expense from continuing operations for the year ended December 31, 2017.

Provisional amount finalized during the third quarter of 2018

The TCJA placed limitations on the future deductibility of certain executive compensation. At December 31, 2017, the IRS had not yet issued guidance in this area, and thus ProAssurance made a reasonable estimate of the effects on its existing deferred tax balances related to executive compensation at that time and recorded a provisional charge of \$3.5 million to income tax expense from continuing operations for the year ended December 31, 2017.

During the third quarter of 2018, the IRS issued guidance addressing the effects of the TCJA on executive compensation; therefore, ProAssurance was able to complete its accounting for the impact of the TCJA on its December 31, 2017 deferred tax balances related to executive compensation. As a result, ProAssurance did not record any measurement-period adjustments to the previously recorded provisional amount.

Provisional amounts finalized during the fourth quarter of 2018

In computing taxable income, property and casualty insurance companies reduce their premiums earned by losses incurred. The tax deduction for losses incurred is discounted using interest rates and factors prescribed by the IRS. The TCJA modified the rules for discounting losses incurred by changing the definition of the applicable interest rate that is used and amending the time periods for the loss payment pattern. These new provisions are effective for tax years beginning after December 31, 2018 and are subject to a transition rule.

At December 31, 2017, the IRS had not yet released the information necessary for the Company to determine a reasonable estimate for the tax effects of the TCJA on its deferred tax balances related to loss reserve discounting; therefore, no provisional amount was recorded at that time. During the fourth quarter of 2018, ProAssurance was able to complete its analysis during the measurement period following the release of new discount factors by the IRS on December 19, 2018. ProAssurance used the new discount factors to determine the impact of the TCJA on its deferred tax balances related to loss reserve discounting. The adjustment, which is referred to as the transition rule adjustment, will be reflected as a component of taxable income evenly over eight years beginning in 2018. This transition rule adjustment is a taxable temporary difference and has no impact on total tax expense (benefit). The ultimate impact of the TCJA on the Company's deferred tax balances for loss reserve discounting could differ, perhaps materially, if the IRS publishes any future revisions to the loss discount factors used in its analysis.

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7. Deferred Policy Acquisition Costs

Policy acquisition costs that are incremental and directly related to the successful production of new and renewal insurance contracts, most significantly agent commissions, premium taxes, and underwriting salaries and benefits, are capitalized as policy acquisition costs and amortized to expense, net of ceding commissions earned, as the related premium revenues are earned. Amortization of DPAC was \$115.3 million, \$104.5 million and \$95.8 million for the years ended December 31, 2019, 2018 and 2017, respectively.

ProAssurance evaluates the recoverability of DPAC typically at the segment level each reporting period, or in a manner that is consistent with the way the Company manages its business. Any amounts estimated to be unrecoverable are charged to expense in the current period as a component of DPAC amortization in the Consolidated Statement of Income and Comprehensive Income.

As part of the evaluation of the recoverability of DPAC, ProAssurance also evaluates its unearned premiums for premium deficiencies. A premium deficiency is recognized if the sum of anticipated losses and loss adjustment expenses, unamortized DPAC and maintenance costs, net of anticipated investment income, exceeds the related unearned premium. If a premium deficiency is identified, the associated DPAC is charged to expense as a component of DPAC amortization in the Consolidated Statement of Income and Comprehensive Income, and a PDR is recorded for the excess deficiency as a component of net losses and loss adjustment expenses in the Consolidated Statement of Income and Comprehensive Income and as a component of the reserve for losses on the Consolidated Balance Sheet. For the year ended December 31, 2019, ProAssurance established a \$9.2 million PDR and a nominal amount of DPAC was charged to expense as it was determined to be unrecoverable.

8. Reserve for Losses and Loss Adjustment Expenses

The reserve for losses is established based on estimates of individual claims and actuarially determined estimates of future losses based on ProAssurance's past loss experience, available industry data and projections as to future claims frequency, severity, inflationary trends and settlement patterns. Estimating the reserve, particularly the reserve appropriate for liability exposures, is a complex process. For a high proportion of the risks insured or reinsured by ProAssurance, claims may be resolved over an extended period of time, often five years or more, and may be subject to litigation. Estimating losses requires ProAssurance to make and revise judgments and assessments regarding multiple uncertainties over an extended period of time. As a result, the reserve estimate may vary considerably from the eventual outcome. The assumptions used in establishing ProAssurance's reserve are regularly reviewed and updated by management as new data becomes available. Changes to estimates of previously established reserves are included in earnings in the period in which the estimate is changed.

ProAssurance believes that the methods it uses to establish reserves are reasonable and appropriate. Each year, ProAssurance uses internal actuaries to review the reserve for losses of each insurance subsidiary. ProAssurance also engages consulting actuaries to review ProAssurance claims data and provide observations regarding cost trends, rate adequacy and ultimate loss costs. ProAssurance considers the views of the actuaries as well as other factors, such as premium rates, claims frequency and severity, historical paid and incurred loss development trends, the expected effect of inflation, general economic and social trends and the legal and political environment in establishing the amount of its reserve for losses. The statutory filings of each insurance company with the insurance regulators must be accompanied by a consulting actuary's certification as to their respective reserves.

ProAssurance partitions its reserve by accident year, which is the year in which the claim becomes its liability. For claims-made policies, the insured event generally becomes a liability when the event is first reported to the Company. For occurrence policies, the insured event becomes a liability when the event takes place. For retroactive coverages, the insured event becomes a liability at inception of the underlying contract. As claims are incurred (reported) and claim payments are made, they are aggregated by accident year for analysis purposes. ProAssurance also partitions its reserve by reserve type: case reserves and IBNR reserves. Case reserves are established by the claims department based upon the particular circumstances of each reported claim and represent ProAssurance's estimate of the future loss costs (often referred to as expected losses) that will be paid on reported claims. Case reserves are decremented as claim payments are made and are periodically adjusted upward or downward as estimates regarding the amount of future losses are revised; a reported loss for an individual claim equates to the case reserve at any point in time plus the claim payments that have been made to date. IBNR reserves represent an estimate, in the aggregate, of future development on losses that have been reported to ProAssurance plus an estimate of losses that have been incurred but not reported.

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Development of Prior Accident Years

In addition to setting the initial reserve for the current accident year, each period ProAssurance reassesses the amount of reserve required for prior accident years. The foundation of ProAssurance's reserve re-estimation process is an actuarial analysis that is performed by both the internal and consulting actuaries. This detailed analysis projects ultimate losses based on partitions which include line of business, geography, coverage layer and accident year. The procedure uses the most representative data for each partition, capturing its unique patterns of development and trends. In all, there are over 200 different partitions of ProAssurance's business for purposes of this analysis. ProAssurance believes that the use of consulting actuaries provides an independent view of the loss data as well as a broader perspective on industry loss trends.

Reserving Methodologies

For the HCPL, medical technology and workers' compensation lines of business, the analysis performed by the consulting actuaries analyzes each partition of the business in a variety of ways and uses multiple actuarial methodologies in performing these analyses, including: Bornhuetter-Ferguson (Paid and Reported) Method, Paid Development Method, Reported (Incurred) Development Method, Average Paid Value Method, Average Reported Value Method, the Adjusted Reported and the Adjusted Paid Methods. Generally, methods such as the Bornhuetter-Ferguson Method are used on more recent accident years where there is less data available on which to base the analysis. As time progresses and an increased amount of data is available for a given accident year, management gives more confidence to the development and average methods, as these methods typically rely more heavily on ProAssurance's own historical data. These methods emphasize different aspects of loss reserve estimation and provide a variety of perspectives for ProAssurance's decisions.

For the workers' compensation line of business in both the Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance segments, ProAssurance utilizes the Reported (Incurred) Development Method, Paid Loss Development Method and Bornhuetter-Ferguson Method, to develop the reserve for each accident year. The actuarial review includes the stratification of claims data (lost time claims and medical only claims) using different variations that allow for identification of trends that may not be readily identifiable if the data was evaluated only in the aggregate. Reported and paid loss development factors are key assumptions in the reserve estimation process and are based on ProAssurance's historical reported and paid loss development patterns. As accident years mature, the various actuarial methodologies produce more consistent loss estimates.

For the Lloyd's Syndicates segment business, losses are initially estimated using the loss assumptions by risk category incorporated into the business plan submitted to Lloyd's with consideration given to loss experience incurred to date. These assumptions were influenced by loss results reflected in Lloyd's historical data for similar risks. As losses are reported and resolved and loss experience becomes more credible from a statistical perspective, actual loss experience is incorporated into the estimates.

Certain of the methodologies utilized to estimate the ultimate losses for each partition of the reserve consider the actual amounts paid. Paid data is particularly influential when a large portion of known claims have been closed, as is the case for older accident years. In selecting a point estimate for each partition, management considers the extent to which trends are emerging consistently for all partitions and known industry trends. Thus, actual, rather than estimated severity trends are given more consideration. If actual severity trends are lower than those estimated at the time that reserves were previously established, the recognition of favorable development is indicated. This is particularly true for older accident years where actuarial methodologies give more weight to actual loss costs (severity).

The various actuarial methods discussed above are applied in a consistent manner from period to period. In addition, ProAssurance performs statistical reviews of claims data such as claim counts, average settlement costs and severity trends when establishing the reserve.

Selected point estimates of ultimate losses are utilized to develop estimates of ultimate losses recoverable from reinsurers, based on the terms and conditions of ProAssurance's reinsurance agreements. An overall estimate of the amount receivable from reinsurers is determined by combining the individual estimates. ProAssurance's net reserve estimate is the gross reserve point estimate less the estimated reinsurance recovery.

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Activity in the reserve for losses and loss adjustment expenses is summarized as follows:

<i>(In thousands)</i>	2019	2018	2017
Balance, beginning of year	\$ 2,119,847	\$ 2,048,381	\$ 1,993,428
Less reinsurance recoverables on unpaid losses and loss adjustment expenses	343,820	335,585	273,475
Net balance, beginning of year	1,776,027	1,712,796	1,719,953
Net losses:			
Current year*	765,698	685,326	603,518
Favorable development of reserves established in prior years, net	(11,783)	(92,116)	(134,360)
Total	753,915	593,210	469,158
Paid related to:			
Current year	(115,133)	(117,268)	(106,633)
Prior years	(458,991)	(412,711)	(369,682)
Total paid	(574,124)	(529,979)	(476,315)
Net balance, end of year	1,955,818	1,776,027	1,712,796
Plus reinsurance recoverables on unpaid losses and loss adjustment expenses	390,708	343,820	335,585
Balance, end of year	\$ 2,346,526	\$ 2,119,847	\$ 2,048,381

* Current year net losses in 2019 included a PDR of \$9.2 million associated with the unearned premium of a large national healthcare account in the Company's Specialty P&C segment (see Note 7). Current year net losses in 2018 included incurred losses of \$25.4 million related to a loss portfolio transfer entered into during the second quarter of 2018 (see Note 4).

As discussed in Note 1, estimating liability reserves is complex and requires the use of many assumptions. As time passes and ultimate losses for prior years are either known or become subject to a more precise estimation, ProAssurance increases or decreases the reserve estimates established in prior periods. The net favorable loss development recognized in 2019 primarily reflected overall favorable trends in claim closing patterns in the Workers' Compensation Insurance and Segregated Portfolio Cell Reinsurance segments, largely offset by net unfavorable loss development recognized in the Specialty P&C segment. The net favorable loss development recognized in the Workers' Compensation Insurance segment primarily related to the 2015 and 2016 accident years and the net favorable loss development recognized in the Segregated Portfolio Cell Reinsurance segment primarily related to the 2015 through 2018 accident years. The net unfavorable loss development recognized in the Specialty P&C segment primarily related to accident years 2016 through 2018. The net favorable development recognized in 2018 and 2017 was primarily due to lower than anticipated claims severity trends for accident years 2011 through 2015 and accident years 2010 through 2014, respectively, in the Specialty P&C segment.

On January 1, 2016, ProAssurance adopted new guidance that requires detailed disclosures related to its reserve for losses and loss adjustment expenses, including significant changes in methodologies and assumptions used in the calculation of its reserve. ProAssurance establishes its reserve and manages claims activity by coverage, product or line of business and various categories of reserves have similar characteristics. Therefore, ProAssurance has aggregated these reserve categories into several reserve groups that provide a more meaningful view of the amount, timing and uncertainty of cash flows arising from the liability. At the same time, these reserve groups present a disaggregated view of the major elements of the overall loss reserve liability. The reserve groups include HCPL claims-made reserve, HCPL occurrence reserve, medical technology liability claims-made reserve, workers' compensation insurance reserve, segregated portfolio cell reinsurance - workers' compensation reserve, Syndicate 1729 casualty reserve, Syndicate 1729 property insurance reserve and Syndicate 1729 property reinsurance reserve. All other loss reserve categories are deemed to be less homogeneous or relatively small on a standalone basis and are included in other short-duration lines in the claims development reconciliation.

The composition of the reserve groups is based on similar characteristics with respect to the risks being insured and the reporting and payout pattern of the underlying claims. In most instances the groups follow the coverage categorizations used in statutory financial reporting for U.S.-domiciled property-casualty insurance companies.

HCPL claims are disaggregated into those claims covered by claims-made policies and those claims covered by occurrence policies. For claims-made policies, the insured event generally becomes a liability when the event is first reported to the insurer. For occurrence policies, the insured event becomes a liability when the event takes place, even if unknown at that

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time. Claims-made coverage has a short reporting pattern, with virtually all claims known shortly after the end of the policy period. Occurrence coverage claims can have an extended reporting pattern, with the time from the loss event until the filing of the claim often measured in years, at which point the claims resolution process begins. Although the resolution process and time frame is similar once a claim is reported, combining claims from claims-made and occurrence coverage types would result in distortion due to the difference in reporting lag. Medical technology liability reserves are grouped separately due to the nature of the risk, including the potential for mass torts and multiple claims arising out of the same product or service. The small amount of medical technology liability occurrence reserves are included in other short-duration lines.

Workers' compensation reserves in the Workers' Compensation Insurance and the Segregated Portfolio Cell Reinsurance segment are each grouped separately due to the difference in the type of coverage provided and the differences in the claims resolution process as compared to other liability insurance. The small amount of HCPL reserves in the Segregated Portfolio Cell Reinsurance segment are included in other short-duration lines.

Finally, claims arising from the Company's involvement in Syndicate 1729 are segregated into casualty (insurance and reinsurance), property insurance and property reinsurance groups. Property insurance claims generally have a shorter reporting and resolution time frame as compared to most casualty claims. The reporting and resolution patterns of property reinsurance claims differs from that of property insurance claims due to predominant coverage of catastrophic loss events on an aggregate basis rather than coverage of individual claims. Casualty reinsurance, on the other hand, generally provides coverage on a per-claim basis and the reporting and resolution time frame for these claims is not substantially different than those arising from casualty insurance written by Syndicate 1729. The small amount of reserves associated with Syndicate 6131 related to contingency and special property business are included in other short-duration lines.

ProAssurance has elected to present reserve history for acquired entities in all periods shown in the tables below, including periods prior to acquisition. With the exception of the workers' compensation insurance and segregated portfolio cell reinsurance - workers' compensation lines of business, virtually all other acquired entities are captured within the HCPL line of business.

All information prior to 2019 disclosed in the Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance, Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance and Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance tables that follow is presented as supplementary information. The "Cumulative Number of Reported Claims" in the tables that follow includes the combined number of claims for an accident year and excludes projected unreported IBNR claims. A claim is considered reported when ProAssurance becomes aware of and accepts it for coverage under the terms of the Company's insurance contracts.

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Healthcare Professional Liability Reserve

HCPL loss costs are impacted by many factors, including but not limited to the nature of the claim, including whether or not the claim is an individual or a mass tort claim, the personal situation of the claimant or the claimant's family, the outcome of jury trials, the legislative and judicial climate where any potential litigation may occur, general economic conditions and, for claims involving bodily injury, the trend of healthcare costs. ProAssurance sets an initial reserve based upon the evaluation of the current loss environment including frequency, severity, economic inflation, social inflation and legal trends. The initial loss ratio for HCPL business has ranged from 87% to 106% in recent years and has recently trended towards the higher end of this range due to increased reserve estimates for a large national healthcare account as well as increases in loss severity in the broader HCPL industry, including our excess and surplus lines of business.

Healthcare Professional Liability Claims-Made

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											December 31, 2019		
<i>(\$ in thousands)</i>													
Year Ended December 31,													
Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Unaudited	IBNR*	Cumulative Number of Reported Claims
2010	\$ 364,996	\$ 354,787	\$ 338,170	\$ 312,813	\$ 291,553	\$ 279,713	\$ 270,484	\$ 258,466	\$ 257,714	\$ 254,974		\$ (1,161)	3,845
2011	—	\$ 348,916	\$ 344,808	\$ 331,884	\$ 305,540	\$ 289,400	\$ 278,258	\$ 264,777	\$ 254,329	253,163		\$ (1,377)	3,530
2012	—	—	\$ 341,289	\$ 324,418	\$ 319,613	\$ 306,956	\$ 291,075	\$ 279,589	\$ 271,110	266,629		\$ (1,040)	3,699
2013	—	—	—	\$ 315,346	\$ 304,209	\$ 296,550	\$ 287,140	\$ 272,364	\$ 258,251	248,594		\$ (4,737)	3,767
2014	—	—	—	—	\$ 290,020	\$ 289,397	\$ 280,043	\$ 267,442	\$ 256,968	244,607		\$ (4,466)	3,315
2015	—	—	—	—	—	\$ 276,492	\$ 269,980	\$ 271,138	\$ 270,814	256,785		\$ (13,965)	3,267
2016	—	—	—	—	—	—	\$ 271,765	\$ 274,643	\$ 287,551	293,515		\$ (6,524)	3,534
2017	—	—	—	—	—	—	—	\$ 283,746	\$ 295,883	331,304		\$ (3,097)	3,869
2018	—	—	—	—	—	—	—	—	\$ 320,772	377,908		\$ 33,282	3,980
2019	—	—	—	—	—	—	—	—	—	377,242		\$ 225,384	3,134
Total	\$ 2,904,721												

* Includes expected development on reported claims

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											
<i>(In thousands)</i>											
Year Ended December 31,											
Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Unaudited
2010	\$ 15,464	\$ 69,551	\$ 137,712	\$ 180,432	\$ 209,777	\$ 221,693	\$ 236,171	\$ 240,945	\$ 243,675	\$ 246,974	
2011	—	\$ 14,417	\$ 71,208	\$ 133,004	\$ 177,089	\$ 198,112	\$ 214,502	\$ 224,982	\$ 233,103	237,605	
2012	—	—	\$ 15,382	\$ 73,571	\$ 145,488	\$ 190,997	\$ 215,220	\$ 231,652	\$ 244,512	250,806	
2013	—	—	—	\$ 16,938	\$ 69,657	\$ 127,496	\$ 171,681	\$ 197,265	\$ 213,879	220,402	
2014	—	—	—	—	\$ 16,764	\$ 59,485	\$ 116,791	\$ 154,236	\$ 186,239	200,392	
2015	—	—	—	—	—	\$ 9,172	\$ 55,731	\$ 111,741	\$ 161,896	195,047	
2016	—	—	—	—	—	—	\$ 9,027	\$ 51,869	\$ 109,756	164,811	
2017	—	—	—	—	—	—	—	\$ 16,309	\$ 63,171	134,787	
2018	—	—	—	—	—	—	—	—	\$ 14,051	79,291	
2019	—	—	—	—	—	—	—	—	—	17,838	
Total	1,747,953										
All outstanding liabilities before 2010, net of reinsurance	9,771										
Liabilities for losses and loss adjustment expenses, net of reinsurance	\$ 1,166,539										

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Healthcare Professional Liability Occurrence

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											December 31, 2019	
Year Ended December 31,											IBNR*	Cumulative Number of Reported Claims
Unaudited												
Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
2010	\$ 41,721	\$ 43,238	\$ 43,195	\$ 42,233	\$ 37,920	\$ 35,831	\$ 33,361	\$ 29,338	\$ 26,501	\$ 24,898	\$ 277	291
2011	—	\$ 45,882	\$ 44,956	\$ 41,453	\$ 39,917	\$ 37,150	\$ 35,004	\$ 32,343	\$ 29,784	27,533	\$ 21	342
2012	—	—	\$ 45,703	\$ 46,513	\$ 44,848	\$ 40,692	\$ 34,774	\$ 32,691	\$ 29,857	25,705	\$ (778)	398
2013	—	—	—	\$ 32,746	\$ 36,602	\$ 35,624	\$ 34,393	\$ 30,906	\$ 26,919	24,857	\$ (658)	358
2014	—	—	—	—	\$ 30,420	\$ 29,918	\$ 32,143	\$ 29,869	\$ 25,885	22,243	\$ (352)	346
2015	—	—	—	—	—	\$ 35,648	\$ 35,347	\$ 37,346	\$ 40,960	36,468	\$ (170)	359
2016	—	—	—	—	—	—	\$ 29,609	\$ 28,790	\$ 27,240	25,019	\$ (349)	357
2017	—	—	—	—	—	—	—	\$ 24,571	\$ 23,760	21,148	\$ 10,738	360
2018	—	—	—	—	—	—	—	—	\$ 38,420	41,555	\$ 25,403	294
2019	—	—	—	—	—	—	—	—	—	35,420	\$ 31,148	179
Total										\$ 284,846		

* Includes expected development on reported claims

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										
Year Ended December 31,										
Unaudited										
Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
2010	\$ 285	\$ 1,881	\$ 5,647	\$ 9,120	\$ 15,147	\$ 21,837	\$ 22,804	\$ 23,313	\$ 23,832	\$ 23,981
2011	—	\$ 291	\$ 2,803	\$ 8,059	\$ 16,544	\$ 19,197	\$ 21,416	\$ 23,194	\$ 24,539	24,933
2012	—	—	\$ 363	\$ 2,430	\$ 7,705	\$ 12,212	\$ 19,275	\$ 21,435	\$ 23,095	23,600
2013	—	—	—	\$ 369	\$ 3,170	\$ 7,826	\$ 14,753	\$ 16,787	\$ 18,949	21,241
2014	—	—	—	—	\$ 394	\$ 2,260	\$ 7,460	\$ 10,519	\$ 14,604	17,024
2015	—	—	—	—	—	\$ (350)	\$ 786	\$ 4,854	\$ 11,626	15,462
2016	—	—	—	—	—	—	\$ (182)	\$ (195)	\$ 2,883	10,576
2017	—	—	—	—	—	—	—	\$ (6,809)	\$ (5,858)	(2,765)
2018	—	—	—	—	—	—	—	—	\$ 65	2,098
2019	—	—	—	—	—	—	—	—	—	439
Total										136,589
All outstanding liabilities before 2010, net of reinsurance										6,998
Liabilities for losses and loss adjustment expenses, net of reinsurance										\$ 155,255

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance

Years	1	2	3	4	5	6	7	8	9	10
	Unaudited									
Healthcare Professional Liability Claims-Made	5.1%	18.7%	23.5%	17.5%	10.9%	6.0%	4.3%	2.5%	1.4%	1.3%
Healthcare Professional Liability Occurrence	(2.6%)	6.2%	16.9%	21.9%	16.4%	12.6%	6.5%	3.0%	1.8%	0.6%

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Medical Technology Liability Reserve

The risks insured in the medical technology liability line of business are more varied, and policies are individually priced based on the risk characteristics of the policy and the account. These policies often have substantial deductibles or self-insured retentions, and the insured risks range from startup operations to large multinational entities. Premiums are established using the most recently developed actuarial estimates of losses expected to be incurred based on factors which include: results from prior analysis of similar business, industry indications, observed trends and judgment. Claims in this line of business primarily involve bodily injury to individuals and are affected by factors similar to those of the HCPL line of business. For the medical technology liability line of business, ProAssurance also establishes an initial reserve using a loss ratio approach, including a provision in consideration of historical loss volatility that this line of business has exhibited.

Medical Technology Liability Claims-Made

(\$ in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										December 31, 2019	
	Year Ended December 31,										IBNR*	Cumulative Number of Reported Claims
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Accident Year	Unaudited											
2010	\$ 26,077	\$ 27,063	\$ 25,175	\$ 23,307	\$ 19,315	\$ 17,439	\$ 16,047	\$ 16,878	\$ 18,611	\$ 17,865	\$ 93	497
2011	—	\$ 17,249	\$ 20,930	\$ 19,166	\$ 15,836	\$ 13,794	\$ 12,487	\$ 12,358	\$ 8,202	7,944	\$ 262	522
2012	—	—	\$ 11,162	\$ 9,989	\$ 8,906	\$ 7,441	\$ 5,824	\$ 4,797	\$ 5,051	3,889	\$ 65	221
2013	—	—	—	\$ 9,807	\$ 9,955	\$ 9,536	\$ 7,226	\$ 4,697	\$ 3,566	3,504	\$ 318	218
2014	—	—	—	—	\$ 9,989	\$ 10,306	\$ 9,012	\$ 8,984	\$ 7,679	6,194	\$ 1,058	272
2015	—	—	—	—	—	\$ 9,376	\$ 8,757	\$ 7,193	\$ 5,929	5,081	\$ 1,585	155
2016	—	—	—	—	—	—	\$ 9,200	\$ 8,467	\$ 7,413	6,422	\$ 1,829	182
2017	—	—	—	—	—	—	—	\$ 11,049	\$ 10,143	8,306	\$ 5,782	95
2018	—	—	—	—	—	—	—	—	\$ 10,141	8,108	\$ 7,280	217
2019	—	—	—	—	—	—	—	—	—	10,072	\$ 8,923	310
Total										\$ 77,385		

* Includes expected development on reported claims

(In thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance									
	Year Ended December 31,									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Accident Year	Unaudited									
2010	\$ 485	\$ 3,557	\$ 8,491	\$ 12,283	\$ 11,725	\$ 12,146	\$ 12,253	\$ 15,366	\$ 17,660	\$ 17,661
2011	—	\$ 118	\$ 2,034	\$ 3,846	\$ 5,062	\$ 7,376	\$ 7,240	\$ 7,799	\$ 7,664	7,665
2012	—	—	\$ 568	\$ 1,520	\$ 2,805	\$ 3,247	\$ 3,366	\$ 3,676	\$ 3,800	3,817
2013	—	—	—	\$ 102	\$ 1,029	\$ 1,967	\$ 2,599	\$ 3,092	\$ 3,102	3,102
2014	—	—	—	—	\$ 388	\$ 1,527	\$ 2,564	\$ 3,046	\$ 3,724	3,776
2015	—	—	—	—	—	\$ 25	\$ 440	\$ 1,625	\$ 2,097	2,567
2016	—	—	—	—	—	—	\$ 53	\$ 1,690	\$ 2,365	2,959
2017	—	—	—	—	—	—	—	\$ 56	\$ 1,681	2,017
2018	—	—	—	—	—	—	—	—	\$ 6	191
2019	—	—	—	—	—	—	—	—	—	584
Total										44,339
All outstanding liabilities before 2010, net of reinsurance										789
Liabilities for losses and loss adjustment expenses, net of reinsurance										\$ 33,835

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	1	2	3	4	5	6	7	8	9	10
	Unaudited									
Medical Technology Liability	3.6%	18.5%	20.6%	13.2%	10.6%	2.0%	2.7%	5.4%	6.4%	—%

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Workers' Compensation Insurance Reserve

Many factors affect the ultimate losses incurred for the workers' compensation coverages in the Workers' Compensation Insurance segment including, but not limited to, the type and severity of the injury, the age and occupation of the injured worker, the estimated length of disability, medical treatment and related costs, and the jurisdiction and workers' compensation laws of the injury occurrence. ProAssurance uses various actuarial methodologies in developing the workers' compensation reserve combined with a review of the exposure base generally based upon payroll of the insured. For the current accident year, given the lack of seasoned information, the different actuarial methodologies produce results with considerable variability; therefore, more emphasis is placed on supplementing results from the actuarial methodologies with trends in exposure base, medical expense inflation, general inflation, severity, and claim counts, among other things, to select an expected loss ratio.

Workers' Compensation Insurance

(\$ in thousands)	Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										December 31, 2019		
	Year Ended December 31,										IBNR*	Cumulative Number of Reported Claims	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019			
Accident Year	Unaudited												
2010	\$ 55,852	\$ 55,852	\$ 55,852	\$ 54,837	\$ 54,779	\$ 55,200	\$ 54,600	\$ 54,600	\$ 54,600	\$ 54,600	\$ 54,400	\$ (98)	12,913
2011	—	\$ 65,665	\$ 65,783	\$ 71,521	\$ 72,280	\$ 72,420	\$ 72,495	\$ 72,495	\$ 72,495	\$ 72,495	\$ 72,445	\$ 1,658	15,244
2012	—	—	\$ 80,285	\$ 76,551	\$ 75,848	\$ 76,357	\$ 75,836	\$ 75,576	\$ 75,076	\$ 75,076	\$ 75,076	\$ 790	16,204
2013	—	—	—	\$ 86,973	\$ 85,935	\$ 86,928	\$ 88,010	\$ 87,260	\$ 87,260	\$ 87,260	\$ 89,760	\$ 1,420	16,429
2014	—	—	—	—	\$ 93,019	\$ 93,529	\$ 93,029	\$ 93,029	\$ 93,029	\$ 93,029	\$ 93,029	\$ 3,395	16,210
2015	—	—	—	—	—	\$ 100,101	\$ 100,454	\$ 98,454	\$ 97,654	\$ 97,654	\$ 96,354	\$ 5,871	16,549
2016	—	—	—	—	—	—	\$ 101,348	\$ 97,348	\$ 92,148	\$ 92,148	\$ 84,799	\$ 4,311	15,977
2017	—	—	—	—	—	—	—	\$ 99,874	\$ 99,874	\$ 99,874	\$ 99,874	\$ 6,274	16,077
2018	—	—	—	—	—	—	—	—	\$ 118,095	\$ 118,095	\$ 118,095	\$ 8,393	17,991
2019	—	—	—	—	—	—	—	—	—	—	\$ 119,752	\$ 39,118	17,082
Total	\$ 903,584												

* Includes expected development on reported claims

(In thousands)	Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance										
	Year Ended December 31,										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
Accident Year	Unaudited										
2010	\$ 20,086	\$ 39,098	\$ 46,762	\$ 51,117	\$ 52,530	\$ 53,443	\$ 53,734	\$ 53,974	\$ 54,014	\$ 54,207	
2011	—	\$ 21,993	\$ 50,900	\$ 62,307	\$ 67,945	\$ 70,146	\$ 70,934	\$ 71,662	\$ 71,856	\$ 71,927	
2012	—	—	\$ 27,448	\$ 56,122	\$ 65,908	\$ 70,558	\$ 72,766	\$ 73,662	\$ 73,676	\$ 73,768	
2013	—	—	—	\$ 30,554	\$ 63,825	\$ 76,813	\$ 82,369	\$ 85,689	\$ 86,783	\$ 87,466	
2014	—	—	—	—	\$ 30,368	\$ 65,922	\$ 77,631	\$ 85,022	\$ 87,314	\$ 87,998	
2015	—	—	—	—	—	\$ 32,078	\$ 65,070	\$ 78,947	\$ 83,483	\$ 86,528	
2016	—	—	—	—	—	—	\$ 28,377	\$ 58,192	\$ 69,237	\$ 74,886	
2017	—	—	—	—	—	—	—	\$ 31,586	\$ 70,333	\$ 82,289	
2018	—	—	—	—	—	—	—	—	\$ 41,619	\$ 86,063	
2019	—	—	—	—	—	—	—	—	—	\$ 40,994	
Total	746,126										
All outstanding liabilities before 2010, net of reinsurance											3,347
Liabilities for losses and loss adjustment expenses, net of reinsurance											\$ 160,805

Years	Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance									
	1	2	3	4	5	6	7	8	9	10
	Unaudited									
Workers' Compensation Insurance	33.8%	37.1%	13.7%	6.8%	3.0%	1.2%	0.6%	0.3%	0.1%	0.4%

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Segregated Portfolio Cell Reinsurance - Workers' Compensation Reserve

The Company estimates and reserves for the workers' compensation business assumed by the Segregated Portfolio Cell Reinsurance segment in the same manner as for its workers' compensation business in the Workers' Compensation Insurance segment, as previously discussed.

Segregated Portfolio Cell Reinsurance - Workers' Compensation

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance											December 31, 2019	
Year Ended December 31,											IBNR*	Cumulative Number of Reported Claims
(\$ in thousands)												
Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Unaudited												
2010	\$ 19,767	\$ 18,265	\$ 17,715	\$ 17,825	\$ 17,736	\$ 17,541	\$ 17,320	\$ 17,278	\$ 17,224	\$ 17,119	\$ 170	2,914
2011	—	\$ 18,790	\$ 19,360	\$ 19,629	\$ 19,282	\$ 18,644	\$ 18,725	\$ 18,666	\$ 18,606	18,522	\$ 339	3,154
2012	—	—	\$ 22,940	\$ 21,513	\$ 21,048	\$ 20,028	\$ 19,972	\$ 19,864	\$ 19,799	19,727	\$ 388	3,454
2013	—	—	—	\$ 23,809	\$ 25,310	\$ 26,758	\$ 26,619	\$ 26,260	\$ 26,033	25,938	\$ 498	3,723
2014	—	—	—	—	\$ 28,248	\$ 28,423	\$ 29,000	\$ 28,373	\$ 28,281	27,919	\$ 664	4,433
2015	—	—	—	—	—	\$ 36,423	\$ 32,519	\$ 28,746	\$ 27,548	26,720	\$ 819	4,949
2016	—	—	—	—	—	—	\$ 37,601	\$ 34,055	\$ 30,998	29,424	\$ 1,092	5,327
2017	—	—	—	—	—	—	—	\$ 42,725	\$ 38,594	34,246	\$ 2,141	5,703
2018	—	—	—	—	—	—	—	—	\$ 43,654	41,283	\$ 6,623	6,337
2019	—	—	—	—	—	—	—	—	—	48,505	\$ 20,653	5,965
Total										\$ 289,403		

* Includes expected development on reported claims

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance												
Year Ended December 31,												
(\$ in thousands)												
Accident Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019		
Unaudited												
2010	\$ 6,503	\$ 12,904	\$ 15,087	\$ 16,214	\$ 16,757	\$ 16,842	\$ 16,810	\$ 16,850	\$ 16,904	\$ 16,904	\$ 16,904	16,904
2011	—	\$ 5,940	\$ 14,045	\$ 17,197	\$ 17,869	\$ 18,054	\$ 18,177	\$ 18,176	\$ 18,185	18,185	18,185	18,185
2012	—	—	\$ 7,808	\$ 14,740	\$ 17,728	\$ 18,474	\$ 19,208	\$ 19,402	\$ 19,328	19,311	19,311	19,311
2013	—	—	—	\$ 8,131	\$ 19,054	\$ 24,268	\$ 25,209	\$ 25,366	\$ 25,489	25,440	25,440	25,440
2014	—	—	—	—	\$ 9,933	\$ 21,880	\$ 26,173	\$ 26,810	\$ 26,959	27,083	27,083	27,083
2015	—	—	—	—	—	\$ 11,257	\$ 21,706	\$ 23,977	\$ 24,781	25,033	25,033	25,033
2016	—	—	—	—	—	—	\$ 10,980	\$ 23,003	\$ 26,285	27,162	27,162	27,162
2017	—	—	—	—	—	—	—	\$ 12,404	\$ 24,791	28,853	28,853	28,853
2018	—	—	—	—	—	—	—	—	\$ 12,517	27,501	27,501	27,501
2019	—	—	—	—	—	—	—	—	—	15,100	15,100	15,100
Total										230,572		
All outstanding liabilities before 2010, net of reinsurance										95		
Liabilities for losses and loss adjustment expenses, net of reinsurance										\$ 58,926		

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance											
Years	1	2	3	4	5	6	7	8	9	10	
Unaudited											
Segregated Portfolio Cell Reinsurance - Workers' Compensation	35.4%	39.3%	14.0%	3.7%	1.7%	0.6%	(0.2%)	0.1%	0.2%	—%	

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Syndicate 1729 Reserve

ProAssurance estimates initial losses using the loss assumptions by risk category incorporated into the business plan submitted to Lloyd's with consideration given to loss experience incurred to date. These assumptions are influenced by loss results in Lloyd's historical data for similar risks. In addition, Lloyd's market data for payment patterns is utilized to develop the payout patterns in the tables shown below. As the book of business matures and additional loss information becomes available, the actual loss experience of Syndicate 1729's book of business will be utilized to a greater extent. This will occur sooner for property coverages than for casualty coverages due to the shorter claim reporting and resolution time described above.

Claim count information for assumed reinsurance coverage written by Syndicate 1729 is not meaningful in many instances. Certain reinsurance contracts provide aggregate coverage for loss events involving numerous underlying claims, resulting in a single claim count for reinsurance purposes, while other reinsurance contracts provide individual per-claim coverage. Still others may provide aggregate stop loss coverage based on the total losses or loss ratio of a class of business. As a result, claim count information is not included in the Syndicate 1729 Casualty and Syndicate 1729 Property Reinsurance tables shown below.

Syndicate 1729 writes coverage in a variety of jurisdictions and currencies, although the majority of its business is in U.S. dollars. For purposes of the tables below, ProAssurance has elected to convert losses from their original currency to U.S. dollars using the exchange rate as of the end of the current period. This provides the purest trend information with respect to loss development, since the amounts in the table are not affected by exchange rate movements. However, the amounts for prior periods shown in the tables will not reconcile to previously-issued financial statements which used existing exchange rates at the date of the financial statement.

Syndicate 1729 Casualty

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance								December 31, 2019	
Year Ended December 31,								IBNR ⁽¹⁾	Cumulative Number of Reported Claims ⁽²⁾
Unaudited									
Accident Year	2014	2015	2016	2017	2018	2019			
2014	\$ 6,110	\$ 5,812	\$ 5,610	\$ 5,547	\$ 5,472	\$ 5,432	\$ 733	nm	
2015	—	\$ 14,810	\$ 14,510	\$ 14,398	\$ 14,232	\$ 14,181	\$ 1,432	nm	
2016	—	—	\$ 19,535	\$ 19,669	\$ 19,552	\$ 19,344	\$ 3,961	nm	
2017	—	—	—	\$ 22,069	\$ 21,824	\$ 21,207	\$ 5,242	nm	
2018	—	—	—	—	\$ 18,688	\$ 18,120	\$ 10,908	nm	
2019	—	—	—	—	—	\$ 15,990	\$ 14,053	nm	
Total						\$ 94,274			

⁽¹⁾ Includes expected development on reported claims

⁽²⁾ The abbreviation "nm" indicates that the information is not meaningful

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance								
Year Ended December 31,								
Unaudited								
Accident Year	2014	2015	2016	2017	2018	2019		
2014	\$ 20	\$ 474	\$ 4,092	\$ 4,214	\$ 4,320	\$ 4,580		
2015	—	\$ 724	\$ 6,307	\$ 10,313	\$ 10,947	\$ 11,654		
2016	—	—	\$ 2,495	\$ 8,441	\$ 12,869	\$ 13,596		
2017	—	—	—	\$ 2,611	\$ 8,301	\$ 12,871		
2018	—	—	—	—	\$ 1,852	\$ 4,905		
2019	—	—	—	—	—	\$ 1,124		
Total						48,730		
All outstanding liabilities before 2014, net of reinsurance						—		
Liabilities for losses and loss adjustment expenses, net of reinsurance						\$ 45,544		

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Syndicate 1729 Property Insurance

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance							December 31, 2019	
<i>(\$ in thousands)</i>								
Year Ended December 31,								
	2014	2015	2016	2017	2018	2019		
Accident Year	Unaudited						IBNR*	Cumulative Number of Reported Claims
2014	\$ 890	\$ 1,089	\$ 888	\$ 864	\$ 866	\$ 831	\$ (43)	68
2015	—	\$ 5,519	\$ 5,917	\$ 6,194	\$ 6,159	\$ 5,886	\$ 753	537
2016	—	—	\$ 11,896	\$ 12,984	\$ 12,823	\$ 12,475	\$ (27)	1,454
2017	—	—	—	\$ 15,018	\$ 17,634	\$ 19,976	\$ 634	2,640
2018	—	—	—	—	\$ 20,636	\$ 21,888	\$ 1,506	3,344
2019	—	—	—	—	—	\$ 18,010	\$ 5,887	3,053
Total						\$ 79,066		

* Includes expected development on reported claims

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance						
<i>(In thousands)</i>						
Year Ended December 31,						
	2014	2015	2016	2017	2018	2019
Accident Year	Unaudited					
2014	\$ 267	\$ 1,005	\$ 836	\$ 854	\$ 857	\$ 860
2015	—	\$ 3,165	\$ 4,022	\$ 4,808	\$ 4,869	\$ 5,018
2016	—	—	\$ 7,751	\$ 10,939	\$ 12,343	\$ 12,400
2017	—	—	—	\$ 8,221	\$ 16,439	\$ 19,404
2018	—	—	—	—	\$ 9,918	\$ 17,248
2019	—	—	—	—	—	\$ 5,575
Total						\$ 60,505
All outstanding liabilities before 2014, net of reinsurance						—
Liabilities for losses and loss adjustment expenses, net of reinsurance						\$ 18,561

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Syndicate 1729 Property Reinsurance

Incurred Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance								December 31, 2019	
Year Ended December 31,								IBNR ⁽¹⁾	Cumulative Number of Reported Claims ⁽²⁾
Unaudited									
Accident Year	2014	2015	2016	2017	2018	2019			
2014	\$ 831	\$ 929	\$ 989	\$ 989	\$ 1,125	\$ 1,120	\$ —	nm	
2015	—	\$ 2,788	\$ 2,825	\$ 2,275	\$ 2,328	\$ 2,377	\$ —	nm	
2016	—	—	\$ 4,497	\$ 4,050	\$ 3,368	\$ 2,832	\$ 438	nm	
2017	—	—	—	\$ 6,861	\$ 7,832	\$ 6,868	\$ (1,935)	nm	
2018	—	—	—	—	\$ 8,840	\$ 6,398	\$ 5,215	nm	
2019	—	—	—	—	—	\$ 10,977	\$ 3,994	nm	
Total						\$ 30,572			

⁽¹⁾ Includes expected development on reported claims

⁽²⁾ The abbreviation "nm" indicates that the information is not meaningful

Cumulative Paid Claims and Allocated Claim Adjustment Expenses, Net of Reinsurance							
Year Ended December 31,							
Unaudited							
Accident Year	2014	2015	2016	2017	2018	2019	
2014	\$ 79	\$ 917	\$ 984	\$ 984	\$ 1,125	\$ 1,120	
2015	—	\$ 1,313	\$ 1,804	\$ 1,996	\$ 2,234	\$ 2,267	
2016	—	—	\$ 613	\$ 1,667	\$ 2,136	\$ 2,192	
2017	—	—	—	\$ 4,147	\$ 7,300	\$ 8,947	
2018	—	—	—	—	\$ 547	\$ 1,644	
2019	—	—	—	—	—	\$ 4,974	
Total						\$ 21,144	
All outstanding liabilities before 2014, net of reinsurance							—
Liabilities for losses and loss adjustment expenses, net of reinsurance						\$ 9,428	

Average Annual Percentage Payout of Incurred Claims by Age, Net of Reinsurance											
Years	1	2	3	4	5	6	7	8	9	10	
	Unaudited										
Syndicate 1729 Casualty	18.7%	40.3%	22.6%	12.8%	3.2%	1.1%	1.0%	0.4%	—%	—%	
Syndicate 1729 Property Insurance	81.4%	15.9%	2.1%	0.2%	0.2%	0.1%	0.1%	0.1%	—%	—%	
Syndicate 1729 Property Reinsurance	82.0%	13.3%	2.8%	1.1%	0.4%	0.2%	0.1%	—%	—%	—%	

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Below is a reconciliation of the claims development information to the Consolidated Balance Sheet:

<i>(In thousands)</i>	<u>December 31, 2019</u>
Net outstanding liabilities	
Healthcare professional liability claims-made	\$ 1,166,539
Healthcare professional liability occurrence	155,255
Medical technology liability claims-made	33,835
Workers' compensation insurance	160,805
Segregated portfolio cell reinsurance - workers' compensation	58,926
Syndicate 1729 casualty	45,544
Syndicate 1729 property insurance	18,561
Syndicate 1729 property reinsurance	9,428
Other short-duration lines	102,997
Liabilities for losses and loss adjustment expenses, net of reinsurance	<u>1,751,890</u>
Reinsurance recoverable on unpaid losses	
Healthcare professional liability claims-made	184,645
Healthcare professional liability occurrence	45,827
Medical technology liability claims-made	31,771
Workers' compensation insurance	62,314
Segregated portfolio cell reinsurance - workers' compensation	35,200
Syndicate 1729 casualty	1,724
Syndicate 1729 property insurance	10,754
Syndicate 1729 property reinsurance	12,826
Other short-duration lines	5,647
Total reinsurance recoverable on unpaid losses and loss adjustment expenses	<u>390,708</u>
Reserve for the future utilization of the DDR benefit	74,200
Unallocated loss adjustment expenses	103,600
Loss portfolio transfers ⁽¹⁾	16,983
Premium deficiency reserve ⁽²⁾	9,200
Other	(55)
	<u>203,928</u>
Gross liability for losses and loss adjustment expenses	<u>\$ 2,346,526</u>

⁽¹⁾ Represents the reserve for retroactive coverages, net of any applicable deferred gains, related to loss portfolio transfers during entered into during 2019 and 2018 (see Note 4).

⁽²⁾ Represents the estimated premium deficiency associated with the unearned premium of a large national healthcare account in the Company's Specialty P&C segment (see Note 7).

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9. Commitments and Contingencies

ProAssurance is involved in various legal actions related to insurance policies and claims handling including, but not limited to, claims asserted by policyholders. These types of legal actions arise in the Company's ordinary course of business and, in accordance with GAAP for insurance entities, are considered as a part of the Company's loss reserving process, which is described in detail under the heading "Losses and Loss Adjustment Expenses" in the Accounting Policies section of Note 1.

As a member of Lloyd's, ProAssurance has obligations to Syndicate 1729 and Syndicate 6131 including a Syndicate Credit Agreement and FAL requirements. The Syndicate Credit Agreement is an unconditional revolving credit agreement to the Premium Trust Fund of Syndicate 1729 for the purpose of providing working capital with maximum permitted borrowings of £30.0 million (approximately \$39.8 million at December 31, 2019). In January 2019, the Syndicate Credit Agreement was amended to extend the current maturity from December 31, 2019 to December 31, 2020 and to implement an annual auto-renewal feature which allows for ProAssurance to elect to non-renew if notice is given at least 30 days prior to the next auto-renewal date, which is one year prior to the maturity date. Under the amended Syndicate Credit Agreement, advances bear interest at 3.8% annually, and may be repaid at any time but are repayable upon demand after December 31, 2020, subject to extension through the auto-renewal feature. As of December 31, 2019, there were no outstanding borrowings under the Syndicate Credit Agreement. ProAssurance also provides FAL to support underwriting by Syndicate 1729 and Syndicate 6131 which is comprised of investment securities and cash and cash equivalents deposited with Lloyd's with a total fair value of approximately \$137.1 million at December 31, 2019. See further discussion on the Syndicate Credit Agreement and FAL in Note 3.

ProAssurance has entered into financial instrument transactions that may present off-balance sheet credit risk or market risk. These transactions include a short-term loan commitment and commitments to provide funding to non-public investment entities. Under the short-term loan commitment, ProAssurance has agreed to advance funds on a 30 day basis to a counterparty provided there is no violation of any condition established in the contract. As of December 31, 2019, ProAssurance had total funding commitments related to non-public investment entities as well as the short-term loan commitment of approximately \$240.3 million which included the amount at risk if the full short-term loan is extended and the counterparties default. However, the credit risk associated with the short-term loan commitment is minimal as the counterparties to the contract are highly rated commercial institutions and to-date have been performing in accordance with their contractual obligations. Of these total funding commitments, \$0.8 million is related to qualified affordable housing project tax credit investments and is expected to be paid as follows: \$0.2 million in 2020, \$0.4 million in 2021 and 2022 combined, \$0.1 million in 2023 and 2024 combined and \$0.1 million thereafter.

In October 2018, ProAssurance entered into an agreement with a company to provide data analytics services for certain product lines within the Company's HCPL book of business. The agreement contains a minimum two year commitment with optional extension features for an annual fee of approximately \$4.8 million per year with additional variable quarterly incentive fees based on service utilization metrics prescribed in the contract. ProAssurance incurred operating expenses associated with this agreement of \$4.9 million and \$1.0 million for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019, the remaining commitment under this agreement was approximately \$3.6 million.

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10. Leases

ProAssurance is involved in a number of operating leases primarily for office facilities. Office facility leases have remaining lease terms ranging from one year to thirteen years; some of which include options to extend the leases for up to ten years, and some of which include an option to terminate the lease within one year. ProAssurance subleases certain office facilities to third parties and classifies these leases as operating leases.

The following table provides a summary of the components of lease expense as well as the reporting location in the Consolidated Statements of Income and Comprehensive Income for the years ended December 31, 2019 and 2018.

<i>(In thousands)</i>	Location in the Consolidated Statements of Income and Comprehensive Income	Year Ended December 31	
		2019	2018
Operating lease expense ⁽¹⁾	Operating expense	\$ 4,485	\$ 5,030
Sublease income ⁽²⁾	Other income	(152)	(148)
Net lease expense		<u>\$ 4,333</u>	<u>\$ 4,882</u>

⁽¹⁾ Includes short-term lease costs and variable lease costs, if applicable. For the year ended December 31, 2019, no short-term lease costs were recognized and variable lease costs were nominal in amount. For the year ended December 31, 2018, short-term lease costs and variable lease costs were each nominal in amount.

⁽²⁾ Sublease income excludes rental income from owned properties of \$2.5 million and \$2.4 million during the years ended December 31, 2019 and 2018, respectively, which is included in other income. See "Item 2. Properties" for a listing of currently owned properties.

The following table provides supplemental lease information for operating leases on the Consolidated Balance Sheet as of December 31, 2019.

<i>(\$ in thousands)</i>	December 31, 2019
Operating lease ROU assets	\$ 21,074
Operating lease liabilities	\$ 22,051
Weighted-average remaining lease term	8.74 years
Weighted-average discount rate	3.08%

The following table provides supplemental lease information for the Consolidated Statements of Cash Flows for the years ended December 31, 2019 and 2018.

<i>(In thousands)</i>	Year Ended December 31	
	2019	2018
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 976	\$ 297

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The following table is a schedule of remaining future minimum lease payments for operating leases that had an initial or remaining non-cancellable lease term in excess of one year as of December 31, 2019. Operating lease payments exclude \$1.5 million of total future minimum lease payments for a lease signed but not yet commenced as of December 31, 2019. This lease will commence in the first quarter of 2020 with a lease term of approximately eleven years.

(In thousands)

2020	\$	4,146
2021		3,941
2022		3,054
2023		2,350
2024		1,763
Thereafter		9,959
Total future minimum lease payments		<u>25,213</u>
Less: Imputed interest		3,162
Total operating lease liabilities	\$	<u>22,051</u>

11. Debt

ProAssurance's outstanding debt consisted of the following:

(In thousands)

	December 31, 2019	December 31, 2018
Senior Notes due 2023, unsecured, interest at 5.3% annually	\$ 250,000	\$ 250,000
Mortgage Loans, outstanding borrowings are secured by first priority liens on two office buildings, and bear an interest rate of three-month LIBOR plus 1.325% (3.21% and 4.10%, respectively) determined on a quarterly basis.	37,617	39,064
Total principal	287,617	289,064
Less unamortized debt issuance costs	1,796	1,307
Debt less unamortized debt issuance costs	\$ 285,821	\$ 287,757

Senior Notes due 2023 (the Senior Notes)

The Senior Notes are the unsecured obligations of ProAssurance Corporation, due in full in November 2023, unless redeemed sooner, with interest payable semiannually. Redemptions may be made prior to maturity, in whole or part, at the greater of par or the sum of the present values of the outstanding principal and remaining interest payments calculated at 0.4% above the then current rate for U.S. Treasury Notes with a term comparable to the remaining term of the Senior Notes. There are no financial covenants associated with the Senior Notes.

Mortgage Loans

During 2017, two of ProAssurance's subsidiaries each entered into ten-year mortgage loans collectively totaling \$40.5 million (Mortgage Loans) with one lender in connection with the recapitalization of two office buildings. The Mortgage Loans, which mature in December 2027, accrue interest at three-month LIBOR plus 1.325% with principal and interest payable on a quarterly basis. To manage the Company's exposure to increases in LIBOR on the Mortgage Loans, ProAssurance entered into an interest rate cap agreement with a notional amount of \$35 million. Per the interest rate cap agreement, the Company is entitled to receive cash payments if and when the three-month LIBOR exceeds 2.35%. Additional information on the Company's derivative instruments is provided in Note 12.

The Mortgage Loans contain customary representations, covenants and events constituting default, and remedies for default. Additionally, the Mortgage Loans carry the following financial covenant:

- (1) Each of the two ProAssurance subsidiaries are not permitted to have a leverage ratio of Consolidated Funded Debt (principally, obligations for borrowed money, obligations for deferred purchase price of property or services, obligations evidenced by notes, bonds, debentures, standby and commercial Letters of Credit and contingent obligations of the subsidiary) to Consolidated Total Capitalization (principally, SAP Consolidated Net Worth plus Consolidated Funded Debt of the subsidiary) greater than 0.35, determined at the end of each fiscal quarter.

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At December 31, 2019, contractual maturities of the Mortgages Loans for each of the next five years, excluding interest payments, are as follows:

<i>(In thousands)</i>	Principal Payments Due by Period
2020	\$ 1,503
2021	1,559
2022	1,617
2023	1,677
2024	1,740
Thereafter	29,521
Total principal payments	<u>\$ 37,617</u>

Revolving Credit Agreement

ProAssurance has a Revolving Credit Agreement with seven participating lenders. During November 2019, ProAssurance executed an amendment to the Revolving Credit Agreement which extended the expiration from June 2020 to November 2024 and increased the permitted borrowings from \$200 million to \$250 million. The Revolving Credit Agreement continues to have a \$50 million accordion feature which, if successfully subscribed, would expand the permitted borrowings to a maximum of \$300 million. The amended Revolving Credit Agreement permits ProAssurance to borrow, repay and reborrow from the lenders during the term of the Revolving Credit Agreement. All borrowings are required to be repaid prior to the expiration date of the Revolving Credit Agreement. ProAssurance is required to pay a commitment fee, ranging from 0.15% to 0.30% based on ProAssurance's credit ratings, on the average unused portion of the credit line during the term of the Revolving Credit Agreement. Borrowings under the Revolving Credit Agreement may be secured or unsecured and accrue interest at a selected base rate, adjusted by a margin, which can vary from 0% to 1.88%, based on ProAssurance's credit ratings and whether the borrowing is secured or unsecured. The base rate selected may either be the current one-, three- or six-month LIBOR, with the LIBOR term selected fixing the interest period for which the rate is effective. If no selection is made, the base rate defaults to the highest of (1) the Prime rate, (2) the Federal Funds rate plus 0.5% or (3) the one month LIBOR plus 1.0%, determined daily. Rates are reset each successive interest period until the borrowing is repaid.

The Revolving Credit Agreement contains customary representations, covenants and events constituting default, and remedies for default. Additionally, the Revolving Credit Agreement carries the following financial covenants:

- (1) ProAssurance is not permitted to have a leverage ratio of Consolidated Funded Indebtedness (principally, obligations for borrowed money, obligations evidenced by instruments such as notes or acceptances, standby and commercial Letters of Credit, and contingent obligations) to Consolidated Total Capitalization (principally, total non-trade liabilities on a consolidated basis plus consolidated shareholders' equity, exclusive of AOCI) greater than 0.35 to 1.0, determined at the end of each fiscal quarter.
- (2) ProAssurance is required to maintain a minimum net worth, excluding AOCI, of at least \$1.0 billion.

Funds borrowed under the terms of the Revolving Credit Agreement will be used for general corporate purposes, including, but not limited to, use as short-term working capital, funding for share repurchases as authorized by the Board and support for other activities.

Covenant Compliance

ProAssurance is currently in compliance with all covenants.

12. Derivatives

ProAssurance is exposed to certain risks relating to its ongoing business and investment activities. ProAssurance utilizes derivative instruments as part of its risk management strategy to reduce the market risk related to fluctuations in future interest rates associated with a portion of its variable-rate debt. As of December 31, 2019, ProAssurance has not designated any derivative instruments as hedging instruments and does not use derivative instruments for trading purposes.

ProAssurance utilizes an interest rate cap agreement with the objective of reducing the Company's exposure to interest rate risk related to its variable-rate Mortgage Loans. Additional information regarding the Company's Mortgage Loans is

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provided in Note 11. Under the terms of the interest rate cap agreement, ProAssurance paid a premium of \$2 million for the right to receive cash payments based upon a notional amount of \$35 million if and when the three-month LIBOR rises above 2.35%. The Company's variable-rate Mortgage Loans bear an interest rate of three-month LIBOR plus 1.325%. Therefore, this derivative instrument is effectively ensuring the interest rate related to the Mortgage Loans is capped at a maximum of 3.675% until expiration of the interest rate cap agreement in October 2027. During the year ended December 31, 2019, ProAssurance received a nominal amount of cash payments associated with this agreement, which were recorded as a reduction to interest expense. ProAssurance has designated the interest rate cap as an economic hedge (non-hedging instrument) of interest rate exposure and any change in fair value of the derivative is immediately recognized in earnings during the period of change.

The following table provides a summary of the volume and fair value position of the interest rate cap as well as the reporting location in the Consolidated Balance Sheets as of December 31, 2019 and 2018.

<i>(\$ in thousands)</i>		December 31, 2019			December 31, 2018		
Derivatives Not Designated as Hedging Instruments	Location in the Consolidated Balance Sheets	Number of Instruments	Notional Amount ⁽¹⁾	Estimated Fair Value ⁽²⁾	Number of Instruments	Notional Amount ⁽¹⁾	Estimated Fair Value ⁽²⁾
Interest Rate Cap	Other assets	1	\$ 35,000	\$ 760	1	\$ 35,000	\$ 1,884

⁽¹⁾ Volume is represented by the derivative instrument's notional amount.

⁽²⁾ Additional information regarding the fair value of the Company's interest rate cap is provided in Note 2.

The following table presents the pre-tax impact of the change in the fair value of the interest rate cap and the reporting location in the Consolidated Statements of Income and Comprehensive Income for the years ended December 31, 2019, 2018 and 2017.

<i>(In thousands)</i>		Gains (Losses) Recognized in Income on Derivatives		
		Year Ended December 31		
Derivatives Not Designated as Hedging Instruments	Location in the Consolidated Statements of Income and Comprehensive Income	2019	2018	2017
Interest Rate Cap	Interest expense	\$ (1,124)	\$ 153	\$ (339)

As a result of this derivative instrument, ProAssurance is exposed to risk that the counterparty will fail to meet its contractual obligations. To mitigate this counterparty credit risk, ProAssurance only enters into derivative contracts with carefully selected major financial institutions based upon their credit ratings and monitors their creditworthiness. As of December 31, 2019, the counterparty had an investment grade rating of BBB- and has performed in accordance with their contractual obligations.

13. Shareholders' Equity

At December 31, 2019 and 2018, ProAssurance had 100 million shares of authorized common stock and 50 million shares of authorized preferred stock. The Board has the authority to determine provisions for the issuance of preferred shares, including the number of shares to be issued, the designations, powers, preferences and rights, and the qualifications, limitations or restrictions of such shares. To date, the Board has not approved the issuance of preferred stock.

The following is a summary of changes in common shares issued and outstanding during the years ended December 31, 2019, 2018 and 2017:

<i>(In thousands)</i>	2019	2018	2017
Issued and outstanding shares - January 1	53,637	53,457	53,251
Shares issued due to vesting of share-based compensation awards	132	135	132
Other shares issued for compensation and shares reissued to stock purchase plan*	23	45	74
Issued and outstanding shares - December 31	53,792	53,637	53,457

* Shares issued were valued at fair value (the market price of a ProAssurance common share on the date of issue).

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As of December 31, 2019, approximately 1.8 million of ProAssurance's authorized common shares were reserved by the Board for award or issuance under the incentive compensation plans described in Note 14 and an additional 0.5 million of authorized common shares were reserved for the issuance of currently outstanding restricted share and performance share unit awards.

ProAssurance declared cash dividends during 2019, 2018 and 2017 as follows:

	Cash Dividends Declared, per Share					
	2019		2018		2017	
First Quarter	\$	0.31	\$	0.31	\$	0.31
Second Quarter	\$	0.31	\$	0.31	\$	0.31
Third Quarter	\$	0.31	\$	0.31	\$	0.31
Fourth Quarter*	\$	0.31	\$	0.81	\$	5.00

* Includes special dividends of \$0.50 per share in 2018 and \$4.69 per share 2017.

Quarterly dividends were paid in the month following the quarter in which they were declared. Dividends declared during 2019, 2018 and 2017 totaled \$66.7 million, \$94.3 million and \$316.9 million, respectively.

ProAssurance's ability to pay dividends to its shareholders is limited by its holding company structure, to the extent of the net assets held by its insurance subsidiaries, as discussed in Note 19. Otherwise, there are no other regulatory restrictions on ProAssurance's retained earnings or net income that materially impact its ability to pay dividends. Based on shareholders' equity at December 31, 2019, total equity of \$467.6 million was free of debt covenant restrictions regarding the payment of dividends. However, any decision to pay future cash dividends is subject to the Board's final determination after a comprehensive review of financial performance, future expectations and other factors deemed relevant by the Board.

As of December 31, 2019, Board authorizations for the repurchase of common shares or the retirement of outstanding debt of \$109.6 million remained available for use. The timing and quantity of purchases depends upon market conditions and changes in ProAssurance's capital requirements and is subject to limitations that may be imposed on such purchases by applicable securities laws and regulations as well as the rules of the NYSE.

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

For the years ended December 31, 2019, 2018 and 2017, OCI was almost entirely comprised of unrealized gains and losses, including non-credit impairment losses, arising during the period related to fixed maturity available-for-sale securities, less reclassification adjustments, as shown in the table that follows, net of tax. For the years ended December 31, 2019 and 2018, OCI also included changes related to the reestimation of the defined benefit plan liability assumed in the Eastern acquisition which were nominal in amount. The defined benefit plan is frozen as to the earnings of additional benefits and the benefit plan liability is reestimated annually.

At December 31, 2019 and 2018, AOCI was almost entirely comprised of accumulated unrealized gains and losses from fixed maturity available-for-sale securities, including accumulated non-credit impairments recognized through OCI of \$0.3 million and \$0.1 million, respectively, net of tax. At December 31, 2019 and 2018, accumulated changes in the defined benefit plan liability not yet recognized in earnings were nominal in amount. Due to the adoption of accounting guidance in the first quarter of 2018 related to certain impacts of the TCJA, ProAssurance increased AOCI by approximately \$3.4 million with a corresponding decrease to retained earnings of the same amount as of the beginning of 2018. Except for an immaterial amount of unrealized gains and losses on available-for-sale securities held at the Company's U.K. subsidiary at December 31, 2019 and 2018, and an immaterial amount of unrealized gains and losses on available-for-sale securities held at the Company's Cayman Islands subsidiaries at December 31, 2018, tax effects of amounts in AOCI at December 31, 2019 and 2018 were computed using the enacted U.S. federal corporate tax rate of 21%.

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Amounts reclassified from AOCI to net income and the amounts of deferred tax expense (benefit) included in OCI were as follows:

<i>(In thousands)</i>	2019	2018	2017
Reclassifications from AOCI to net income:			
Realized investment gains (losses)	\$ 2,500	\$ 274	\$ 2,512
Non-credit impairment losses reclassified to earnings, due to sale of securities or reclassification as a credit loss	—	(621)	(3)
Total gains (losses) reclassified, before-tax effect	2,500	(347)	2,509
Tax effect*	(525)	73	(878)
Net reclassification adjustments	\$ 1,975	\$ (274)	\$ 1,631
Deferred tax expense (benefit) included in OCI	\$ 14,150	\$ (9,573)	\$ (4,676)

* Tax effects were computed using a 21% rate for the years ended December 31, 2019 and 2018 and a 35% rate for the year ended December 31, 2017.

14. Share-Based Payments

Share-based compensation costs are primarily classified as a component of operating expense.

During 2019, 2018 and 2017, ProAssurance provided share-based compensation to employees utilizing three types of awards: restricted share units, performance share units and purchase match units. The restricted share and performance share awards were made under either the ProAssurance Corporation Amended and Restated 2014 Equity Incentive Plan or the ProAssurance Corporation 2008 Equity Incentive Plan. The Compensation Committee of the Board is responsible for the administration of both plans.

The following table provides a summary of compensation expense and the total related tax benefit recognized during each period as well as estimated compensation cost that will be charged to expense in future periods.

	Share-Based Compensation Expense			Unrecognized Compensation Cost	
	Year Ended December 31			December 31, 2019	
<i>(\$ in millions, except remaining recognition period)</i>	2019	2018	2017	Amount	Weighted Average Remaining Recognition Period
Total share-based compensation expense	\$ 3.5	\$ 5.3	\$ 10.6	\$ 5.6	2.5
Tax benefit recognized	\$ 0.7	\$ 1.1	\$ 3.7		

The majority of awards are equity classified awards and are charged to expense as an increase to additional paid-in capital over the service period (generally the vesting period) associated with the award. However, a nominal amount of awards are liability classified awards and are recorded as a liability as they are structured to be settled in cash. As of December 31, 2019, the majority of share-based compensation expense related to restricted share units. Restricted share and performance share units vest in their entirety generally at the end of a three-year period, except for certain restricted share units granted in 2019 which will vest at the end of a five-year period, following the grant date based on a continuous service requirement and, for performance share units, achievement of a performance objective; partial vesting is permitted for retirees. All non-vested purchase match units at December 31, 2018 were fully vested in the fourth quarter of 2019; previously, units vested over a three-year period based on a service requirement with partial vesting permitted for all participants. For the restricted share and purchase match units, a single share of ProAssurance common stock is issued per vested unit. For performance share units, the number of shares of ProAssurance common stock issued per vested unit varies based on performance goals achieved. For equity classified awards, units sufficient to satisfy required tax withholdings are paid in cash rather than in shares of ProAssurance common stock. Liability classified awards, which are nominal in amount, are settled in cash at the end of the vesting period.

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Restricted Share Units

Activity for restricted share units during 2019, 2018 and 2017 is summarized below. Grant date fair values are based on the market value of a share of ProAssurance common stock on the date of grant less the estimated net present value of expected dividends during the vesting period.

	2019		2018		2017	
	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value
Beginning non-vested balance	267,323	\$ 49.16	269,520	\$ 48.63	240,149	\$ 44.07
Granted	164,196	\$ 36.96	85,797	\$ 44.73	84,565	\$ 58.35
Forfeited	(3,832)	\$ 45.09	(3,878)	\$ 50.07	(4,087)	\$ 52.35
Vested and released	(107,062)	\$ 46.06	(84,116)	\$ 42.90	(51,107)	\$ 43.01
Ending non-vested balance	<u>320,625</u>	<u>\$ 43.99</u>	<u>267,323</u>	<u>\$ 49.16</u>	<u>269,520</u>	<u>\$ 48.63</u>

The aggregate grant date fair value of restricted share units vested and released in 2019, 2018 and 2017 totaled \$4.9 million, \$3.6 million and \$2.2 million, respectively. The aggregate intrinsic value of restricted share units vested and released in 2019, 2018 and 2017 (including units paid in cash to cover tax withholdings) totaled \$4.6 million, \$4.1 million and \$3.1 million, respectively.

Performance Share Units

Performance share units vest only if minimum performance objectives are met, and the number of units earned varies from 50% to 200% of a base award depending upon the degree to which stated performance objectives are achieved. Performance share unit activity for 2019, 2018 and 2017 is summarized below. The table reflects the base number of units; actual awards that vest depend upon the extent to which performance objectives are achieved. Grant date fair values are based on the market value of a share of ProAssurance common stock on the date of grant less the estimated net present value of expected dividends during the vesting period.

	2019		2018		2017	
	Base Units	Weighted Average Grant Date Fair Value	Base Units	Weighted Average Grant Date Fair Value	Base Units	Weighted Average Grant Date Fair Value
Beginning non-vested balance	135,202	\$ 49.95	212,105	\$ 47.11	305,240	\$ 43.41
Granted	25,168	\$ 40.18	27,202	\$ 44.73	48,000	\$ 58.35
Forfeited	—	\$ —	—	\$ —	(227)	\$ 42.79
Vested and released	(60,000)	\$ 45.59	(104,105)	\$ 42.79	(140,908)	\$ 42.95
Ending non-vested balance	<u>100,370</u>	<u>\$ 50.10</u>	<u>135,202</u>	<u>\$ 49.95</u>	<u>212,105</u>	<u>\$ 47.11</u>

The aggregate grant date fair value of performance share units (base level) vested and released in 2019, 2018 and 2017 totaled \$2.7 million, \$4.5 million and \$6.1 million, respectively. The aggregate intrinsic value of performance share units (base level) vested and released in 2019, 2018 and 2017 (including units paid in cash to cover tax withholdings) totaled \$2.6 million, \$5.0 million and \$8.7 million, respectively. The weighted average level at which the vested units were issued was 95%, 125% and 119% during 2019, 2018 and 2017, respectively, based on performance levels achieved.

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Purchase Match Units

The ProAssurance Corporation 2011 Employee Stock Ownership Plan provided a purchase match unit for each share of ProAssurance common stock purchased with contributions by eligible plan participants, with participant contributions subject to a \$5,000 annual limit per participant. During 2017, the ProAssurance Corporation 2011 Employee Stock Ownership Plan was discontinued and the existing non-vested purchase match units were fully vested in the fourth quarter of 2019. Purchase match unit activity during 2019, 2018 and 2017 is summarized below. Grant date fair values are based on the market value of a ProAssurance common share on the date of grant less the estimated net present value of expected dividends during the vesting period.

	2019		2018		2017	
	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value
Beginning non-vested balance	44,682	\$ 51.05	70,292	\$ 49.40	72,615	\$ 45.77
Granted	—	\$ —	—	\$ —	24,444	\$ 51.83
Forfeited	(1,400)	\$ 51.47	(1,594)	\$ 50.19	(2,012)	\$ 48.29
Vested and released	(43,282)	\$ 51.03	(24,016)	\$ 46.28	(24,755)	\$ 41.33
Ending non-vested balance	—	\$ —	44,682	\$ 51.05	70,292	\$ 49.40

The aggregate grant date fair value of purchase match units vested and released in 2019, 2018 and 2017 totaled \$2.2 million, \$1.1 million and \$1.0 million, respectively. The aggregate intrinsic value of purchase match share units vested and released in 2019, 2018 and 2017 (including units paid in cash to cover tax withholdings) totaled \$1.7 million, \$1.1 million and \$1.4 million, respectively.

15. Variable Interest Entities

ProAssurance holds passive interests in a number of entities that are considered to be VIEs under GAAP guidance. ProAssurance's VIE interests principally consist of interests in LPs/LLCs formed for the purpose of achieving diversified equity and debt returns. ProAssurance's VIE interests, carried as a part of investment in unconsolidated subsidiaries, totaled \$309.0 million at December 31, 2019 and \$285.8 million at December 31, 2018.

ProAssurance does not have power over the activities that most significantly impact the economic performance of these VIEs and thus is not the primary beneficiary. Therefore, ProAssurance has not consolidated these VIEs. ProAssurance's involvement with each VIE is limited to its direct ownership interest in the VIE. Except for the funding commitments disclosed in Note 9, ProAssurance has no arrangements with any of the VIEs to provide other financial support to or on behalf of the VIE. At December 31, 2019, ProAssurance's maximum loss exposure relative to these investments was limited to the carrying value of ProAssurance's investment in the VIE.

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16. Earnings Per Share

Diluted weighted average shares is calculated as basic weighted average shares plus the effect, calculated using the treasury stock method, of assuming that restricted share units, performance share units and purchase match units have vested. The following table provides the weighted average number of common shares outstanding used in the calculation of the Company's basic and diluted earnings per share:

<i>(In thousands, except per share data)</i>	Year Ended December 31		
	2019	2018	2017
Weighted average number of common shares outstanding, basic	53,740	53,598	53,393
Dilutive effect of securities:			
Restricted Share Units	75	70	85
Performance Share Units	10	63	110
Purchase Match Units	16	18	23
Weighted average number of common shares outstanding, diluted	53,841	53,749	53,611
Effect of dilutive shares on earnings per share	\$ —	\$ —	\$ (0.01)

All dilutive common share equivalents are reflected in the earnings per share calculation while antidilutive common share equivalents are not reflected in the earnings per share calculation. There were no antidilutive common share equivalents for the year ended December 31, 2019. The diluted weighted average number of common shares outstanding for the years ended December 31, 2018 and 2017 exclude approximately 2,000 and 7,000 common share equivalents issuable under the Company's stock compensation plans, respectively, as their effect would be antidilutive.

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17. Segment Information

ProAssurance's segments are based on the Company's internal management reporting structure for which financial results are regularly evaluated by the Company's CODM to determine resource allocation and assess operating performance. The Company continually assesses its internal management reporting structure and information evaluated by its CODM to determine whether any changes have occurred that would impact its segment reporting structure. The Company operates in five segments that are organized around the nature of the products and services provided: Specialty P&C, Workers' Compensation Insurance, Segregated Portfolio Cell Reinsurance, Lloyd's Syndicates and Corporate. A description of each of ProAssurance's five operating and reportable segments follows.

Specialty P&C includes professional liability insurance and medical technology liability insurance. Professional liability insurance is primarily offered to healthcare providers and institutions and, to a lesser extent, to attorneys and their firms. Medical technology liability insurance is offered to medical technology and life sciences companies that manufacture or distribute products including entities conducting human clinical trials. In addition, the Specialty P&C segment also offers custom alternative risk solutions including loss portfolio transfers and captive cell programs for healthcare professional liability insureds. For the alternative market captive cell programs, the Specialty P&C segment cedes either all or a portion of the premium to certain SPCs in the Company's Segregated Portfolio Cell Reinsurance segment.

Workers' Compensation Insurance includes workers' compensation products provided to employers with 1,000 or fewer employees. The segment's products include guaranteed cost policies, policyholder dividend policies, retrospectively-rated policies, deductible policies and alternative market solutions. Alternative market products include program design, fronting, claims administration, risk management, SPC rental, asset management and SPC management services. Alternative market program premiums are 100% ceded to either SPCs in the Company's Segregated Portfolio Cell Reinsurance segment or, to a limited extent, to a captive insurer unaffiliated with ProAssurance.

Segregated Portfolio Cell Reinsurance reflects the net operating results (underwriting profit or loss, plus investment results, net of U.S. federal income taxes) of SPCs at Inova Re and Eastern Re, the Company's Cayman Islands SPC operations. Each SPC is owned, fully or in part, by an agency, group or association, and the operating results of the SPCs are due to the participants of that cell. ProAssurance participates to a varying degree in the results of selected SPCs. SPC operating results attributable to external cell participants are reflected as an SPC dividend expense (income) in the Segregated Portfolio Cell Reinsurance segment and in ProAssurance's Consolidated Statements of Income and Comprehensive Income. In addition, the Segregated Portfolio Cell Reinsurance segment includes the SPC investment results as the investments are solely for the benefit of the cell participants, and investment results attributable to external cell participants are reflected in the SPC dividend expense (income). The SPCs assume workers' compensation insurance, healthcare professional liability insurance or a combination of the two from the Company's Workers' Compensation Insurance and Specialty P&C segments. In addition, during 2019 one SPC at Eastern Re assumed an errors and omissions liability policy from a captive insurer unaffiliated with ProAssurance; the Company does not participate in the SPC that assumed this policy; therefore, the operating results of this policy are the obligation of the external cell participants and are reflected as an offset in the SPC dividend (expense) income and have no effect on the Segregated Portfolio Cell Reinsurance segment net operating results.

Lloyd's Syndicates includes operating results from ProAssurance's participation in Lloyd's of London Syndicate 1729 and Syndicate 6131, which is an SPA that underwrites on a quota share basis with Syndicate 1729. The results of this segment are normally reported on a quarter lag, except when information is available that is material to the current period. Furthermore, investment results associated with the majority of investment assets solely allocated to Lloyd's Syndicate operations and certain U.S. paid administrative expenses are reported concurrently as that information is available on an earlier time frame. For the 2019 underwriting year, ProAssurance slightly decreased its participation in the operating results of Syndicate 1729 from 62% to 61%; however, due to the quarter lag these changes were not reflected in the Lloyd's Syndicates segment results until the second quarter of 2019. Furthermore, ProAssurance's 100% participation in Syndicate 6131 was not reflected in the Lloyd's Syndicates segment results until the second quarter of 2018 as Syndicate 6131 began writing business effective January 1, 2018. Syndicate 1729 underwrites risks over a wide range of property and casualty insurance and reinsurance lines in both the U.S. and international markets. Syndicate 6131 focuses on contingency and specialty property business, also within the U.S. and international markets.

Corporate includes ProAssurance's investment operations, other than those reported in the Company's Segregated Portfolio Cell Reinsurance and Lloyd's Syndicates segments, interest expense and U.S. income taxes. The segment also includes non-premium revenues generated outside of the Company's insurance entities and corporate expenses.

The accounting policies of the segments are described in Note 1. ProAssurance evaluates the performance of its Specialty P&C and Workers' Compensation Insurance segments based on before tax underwriting profit or loss, which excludes investment performance. ProAssurance evaluates the performance of its Segregated Portfolio Cell Reinsurance segment based

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on operating profit or loss, which includes investment results of investment assets solely allocated to SPC operations, net of U.S. federal income taxes. Performance of the Lloyd's Syndicates segment is evaluated based on operating profit or loss, which includes investment results of investment assets solely allocated to Lloyd's Syndicate operations, net of U.K. income tax expense. Performance of the Corporate segment is evaluated based on the contribution made to consolidated after-tax results. ProAssurance accounts for inter-segment transactions as if the transactions were to third parties at current market prices. Assets are not allocated to segments because investments, other than the investments discussed above that are solely allocated to the Segregated Portfolio Cell Reinsurance and Lloyd's Syndicates segments, and other assets are not managed at the segment level.

Financial results by segment were as follows:

<i>(In thousands)</i>	Year Ended December 31, 2019						
	Specialty P&C	Workers' Compensation Insurance	Segregated Portfolio Cell Reinsurance	Lloyd's Syndicates	Corporate	Inter- segment Eliminations	Consolidated
Net premiums earned	\$ 499,058	\$ 189,240	\$ 78,563	\$ 80,671	\$ —	\$ —	\$ 847,532
Net investment income	—	—	1,578	4,551	87,140	—	93,269
Equity in earnings (loss) of unconsolidated subsidiaries	—	—	—	—	(10,061)	—	(10,061)
Net realized gains (losses)	—	—	4,020	768	55,086	—	59,874
Other income (expense) ⁽¹⁾	5,796	2,399	559	(573)	3,478	(2,439)	9,220
Net losses and loss adjustment expenses	(532,485)	(121,649)	(52,412)	(47,369)	—	—	(753,915)
Underwriting, policy acquisition and operating expenses ⁽¹⁾⁽²⁾	(120,310)	(57,520)	(24,260)	(34,711)	(19,146)	2,439	(253,508)
Segregated portfolio cells dividend (expense) income	—	—	(4,579)	—	—	—	(4,579)
Interest expense	—	—	—	—	(16,636)	—	(16,636)
Income tax benefit (expense)	—	—	—	—	29,808	—	29,808
Segment operating results	\$ (147,941)	\$ 12,470	\$ 3,469	\$ 3,337	\$ 129,669	\$ —	\$ 1,004
Significant non-cash items:							
Depreciation and amortization, net of accretion	\$ 6,586	\$ 3,825	\$ (41)	\$ (7)	\$ 8,302	\$ —	\$ 18,665

<i>(In thousands)</i>	Year Ended December 31, 2018						
	Specialty P&C	Workers' Compensation Insurance	Segregated Portfolio Cell Reinsurance	Lloyd's Syndicates	Corporate	Inter- segment Eliminations	Consolidated
Net premiums earned	\$ 491,787	\$ 186,079	\$ 73,940	\$ 67,047	\$ —	\$ —	\$ 818,853
Net investment income	—	—	1,566	3,358	86,960	—	91,884
Equity in earnings (loss) of unconsolidated subsidiaries	—	—	—	—	8,948	—	8,948
Net realized gains (losses)	—	—	(3,149)	(460)	(39,879)	—	(43,488)
Other income (expense) ⁽¹⁾	5,844	2,412	211	322	3,525	(2,481)	9,833
Net losses and loss adjustment expenses	(384,431)	(118,483)	(38,726)	(51,570)	—	—	(593,210)
Underwriting, policy acquisition and operating expenses ⁽¹⁾⁽²⁾	(112,419)	(55,693)	(22,426)	(31,686)	(18,767)	2,435	(238,556)
Segregated portfolio cells dividend (expense) income	—	—	(9,122)	—	—	—	(9,122)
Interest expense	—	—	—	—	(16,163)	46	(16,117)
Income tax benefit (expense)	—	—	—	317	17,715	—	18,032
Segment operating results	\$ 781	\$ 14,315	\$ 2,294	\$ (12,672)	\$ 42,339	\$ —	\$ 47,057
Significant non-cash items:							
Depreciation and amortization, net of accretion	\$ 7,050	\$ 3,850	\$ 441	\$ (8)	\$ 9,922	\$ —	\$ 21,255

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<i>(In thousands)</i>	Specialty P&C	Workers' Compensati on Insurance	Segregated Portfolio Cell Reinsurance	Lloyd's Syndicates	Corporate	Inter- segment Eliminations	Consolidated
Net premiums earned	\$ 449,823	\$ 163,309	\$ 68,197	\$ 57,202	\$ —	\$ —	\$ 738,531
Net investment income	—	—	1,059	1,736	92,867	—	95,662
Equity in earnings (loss) of unconsolidated subsidiaries	—	—	—	—	8,033	—	8,033
Net realized gains (losses)	—	—	3,914	107	12,388	—	16,409
Other income (expense) ⁽¹⁾	5,688	2,096	115	(1,476)	2,888	(1,797)	7,514
Net losses and loss adjustment expenses	(285,250)	(102,233)	(37,455)	(44,220)	—	—	(469,158)
Underwriting, policy acquisition and operating expenses ⁽¹⁾	(107,972)	(52,576)	(20,764)	(26,963)	(29,275)	1,797	(235,753)
Segregated portfolio cells dividend (expense) income ⁽³⁾	(5,181)	—	(10,590)	—	—	—	(15,771)
Interest expense	—	—	—	—	(16,844)	—	(16,844)
Income tax benefit (expense) ⁽³⁾	—	—	—	568	(21,927)	—	(21,359)
Segment operating results	\$ 57,108	\$ 10,596	\$ 4,476	\$ (13,046)	\$ 48,130	\$ —	\$ 107,264
Significant non-cash items:							
Depreciation and amortization, net of accretion	\$ 7,922	\$ 3,480	\$ 680	\$ (20)	\$ 16,734	\$ —	\$ 28,796

⁽¹⁾ Certain fees for services provided to the SPCs at Inova Re and Eastern Re are recorded as expenses within the Segregated Portfolio Cell Reinsurance segment and as other income within the Workers' Compensation Insurance segment. These fees are primarily SPC rental fees and are eliminated between segments in consolidation.

⁽²⁾ Underwriting, policy acquisition and operating expenses in both the years ended December 31, 2019 and 2018 included a provision for U.S. federal income taxes of \$1.1 million and \$0.4 million, respectively, for SPCs at Inova Re that have elected to be taxed as U.S. taxpayers. The portion of U.S. federal income taxes attributable to external cell participants is reflected in SPC dividend (expense) income.

⁽³⁾ During 2017, ProAssurance recognized a \$5.2 million pre-tax expense related to previously unrecognized SPC dividend expense for the cumulative earnings of unrelated parties that have owned segregated portfolio cells at various periods since 2003 in a Bermuda captive insurance operation managed by the Company's HCPL line of business within the Specialty P&C segment. The expense recorded in 2017 related to periods prior to the then current period and was unrelated to the Company's Cayman Islands captive operations. The \$1.8 million tax impact of the expense recognized in 2017 was included in the Corporate segment's income tax benefit (expense).

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

The following table provides detailed information regarding ProAssurance's gross premiums earned by product as well as a reconciliation to net premiums earned. All gross premiums earned are from external customers except as noted. ProAssurance's insured risks are primarily within the U.S.

<i>(In thousands)</i>	Year Ended December 31		
	2019	2018	2017
<u>Specialty P&C Segment</u>			
Gross premiums earned:			
Healthcare professional liability	\$ 517,977	\$ 518,303	\$ 477,561
Legal professional liability	26,766	26,094	25,771
Medical technology liability	33,957	35,157	33,836
Other	2,096	468	415
Ceded premiums earned	(81,738)	(88,235)	(87,760)
Segment net premiums earned	499,058	491,787	449,823
<u>Workers' Compensation Insurance Segment</u>			
Gross premiums earned:			
Traditional business	203,195	199,466	173,246
Alternative market business	84,214	83,508	80,698
Ceded premiums earned	(98,169)	(96,895)	(90,635)
Segment net premiums earned	189,240	186,079	163,309
<u>Segregated Portfolio Cell Reinsurance Segment</u>			
Gross premiums earned:			
Workers' compensation ⁽¹⁾	81,765	78,255	72,814
Healthcare professional liability ⁽²⁾	6,059	5,009	4,097
Other	480	—	—
Ceded premiums earned	(9,741)	(9,324)	(8,714)
Segment net premiums earned	78,563	73,940	68,197
<u>Lloyd's Syndicates Segment</u>			
Gross premiums earned:			
Property and casualty ⁽³⁾	101,222	83,307	69,749
Ceded premiums earned	(20,551)	(16,260)	(12,547)
Segment net premiums earned	80,671	67,047	57,202
Consolidated net premiums earned	\$ 847,532	\$ 818,853	\$ 738,531

⁽¹⁾ Premium for all periods is assumed from the Workers' Compensation Insurance segment.

⁽²⁾ Premium for all periods is assumed from the Specialty P&C segment.

⁽³⁾ Includes premium assumed from the Specialty P&C segment of \$0.1 million, \$5.0 million and \$11.8 million for years ended December 31, 2019, 2018 and 2017, respectively.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

18. Benefit Plans

ProAssurance maintains the ProAssurance Savings Plan that is intended to provide retirement income to eligible employees. ProAssurance provides employer contributions to the plan of up to 10% of salary for qualified employees. ProAssurance incurred expense related to the ProAssurance Savings Plan of \$7.2 million, \$7.0 million and \$7.8 million during the years ended December 31, 2019, 2018 and 2017, respectively.

ProAssurance also maintains the ProAssurance Plan that allows participating management employees to defer a portion of their current salary. ProAssurance incurred expense related to the ProAssurance Plan of \$0.3 million during each of the years ended December 31, 2019, 2018 and 2017. ProAssurance deferred compensation liabilities totaled \$26.8 million and \$21.3 million at December 31, 2019 and 2018, respectively. The liabilities included amounts due under the ProAssurance Plan and amounts due under individual agreements with current or former employees.

19. Statutory Accounting and Dividend Restrictions

ProAssurance's domestic U.S. insurance subsidiaries are required to file statutory financial statements with state insurance regulatory authorities, prepared based upon SAP prescribed or permitted by regulatory authorities. ProAssurance did not use any prescribed or permitted SAP that differed from the NAIC's SAP at December 31, 2019, 2018 or 2017. Differences between net income (loss) prepared in accordance with GAAP and statutory net income (loss) are principally due to: (a) policy acquisition and certain software and equipment costs which are deferred under GAAP but expensed for statutory purposes and (b) certain deferred income taxes which are recognized under GAAP but are not recognized for statutory purposes.

The NAIC specifies risk-based capital requirements for property and casualty insurance providers. At December 31, 2019, actual statutory capital and surplus for each of ProAssurance's insurance subsidiaries exceeded the minimum regulatory requirements. Net income (loss) and capital and surplus of ProAssurance's insurance subsidiaries on a statutory basis are shown in the following table.

(In millions)

Statutory Net Income (Loss)			Statutory Capital and Surplus	
2019	2018	2017	2019	2018
(\$22)	\$135	\$139	\$878	\$1,041

At December 31, 2019, \$1.2 billion of ProAssurance's consolidated net assets were held at its domestic insurance subsidiaries, of which approximately \$88 million are permitted to be paid as dividends over the course of 2020 without prior approval of state insurance regulators. However, the payment of any dividend requires prior notice to the insurance regulator in the state of domicile and the regulator may prevent the dividend if, in its judgment, payment of the dividend would have an adverse effect on the capital and surplus of the insurance subsidiary.

ProAssurance Corporation and Subsidiaries
Notes to Consolidated Financial Statements
December 31, 2019

20. Quarterly Results of Operations (unaudited)

The following is a summary of unaudited quarterly results of operations for 2019 and 2018:

<i>(In thousands, except per share data)</i>	2019*			
	1st	2nd	3rd	4th
Net premiums earned	\$ 208,149	\$ 209,149	\$ 215,788	\$ 214,446
Net losses and loss adjustment expenses:				
Current year	\$ 170,032	\$ 184,435	\$ 177,555	\$ 233,680
Unfavorable (favorable) development of reserves established in prior years, net	\$ (10,277)	\$ (15,995)	\$ (15,941)	\$ 30,428
Net income (loss)	\$ 31,650	\$ 11,536	\$ 17,193	\$ (59,375)
Basic earnings (loss) per share	\$ 0.59	\$ 0.21	\$ 0.32	\$ (1.10)
Diluted earnings (loss) per share	\$ 0.59	\$ 0.21	\$ 0.32	\$ (1.10)

<i>(In thousands, except per share data)</i>	2018*			
	1st	2nd	3rd	4th
Net premiums earned	\$ 187,159	\$ 223,591	\$ 206,070	\$ 202,033
Net losses and loss adjustment expenses:				
Current year	\$ 152,572	\$ 184,543	\$ 169,154	\$ 179,056
Unfavorable (favorable) development of reserves established in prior years, net	\$ (22,786)	\$ (22,815)	\$ (21,549)	\$ (24,967)
Net income (loss)	\$ 11,856	\$ 28,423	\$ 31,228	\$ (24,450)
Basic earnings (loss) per share	\$ 0.22	\$ 0.53	\$ 0.58	\$ (0.46)
Diluted earnings (loss) per share	\$ 0.22	\$ 0.53	\$ 0.58	\$ (0.46)

*Due to rounding, the sum of quarterly amounts may not equal the total amount for the respective year-to-date periods

21. Subsequent Events

On February 20, 2020, ProAssurance entered into a definitive agreement to acquire NORCAL Group (NORCAL), an underwriter of medical professional liability insurance, after the demutualization of NORCAL Mutual Insurance Company (NORCAL Mutual), NORCAL's ultimate controlling party. ProAssurance will pay base consideration of \$450 million to be funded with cash and debt, with contingent consideration of up to \$150 million should NORCAL reserves as of the acquisition date develop favorably to estimates made by ProAssurance. The demutualization and the definitive agreement are mutually contingent, and are subject to customary conditions, including approval by NORCAL Mutual policyholders and appropriate state and federal regulators. The companies are targeting to close the transaction by the end of 2020.

ProAssurance Corporation and Subsidiaries
Schedule I -- Summary of Investments -- Other than Investments in Related Parties
(In thousands)

Type of Investment	December 31, 2019		
	Recorded Cost Basis	Fair Value	Amount Which is Presented in the Balance Sheet
Fixed maturities			
Bonds:			
U.S. Government or government agencies and authorities	\$ 138,708	\$ 140,336	\$ 140,336
States, municipalities and political subdivisions	287,658	296,093	296,093
Foreign governments	39,208	40,124	40,124
Public utilities	75,294	77,342	77,342
All other corporate bonds	1,227,444	1,256,376	1,256,376
Asset-backed securities	519,764	525,798	525,798
Total Fixed Maturities	2,288,076	2,336,069	2,336,069
Equity Securities			
Common Stocks:			
Public utilities	3,567	4,407	4,407
Banks, trusts and insurance companies	35,548	40,294	40,294
Industrial, miscellaneous and all other	188,758	205,851	205,851
Total Equity Securities, trading	227,873	250,552	250,552
Other long-term investments	343,334	463,881	463,881
Short-term investments	339,899	339,907	339,907
Total Investments	\$ 3,199,182	\$ 3,390,409	\$ 3,390,409

ProAssurance Corporation and Subsidiaries
Schedule II – Condensed Financial Information of Registrant
Condensed Balance Sheet
(In thousands)

	December 31, 2019	December 31, 2018
Assets		
Investment in subsidiaries, at equity	\$ 1,534,367	\$ 1,599,486
Fixed maturities available for sale, at fair value	85,263	78,076
Short-term investments	63,992	76,347
Investment in unconsolidated subsidiaries	915	875
Cash and cash equivalents	65,956	25,757
Other assets	40,640	45,683
Total Assets	<u>\$ 1,791,133</u>	<u>\$ 1,826,224</u>
Liabilities and Shareholders' Equity		
Liabilities:		
Due to subsidiaries	\$ 9,899	\$ 4,067
Dividends payable	16,676	43,446
Other liabilities	4,268	6,823
Debt less debt issuance costs	248,377	248,886
Total Liabilities	<u>279,220</u>	<u>303,222</u>
Shareholders' Equity:		
Common stock	631	630
Other shareholders' equity, including unrealized gains (losses) on securities of subsidiaries	1,511,282	1,522,372
Total Shareholders' Equity	<u>1,511,913</u>	<u>1,523,002</u>
Total Liabilities and Shareholders' Equity	<u>\$ 1,791,133</u>	<u>\$ 1,826,224</u>

ProAssurance Corporation and Subsidiaries
Schedule II – Condensed Financial Information of Registrant
Condensed Statements of Income
(In thousands)

	Year Ended December 31		
	2019	2018	2017
Revenues			
Net investment income	\$ 2,694	\$ 3,495	\$ 7,646
Equity in earnings (loss) of unconsolidated subsidiaries	40	(325)	(137)
Net realized investment gains (losses)	19	(789)	(8,606)
Other income (loss)	795	977	921
Total revenues	3,548	3,358	(176)
Expenses			
Interest expense	14,074	14,844	16,440
Other expenses	16,653	17,092	26,351
Total expenses	30,727	31,936	42,791
Income (loss) before income tax expense (benefit) and equity in net income (loss) of consolidated subsidiaries	(27,179)	(28,578)	(42,967)
Income tax expense (benefit)	(28,455)	(7,142)	(13,293)
Income (loss) before equity in net income (loss) of consolidated subsidiaries	1,276	(21,436)	(29,674)
Equity in net income (loss) of consolidated subsidiaries	(272)	68,493	136,938
Net income	1,004	47,057	107,264
Other comprehensive income (loss)	53,866	(35,238)	(2,488)
Comprehensive income	\$ 54,870	\$ 11,819	\$ 104,776

ProAssurance Corporation and Subsidiaries
Schedule II – Condensed Financial Information of Registrant
Condensed Statements of Cash Flow
(In thousands)

	Year Ended December 31		
	2019	2018	2017
Net cash provided (used) by operating activities	\$ 20,055	\$ 27,981	\$ 67,779
Investing activities			
Proceeds from sales or maturities of:			
Fixed maturities, available for sale	27,974	169,822	295,035
Net decrease (increase) in short-term investments	12,603	194,035	11,811
Dividends from subsidiaries	52,499	29,395	99,694
Unsettled security transactions, net of change	—	—	1,100
Funds (advanced) repaid for Lloyd's FAL deposit	(4,894)	(21,576)	(25,449)
Funds (advanced) repaid under Syndicate Credit Agreement	30,296	(11,232)	(6,883)
Funds (advanced) repaid under a business investment line of credit	—	—	(4,066)
Other	(936)	330	(2,276)
Net cash provided (used) by investing activities	117,542	360,774	368,966
Financing activities			
Borrowings (repayments) under Revolving Credit Agreement	—	(123,000)	(77,000)
Subsidiary payments for common shares and share-based compensation awarded to subsidiary employees	344	1,154	12,030
Dividends to shareholders	(93,204)	(316,476)	(315,228)
Other	(4,538)	(5,685)	(6,868)
Net cash provided (used) by financing activities	(97,398)	(444,007)	(387,066)
Increase (decrease) in cash and cash equivalents	40,199	(55,252)	49,679
Cash and cash equivalents at beginning of period	25,757	81,009	31,330
Cash and cash equivalents at end of period	\$ 65,956	\$ 25,757	\$ 81,009

Supplemental disclosure of cash flow information:

Cash paid during the year for income taxes, net of refunds	\$ 2,053	\$ 4,966	\$ 17,193
Cash paid during the year for interest	\$ 13,699	\$ 14,777	\$ 15,892

Significant non-cash transactions:

Dividends declared and not yet paid	\$ 16,676	\$ 43,446	\$ 267,292
Securities transferred at fair value as dividends from subsidiaries	\$ 34,897	\$ 98,292	\$ 190,709

Basis of Presentation

The registrant-only financial statements should be read in conjunction with ProAssurance Corporation's Consolidated Financial Statements and Notes thereto.

At December 31, 2019 and 2018, PRA investment in subsidiaries is stated at the initial consolidation value plus equity in the undistributed earnings of subsidiaries since the date of acquisition.

ProAssurance Corporation has a management agreement with several of its insurance subsidiaries whereby ProAssurance Corporation charges the subsidiaries a management fee for various management services provided to the subsidiary. Under the arrangement, the expenses associated with such services remain as expenses of ProAssurance Corporation and the management fee charged is reported as an offset to ProAssurance Corporation expenses.

ProAssurance Corporation and Subsidiaries
Schedule III – Supplementary Insurance Information
(In thousands)

	2019	2018	2017
Net premiums earned			
Specialty P&C	\$ 499,058	\$ 491,787	\$ 449,823
Workers' Compensation Insurance	189,240	186,079	163,309
Segregated Portfolio Cell Reinsurance	78,563	73,940	68,197
Lloyd's Syndicates	80,671	67,047	57,202
Consolidated	<u>\$ 847,532</u>	<u>\$ 818,853</u>	<u>\$ 738,531</u>
Net investment income ⁽¹⁾			
Segregated Portfolio Cell Reinsurance	\$ 1,578	\$ 1,566	\$ 1,059
Lloyd's Syndicates	4,551	3,358	1,736
Corporate	87,140	86,960	92,867
Consolidated	<u>\$ 93,269</u>	<u>\$ 91,884</u>	<u>\$ 95,662</u>
Losses and loss adjustment expenses incurred related to current year, net of reinsurance			
Specialty P&C	\$ 526,744	\$ 461,516	\$ 404,543
Workers' Compensation Insurance	129,450	126,534	107,975
Segregated Portfolio Cell Reinsurance	62,546	47,693	45,968
Lloyd's Syndicates	46,958	49,583	45,032
Consolidated	<u>\$ 765,698</u>	<u>\$ 685,326</u>	<u>\$ 603,518</u>
Losses and loss adjustment expenses incurred related to prior year, net of reinsurance			
Specialty P&C	\$ 5,741	\$ (77,085)	\$ (119,293)
Workers' Compensation Insurance	(7,801)	(8,051)	(5,742)
Segregated Portfolio Cell Reinsurance	(10,134)	(8,967)	(8,513)
Lloyd's Syndicates	411	1,987	(812)
Consolidated	<u>\$ (11,783)</u>	<u>\$ (92,116)</u>	<u>\$ (134,360)</u>
Paid losses and loss adjustment expenses, net of reinsurance			
Specialty P&C	\$ 382,845	\$ 354,221	\$ 320,776
Workers' Compensation Insurance	117,848	108,742	96,734
Segregated Portfolio Cell Reinsurance	37,034	29,320	28,761
Lloyd's Syndicates	36,593	37,496	29,926
Inter-segment eliminations	(196)	200	118
Consolidated	<u>\$ 574,124</u>	<u>\$ 529,979</u>	<u>\$ 476,315</u>
Amortization of DPAC			
Specialty P&C	\$ 56,605	\$ 52,253	\$ 47,615
Workers' Compensation Insurance	17,144	16,864	14,551
Segregated Portfolio Cell Reinsurance	21,717	21,039	19,927
Lloyd's Syndicate	21,392	15,913	15,194
Inter-segment eliminations	(1,528)	(1,568)	(1,536)
Consolidated	<u>\$ 115,330</u>	<u>\$ 104,501</u>	<u>\$ 95,751</u>
Other underwriting, policy acquisition and operating expenses			
Specialty P&C	\$ 63,705	\$ 60,166	\$ 60,357
Workers' Compensation Insurance	40,376	38,829	38,025
Segregated Portfolio Cell Reinsurance	2,543	1,387	837
Lloyd's Syndicates	13,319	15,773	11,769
Corporate	19,146	18,767	29,275
Inter-segment eliminations	(911)	(867)	(261)
Consolidated	<u>\$ 138,178</u>	<u>\$ 134,055</u>	<u>\$ 140,002</u>

Continued on the following page.

ProAssurance Corporation and Subsidiaries
Schedule III – Supplementary Insurance Information
(In thousands)

	2019	2018	2017
<i>Continued from previous page</i>			
Net premiums written			
Specialty P&C	\$ 495,750	\$ 494,148	\$ 466,621
Workers' Compensation Insurance	182,233	195,350	173,566
Segregated Portfolio Cell Reinsurance	77,639	75,547	68,862
Lloyd's Syndicates	87,103	69,869	54,969
Consolidated	<u>\$ 842,725</u>	<u>\$ 834,914</u>	<u>\$ 764,018</u>
Deferred policy acquisition costs ⁽¹⁾	\$ 55,567	\$ 54,116	\$ 50,261
Reserve for losses and loss adjustment expenses ⁽¹⁾	\$ 2,346,526	\$ 2,119,847	\$ 2,048,381
Unearned premiums ⁽¹⁾	\$ 413,086	\$ 415,211	\$ 398,884

⁽¹⁾ Assets are not allocated to segments because investments and assets are not managed at the segment level.

ProAssurance Corporation and Subsidiaries
Schedule IV - Reinsurance
(\$ in thousands)

	2019	2018	2017
Property and Liability *			
Premiums earned	\$ 926,035	\$ 903,354	\$ 821,249
Premiums ceded	(124,171)	(126,036)	(110,347)
Premiums assumed	45,668	41,535	27,629
Net premiums earned	\$ 847,532	\$ 818,853	\$ 738,531
Percentage of amount assumed to net	5.39%	5.07%	3.74%

* All of ProAssurance's premiums are related to property and liability coverages.

EXHIBIT INDEX

Exhibit Number	Description
3.1(a)	Certificate of Incorporation of ProAssurance, filed as an Exhibit to ProAssurance's Registration Statement on Form S-4 (File No. 333-49378) and incorporated herein by reference pursuant to SEC Rule 12b-32.
3.1(b)	Certificate of Amendment to Certificate of Incorporation of ProAssurance, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2001 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
3.2	Fourth Restatement of the Bylaws of ProAssurance, effective December 2, 2015, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2015 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
4.1	Indenture, dated November 21, 2013, between ProAssurance and Wilmington Trust Company, filed as an Exhibit to ProAssurance's Current Report on Form 8-K for event occurring November 21, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
4.2	First Supplemental Indenture, dated November 21, 2013, between ProAssurance and Wilmington Trust Company relating to the \$250,000 5.30% Senior Notes due 2023, filed as an Exhibit to ProAssurance's Current Report on Form 8-K for event occurring November 21, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
	ProAssurance will file with the Commission upon request pursuant to the requirements of Item 601 (b) (4) of Regulation S-K documents defining rights of holders of ProAssurance's long-term indebtedness that has not been registered. See also the documents related to long-term indebtedness filed as material contracts under Exhibits 10.8(a), (b), (c), (d), (e) and (f) to this Form 10-K.
10.1	Form of Release and Severance Compensation Agreement dated as of January 1, 2008 between ProAssurance and each of the following named executive officers*: <p style="margin-left: 40px;">Jeffrey P. Lisenby Edward L. Rand Jr.</p> Filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2007 (File No. 001-16533) and incorporated herein by this reference pursuant to SEC Rule 12b-32.
10.1(a)	Employment Agreement between ProAssurance and Edward L. Rand, Jr. dated as of July 1, 2019, filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ending September 30, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32, which supersedes the Release and Severance Compensation Agreement referenced in Exhibit 10.1.*
10.2	Employment Agreement between ProAssurance and W. Stancil Starnes dated as of May 1, 2007, filed as an Exhibit to ProAssurance's Current Report on Form 8-K for the event occurring May 12, 2007 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
10.2(a)	Amendment to Employment Agreement with W. Stancil Starnes (May 1, 2007), effective as of January 1, 2008, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2007 (File No. 001-16533) and incorporated herein by this reference pursuant to SEC Rule 12b-32.*
10.2(b)	Amendment to Employment Agreement with W. Stancil Starnes (May 1, 2007), effective as of June 1, 2015, filed as an Exhibit to ProAssurance's Current Report on Form 8-K dated May 27, 2015 (File No. 001-16533) and incorporated herein by this reference pursuant to SEC Rule 12b-32.*
10.2(c)	Amendment to Employment Agreement with W. Stancil Starnes (May 1, 2007), effective as of June 1, 2017, filed as an Exhibit to ProAssurance's Current Report on Form 8-K dated May 31, 2017 (File No. 001-16533) and incorporated herein by this reference pursuant to SEC Rule 12b-32.* Effective July 1, 2019, W. Stancil Starnes voluntarily terminated the referenced agreement to accept his new position as Executive Chairman.
10.3	Form of Release and Severance Compensation Agreement dated as of September 1, 2011 between ProAssurance and Ross E. Taubman, filed as an Exhibit to ProAssurance's Definitive Proxy Statement (File No. 001-16533) on April 11, 2008 and incorporated herein by reference pursuant to SEC Rule 12b-32.*
10.4	Form of Indemnification Agreement between ProAssurance and each of the following named executive officers and directors of ProAssurance*:

Robert E. Flowers
Howard H. Friedman
M. James Gorrie
Ziad R. Haydar
Jeffrey P. Lisenby
Frank B. O'Neil
Edward L. Rand, Jr.
Frank A. Spinosa
W. Stancil Starnes
Ross E. Taubman
Thomas A. S. Wilson, Jr.

Filed as an Exhibit to ProAssurance's Definitive Proxy Statement (File No. 001-16533) on April 11, 2008 and incorporated herein by reference pursuant to SEC Rule 12b-32.

- 10.5 ProAssurance Group Employee Benefit Plan which includes the Executive Supplemental Life Insurance Program (Article VIII), filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2004 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.6 Amendment and Restatement of the Executive Non-Qualified Excess Plan and Trust effective January 1, 2008, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2007 (File No. 001-16533) and incorporated herein by this reference pursuant to SEC Rule 12b-32.*
- 10.7 Director Deferred Compensation Plan as amended and restated December 7, 2011, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2011 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.7(a) Amendment No. 1 to the Amended and Restated Director Deferred Compensation Plan dated May 22, 2013, filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.7(b) Amendment No. 2 to the Amended and Restated Director Deferred Compensation Plan effective June 22, 2017, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.7(c) Amendment No. 3 to the Amended and Restated Director Deferred Compensation Plan effective March 6, 2019, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.8 Revolving Credit Agreement, dated April 15, 2011, between ProAssurance and U.S. Bank National Association, Wells Fargo Bank, National Association, Branch Banking and Trust Company, First Tennessee Bank, N.A., and JP Morgan Chase Bank N.A., filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.8(a) Amendment No. 1 to Revolving Credit Agreement between ProAssurance and U.S. Bank National Association, Wells Fargo Bank, National Association, Branch Banking and Trust Company, First Tennessee Bank, N.A., and JP Morgan Chase Bank N.A., filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.8(b) Amendment No. 2 to Revolving Credit Agreement between ProAssurance and U.S. Bank National Association, Wells Fargo Bank, National Association, Branch Banking and Trust Company, First Tennessee Bank, N.A., and JP Morgan Chase Bank N.A., filed as an Exhibit to ProAssurance's Current Report on Form 8-K for event occurring November 8, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.8(c) Form of the Augmenting Lender Supplement to Revolving Credit Agreement between ProAssurance and U.S. Bank National Association, Wells Fargo Bank, National Association, Branch Banking and Trust Company, First Tennessee Bank, N.A., and JP Morgan Chase Bank N.A., filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ending June 30, 2014 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.

- 10.8(d) Copy of the Augmenting Lender Supplement to Revolving Credit Agreement between ProAssurance and U.S. Bank N.A., Wells Fargo Bank, N.A., Branch Banking and Trust Company, First Tennessee Bank, N.A., Key Bank, Cadence Bank, N.A., and Regions Bank, N.A., dated June 19, 2015, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2015 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.8(e) Amendment No. 5 to Revolving Credit Agreement between ProAssurance and U.S. Bank National Association, Wells Fargo Bank, National Association, Branch Banking and Trust Company, First Tennessee Bank, N.A., and JP Morgan Chase Bank N.A., filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the Year ended December 31, 2017 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.8(f) Amendment No. 6 to Revolving Credit Agreement between ProAssurance and U.S. Bank National Association, Wells Fargo Bank, National Association, Branch Banking and Trust Company, First Tennessee Bank, N.A., and JP Morgan Chase Bank N.A., filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the Year ended December 31, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.9 Pledge and Security Agreement between ProAssurance and U.S. Bank National Association, filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.10 ProAssurance Corporation Amended and Restated 2014 Equity Incentive Plan, filed as an Exhibit to ProAssurance's Current Report on Form 8-K for event occurring May 14, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.11 ProAssurance Corporation 2014 Annual Incentive Plan, filed as an Exhibit to ProAssurance's Definitive Proxy Statement (File No. 001-16533) filed on May 22, 2013 and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.12 Facility Agreement between ProAssurance and the Premiums Trust Fund of Syndicate 1729, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.12(a) Amendment to Facility Agreement effective April 6, 2016, between ProAssurance and the Premiums Trust Fund of Syndicate 1729 filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.13 Retention and Severance Compensation Agreement effective January 1, 2014, between ProAssurance and Michael L. Boguski, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2013 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
- 10.13(a) Employment Agreement between ProAssurance and Michael Boguski dated as of May 1, 2019, filed as an Exhibit to ProAssurance's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32, which supersedes the Retention and Severance Compensation Agreement referenced in Exhibit 10.14.*
- 10.14 Mortgage Agreement, dated December 11, 2017, between ProAssurance Indemnity Company, Inc. and First Tennessee Bank National Association, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.15 Mortgage Agreement, dated December 11, 2017, between Podiatry Insurance Company of America and First Tennessee Bank National Association, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.16 Interest Rate Cap Agreement, dated October 23, 2017, between Professional Liability Group and First Tennessee Bank National Association, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.
- 10.17 Form of Release and Severance Compensation Agreement dated as of May 13, 2019 between ProAssurance and Dana S. Hendricks, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*

10.18	Form of Release and Severance Compensation Agreement dated as of May 13, 2019 between ProAssurance and Kevin M. Shook, filed as an Exhibit to ProAssurance's Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-16533) and incorporated herein by reference pursuant to SEC Rule 12b-32.*
21.1	Subsidiaries of ProAssurance Corporation
23.1	Consent of Ernst & Young LLP
31.1	Certification of Principal Executive Officer of ProAssurance as required under SEC Rule 13a-14(a)
31.2	Certification of Principal Financial Officer of ProAssurance as required under SEC Rule 13a-14(a)
32.1	Certification of Principal Executive Officer of ProAssurance as required under SEC Rule 13a-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code, as amended (18 U.S.C. 1350)
32.2	Certification of Principal Financial Officer of ProAssurance as required under SEC Rule 13a-14(b) and 18 U.S.C. 1350
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 Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Denotes a management contract or compensatory plan, contract or arrangement required to be filed as an Exhibit to this report.

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Appendix A

Non-GAAP Financial Measures

Non-GAAP operating income (loss) is a financial measure that is widely used to evaluate performance within the insurance sector. In calculating Non-GAAP operating income (loss), we have excluded the after-tax effects of the items listed in the following table that do not reflect normal operating results. We believe Non-GAAP operating income (loss) presents a useful view of the performance of our insurance operations, however it should be considered in conjunction with net income computed in accordance with GAAP.

Reconciliation of net income to Non-GAAP operating income (loss):

<i>(In thousands, except per share data)</i>	Year Ended December 31,				
	2019	2018	2017	2016	2015
Net income	\$ 1,004	\$ 47,057	\$ 107,264	\$ 151,081	\$ 116,197
Items excluded in the calculation of Non-GAAP operating income (loss):					
Net realized investment (gains) losses	(59,874)	43,488	(16,409)	(34,875)	41,639
Net realized gains (losses) attributable to SPCs which no profit/loss is retained ⁽¹⁾	3,144	(2,535)	3,083	2,049	(1,192)
Guaranty fund assessments (recoupments)	43	148	(157)	153	218
Pre-tax effect of exclusions	(56,687)	41,101	(13,483)	(32,673)	40,665
Tax effect ⁽²⁾	11,904	(8,631)	4,719	11,436	(14,233)
After-tax effect of exclusions	(44,783)	32,470	(8,764)	(21,237)	26,432
Non-GAAP operating income (loss), before tax reform adjustments	(43,779)	79,527	98,500	129,844	142,629
Tax reform adjustments on our deferred tax balances excluded in the calculation of Non-GAAP operating income (loss):					
Adjustment of deferred taxes upon the change in corporate tax rate ⁽³⁾	—	—	6,541	—	—
Adjustment of deferred taxes upon the change in limitation of future deductibility of certain executive compensation ⁽³⁾	—	—	3,497	—	—
Non-GAAP operating income (loss)	\$ (43,779)	\$ 79,527	\$ 108,538	\$ 129,844	\$ 142,629
Per diluted common share:					
Net income	\$ 0.02	\$ 0.88	\$ 2.00	\$ 2.83	\$ 2.11
Effect of exclusions	(0.83)	0.60	0.02	(0.40)	0.48
Non-GAAP operating income (loss) per diluted common share	\$ (0.81)	\$ 1.48	\$ 2.02	\$ 2.43	\$ 2.59

⁽¹⁾ Net realized investment gains (losses) on investments related to SPCs are recognized in our Segregated Portfolio Cell Reinsurance segment. SPC operating results, including any realized gain or loss, that are attributable to external cell participants are reflected in the SPC dividend expense (income). To be consistent with our exclusion of net realized investment gains (losses) recognized in earnings, we are excluding the portion of net realized investment gains (losses) that is included in the SPC dividend expense (income) which is attributable to the external cell participants.

⁽²⁾ The annual expected incremental tax rate for 2019 and 2018 is 21% as compared to 35% for all other years shown, associated with the taxable or tax deductible items listed above. Excluding certain discrete items, which are tax effected at the annual expected incremental tax rate in the period they are included in net income, our effective tax rate for the respective years was applied to these items in calculating net income (loss).

⁽³⁾ Due to tax reform enacted by the TCJA, we remeasured our deferred tax assets and liabilities based on the newly enacted tax rate of 21% and recognized a charge of \$6.5 million, which is included as a component of income tax expense from continuing operations for the year ended December 31, 2017. In addition, we made a reasonable estimate of the effects on our deferred tax asset balances at December 31, 2017 as it related to the limitation on the future deductibility on certain executive compensation and recorded a provisional charge to income tax expense of \$3.5 million for the year ended December 31, 2017. During 2018, we were able to complete our accounting for the impact of the TCJA on our December 31, 2017 deferred tax asset balances related to executive compensation; no measurement period adjustment was recorded in 2018 as a result.

This page is not a part of ProAssurance's Annual Report on Form 10K, and was not filed with the Securities & Exchange Commission.

Investor Information

INVESTOR INFORMATION

There were 53,793,370 shares of ProAssurance Corporation common stock outstanding at March 15, 2020. On that date, we had 2,575 shareholders of record. Our common stock trades on The New York Stock Exchange under the symbol PRA. The price of our stock is available from any website that provides stock quotes. We also post the price of our stock on our website, ProAssurance.com.

YOUR SHARES

If you hold your shares through a brokerage account, your broker or a customer service representative at that firm should be able to answer questions about your holdings.

If you hold your shares in certificate form, or have shares held in direct registration (DRS), you are a "registered holder." Registered holders may contact our transfer agent, Computershare, for address changes, transfer of certificates, and replacement of share certificates that have been lost or stolen.

You may reach Computershare in a variety of ways:

By Phone

(800) 851-4218 or (201) 680-6578

By Internet

Information about your account including share transfer, direct deposit of dividends and your dividend payment history:

www-us.computershare.com/Investor.

For immediate access to tax forms:

www-us.computershare.com/investor/QuickTax.

For technical assistance with the Computershare website, please phone (800) 942-5909.

By Mail

Computershare
P. O. Box 30170
College Station, TX 77842-3170

Computershare
211 Quality Circle, Suite 210
College Station, TX 77845-4470

DIRECT DEPOSIT OF DIVIDENDS FOR REGISTERED HOLDERS

We encourage registered holders to have dividends deposited directly into a designated account to ensure prompt, secure delivery of your funds. You may arrange for Direct Deposit by updating your banking details with Computershare (www-us.computershare.com/Investor/myProfile) once you have established online access to your account with Computershare.

CORPORATE GOVERNANCE AND COMPLIANCE WITH REGULATORY AND NEW YORK STOCK EXCHANGE REQUIREMENTS

We invite you to visit the Investor Relations and Corporate Governance sections of our website, <http://investor.proassurance.com>. There you will find important information about our Company, including our Corporate Governance Principles and Code of Ethics and Conduct, which were developed and adopted by our Board of Directors. The Governance section of our website (<http://investor.proassurance.com/govdocs>) also provides copies of the Board-adopted charters for our Audit, Compensation, and Nominating/Corporate Governance Committees and our Internal Audit Charter. Our Corporate Governance section also provides information such as stock ownership guidelines, committee composition and leadership, and director independence, including categorical standards to assist in determining independence.

Our filings with the Securities and Exchange Commission (SEC) are available in the Investor Relations section of our website (<http://investor.proassurance.com/Docs>). Our SEC filings are also available in the EDGAR section of the SEC's website (www.sec.gov/edgar.shtml).

W. Stancil Starnes, our then Chief Executive Officer, submitted the required Section 12(a) CEO Certification to the New York

Stock Exchange on May 23, 2019. Additionally, we have been timely in the filing of CEO/CFO certifications as required in Section 302 of the Sarbanes-Oxley Act. These certifications are published as exhibits in our Form 10-K filed with the SEC on February 20, 2020.

INVESTOR RELATIONS

The Investor Relations section of our website (<http://investor.proassurance.com>) also contains detailed financial information, a dividend payment history, SEC filings, the latest news releases about the Company and our latest presentation materials. We also maintain an archive of presentation materials, although you should realize that archived information, by its very nature, may no longer be accurate.

OBTAINING INFORMATION DIRECTLY FROM PROASSURANCE

Any of the documents mentioned above may be obtained from our Communications and Investor Relations Department using one of the contact methods below:

By Email

Investor@ProAssurance.com

By U. S. Postal Service

ProAssurance Corporation
Investor Relations
P. O. Box 590009
Birmingham, AL 35259-0009

By Phone or Fax

Phone: (205) 877-4400
(800) 282-6242
Fax: (205) 802-4799

Annual Meeting

The 2020 Annual Meeting is scheduled for 9:00 AM CDT on Wednesday, May 20, 2020 at the headquarters of ProAssurance Corporation, 100 Brookwood Place, Birmingham, Alabama 35209.



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Birmingham, Alabama 35209
(205) 877-4400
(800) 282-6242
proassurance.com