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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 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 : 001-31911

American Equity Investment Life Holding Company
(Exact name of registrant as specified in its charter)

Iowa	**42-1447959**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

6000 Westown Parkway
West Des Moines, Iowa 50266
(Address of principal executive offices, including zip code)

(515) 221-0002
(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 $1	AEL	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Sections 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, 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. (Check one):

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

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

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

APPLICABLE TO CORPORATE ISSUERS:

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

As of November 5, 2019, there were 91,046,262 shares of the registrant's common stock, $1 par value, outstanding.

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PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(Dollars in thousands, except share and per share data)

	September 30, 2019	December 31, 2018
	(Unaudited)	
Assets		
Investments:		
Fixed maturity securities, available for sale, at fair value (amortized cost: 2019 - $48,170,556; 2018 - $46,131,190)	$ 51,854,384	$ 45,923,727
Mortgage loans on real estate	3,212,075	2,943,091
Derivative instruments	963,081	205,149
Other investments	694,416	355,531
Total investments	56,723,956	49,427,498
Cash and cash equivalents	1,138,737	344,396
Coinsurance deposits	5,072,015	4,954,068
Accrued investment income	497,291	468,729
Deferred policy acquisition costs	2,883,599	3,535,838
Deferred sales inducements	1,952,353	2,516,721
Deferred income taxes	—	291,169
Income taxes recoverable	30,277	26,537
Other assets	31,765	60,608
Total assets	$ 68,329,993	$ 61,625,564
Liabilities and Stockholders' Equity		
Liabilities:		
Policy benefit reserves	$ 61,348,138	$ 57,606,009
Other policy funds and contract claims	259,939	270,858
Notes payable	494,982	494,591
Subordinated debentures	243,311	242,982
Amounts due under repurchase agreements	48,931	109,298
Deferred income taxes	143,195	—
Other liabilities	1,664,781	502,725
Total liabilities	64,203,277	59,226,463
Stockholders' equity:		
Preferred stock, par value $1 per share, 2,000,000 shares authorized, 2019 and 2018 - no shares issued and outstanding	—	—
Common stock, par value $1 per share, 200,000,000 shares authorized; issued and outstanding: 2019 - 91,006,950 shares (excluding 1,393,973 treasury shares); 2018 - 90,369,229 shares (excluding 1,535,960 treasury shares)	91,007	90,369
Additional paid-in capital	820,362	811,186
Accumulated other comprehensive income (loss)	1,639,429	(52,432)
Retained earnings	1,575,918	1,549,978
Total stockholders' equity	4,126,716	2,399,101
Total liabilities and stockholders' equity	$ 68,329,993	$ 61,625,564

See accompanying notes to unaudited consolidated financial statements.

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

(Dollars in thousands, except per share data)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	**2018**	**2019**	**2018**
Revenues:				
Premiums and other considerations	$ 5,152	$ 7,240	$ 14,688	$ 22,050
Annuity product charges	63,647	58,365	177,313	164,094
Net investment income	590,412	549,391	1,719,418	1,593,457
Change in fair value of derivatives	(20,042)	595,311	440,472	276,433
Net realized gains (losses) on investments, excluding other than temporary impairment ("OTTI") losses	4,328	(2,196)	(67)	(40,275)
OTTI losses on investments:				
Total OTTI losses	(101)	(14,373)	(1,099)	(16,025)
Portion of OTTI losses recognized from other comprehensive income	—	—	(215)	(1,651)
Net OTTI losses recognized in operations	(101)	(14,373)	(1,314)	(17,676)
Total revenues	643,396	1,193,738	2,350,510	1,998,083
Benefits and expenses:				
Insurance policy benefits and change in future policy benefits	7,627	10,721	23,865	32,091
Interest sensitive and index product benefits	500,285	413,089	888,062	1,355,135
Amortization of deferred sales inducements	(55,769)	55,244	(2,675)	233,779
Change in fair value of embedded derivatives	212,278	383,716	1,306,163	(585,465)
Interest expense on notes payable	6,382	6,376	19,141	19,122
Interest expense on subordinated debentures	3,968	3,942	12,113	11,450
Amortization of deferred policy acquisition costs	(120,934)	81,053	(45,856)	336,741
Other operating costs and expenses	38,554	31,924	114,959	95,704
Total benefits and expenses	592,391	986,065	2,315,772	1,498,557
Income before income taxes	51,005	207,673	34,738	499,526
Income tax expense	13,645	38,345	8,798	95,333
Net income	$ 37,360	$ 169,328	$ 25,940	$ 404,193
Earnings per common share	$ 0.41	$ 1.87	$ 0.28	$ 4.48
Earnings per common share - assuming dilution	$ 0.41	$ 1.85	$ 0.28	$ 4.42
Weighted average common shares outstanding (in thousands):				
Earnings per common share	91,252	90,486	91,081	90,278
Earnings per common share - assuming dilution	91,711	91,651	91,748	91,355

See accompanying notes to unaudited consolidated financial statements.

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(Dollars in thousands)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net income	$ 37,360	$ 169,328	$ 25,940	$ 404,193
Other comprehensive income (loss):				
Change in net unrealized investment gains/losses (1)	742,756	(138,863)	2,136,989	(971,451)
Noncredit component of OTTI losses (1)	—	—	103	775
Reclassification of unrealized investment gains/losses to net income (1)	2,681	(525)	3,809	(19,026)
Other comprehensive income (loss) before income tax	745,437	(139,388)	2,140,901	(989,702)
Income tax effect related to other comprehensive income (loss)	(155,992)	29,270	(449,040)	207,837
Other comprehensive income (loss)	589,445	(110,118)	1,691,861	(781,865)
Comprehensive income (loss)	$ 626,805	$ 59,210	$ 1,717,801	$ (377,672)

(1) Net of related adjustments to amortization of deferred sales inducements and deferred policy acquisition costs.

See accompanying notes to unaudited consolidated financial statements.

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

(Dollars in thousands, except share data)
(Unaudited)

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Stockholders' Equity
For the nine months ended September 30, 2019					
Balance at December 31, 2018	$ 90,369	$ 811,186	$ (52,432)	$ 1,549,978	$ 2,399,101
Net income for period	—	—	—	25,940	25,940
Other comprehensive income	—	—	1,691,861	—	1,691,861
Share-based compensation	—	9,402	—	—	9,402
Issuance of 637,721 shares of common stock under compensation plans	638	(226)	—	—	412
Balance at September 30, 2019	$ 91,007	$ 820,362	$ 1,639,429	$ 1,575,918	$ 4,126,716

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Retained Earnings	Total Stockholders' Equity
For the three months ended September 30, 2019					
Balance at June 30, 2019	$ 90,936	$ 817,997	$ 1,049,984	$ 1,538,558	$ 3,497,475
Net income for period	—	—	—	37,360	37,360
Other comprehensive income	—	—	589,445	—	589,445
Share-based compensation	—	2,042	—	—	2,042
Issuance of 70,626 shares of common stock under compensation plans	71	323	—	—	394
Balance at September 30, 2019	$ 91,007	$ 820,362	$ 1,639,429	$ 1,575,918	$ 4,126,716

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Retained Earnings	Total Stockholders' Equity
For the nine months ended September 30, 2018					
Balance at December 31, 2017	$ 89,331	$ 791,446	$ 724,599	$ 1,244,781	$ 2,850,157
Net income for period	—	—	—	404,193	404,193
Other comprehensive loss	—	—	(781,865)	—	(781,865)
Implementation of accounting standard related to the reclassification of certain tax effects	—	—	127,554	(127,554)	—
Share-based compensation	—	8,444	—	—	8,444
Issuance of 946,539 shares of common stock under compensation plans	947	7,420	—	—	8,367
Balance at September 30, 2018	$ 90,278	$ 807,310	$ 70,288	$ 1,521,420	$ 2,489,296

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Retained Earnings	Total Stockholders' Equity
For the three months ended September 30, 2018					
Balance at June 30, 2018	$ 90,233	$ 804,094	$ 180,406	$ 1,352,092	$ 2,426,825
Net income for period	—	—	—	169,328	169,328
Other comprehensive loss	—	—	(110,118)	—	(110,118)
Share-based compensation	—	2,398	—	—	2,398
Issuance of 44,280 shares of common stock under compensation plans	45	818	—	—	863
Balance at September 30, 2018	$ 90,278	$ 807,310	$ 70,288	$ 1,521,420	$ 2,489,296

See accompanying notes to unaudited consolidated financial statements.

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2019	**2018**
Operating activities		
Net income	$ 25,940	$ 404,193
Adjustments to reconcile net income to net cash provided by operating activities:		
Interest sensitive and index product benefits	888,062	1,355,135
Amortization of deferred sales inducements	(2,675)	233,779
Annuity product charges	(177,313)	(164,094)
Change in fair value of embedded derivatives	1,306,163	(585,465)
Change in traditional life and accident and health insurance reserves	(5,113)	2,241
Policy acquisition costs deferred	(344,293)	(289,131)
Amortization of deferred policy acquisition costs	(45,856)	336,741
Provision for depreciation and other amortization	2,863	2,584
Amortization of discounts and premiums on investments	21,762	15,315
Realized gains (losses) on investments and net OTTI losses recognized in operations	1,381	57,951
Distributions from equity method investments	1,160	1,043
Change in fair value of derivatives	(440,272)	(276,688)
Deferred income taxes	(14,676)	(4,750)
Share-based compensation	9,402	8,444
Change in accrued investment income	(28,562)	(52,991)
Change in income taxes recoverable/payable	(3,740)	(47,997)
Change in other assets	(2,009)	(469)
Change in other policy funds and contract claims	(16,465)	(16,203)
Change in collateral held for derivatives	737,103	(335,548)
Change in collateral held for securities lending	365,592	—
Change in other liabilities	20,670	(48,663)
Other	(10,844)	(9,188)
Net cash provided by operating activities	2,288,280	586,239
Investing activities		
Sales, maturities, or repayments of investments:		
Fixed maturity securities, available for sale	2,184,662	2,797,834
Mortgage loans on real estate	207,054	239,135
Derivative instruments	352,634	1,252,754
Other investments	7,887	156,536
Acquisitions of investments:		
Fixed maturity securities, available for sale	(4,214,476)	(5,215,295)
Mortgage loans on real estate	(474,734)	(465,473)
Derivative instruments	(620,638)	(642,849)
Other investments	(344,652)	(67,646)
Purchases of property, furniture and equipment	(3,148)	(3,510)
Net cash used in investing activities	(2,905,411)	(1,948,514)

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS (Continued)

(Dollars in thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2019	**2018**
Financing activities		
Receipts credited to annuity and single premium universal life policyholder account balances	$ 4,035,051	$ 3,255,014
Coinsurance deposits	67,858	(53,806)
Return of annuity policyholder account balances	(2,626,214)	(2,248,876)
Net proceeds from amounts due under repurchase agreements	(60,367)	116,399
Proceeds from issuance of common stock	412	8,367
Change in checks in excess of cash balance	(5,268)	(19,626)
Net cash provided by financing activities	1,411,472	1,057,472
Increase (decrease) in cash and cash equivalents	794,341	(304,803)
Cash and cash equivalents at beginning of period	344,396	1,434,045
Cash and cash equivalents at end of period	$ 1,138,737	$ 1,129,242
Supplemental disclosures of cash flow information		
Cash paid during period for:		
Interest expense	$ 26,490	$ 24,009
Income taxes	28,193	148,157
Non-cash operating activity:		
Deferral of sales inducements	140,960	135,015

See accompanying notes to unaudited consolidated financial statements.

AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

September 30, 2019
(Unaudited)

1. Significant Accounting Policies

Consolidation and Basis of Presentation

The accompanying consolidated financial statements of American Equity Investment Life Holding Company ("we", "us" or "our") have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all the information and notes required by GAAP for complete financial statements. The consolidated financial statements reflect all adjustments, consisting only of normal recurring items, which are necessary to present fairly our financial position and results of operations on a basis consistent with the prior audited consolidated financial statements. Operating results for the three and nine month periods ended September 30, 2019 are not necessarily indicative of the results that may be expected for the year ended December 31, 2019. All significant intercompany accounts and transactions have been eliminated. The preparation of financial statements requires the use of management estimates. For further information related to a description of areas of judgment and estimates and other information necessary to understand our financial position and results of operations, refer to the audited consolidated financial statements and notes included in our Annual Report on Form 10-K for the year ended December 31, 2018.

Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued an accounting standards update (“ASU”) that requires recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This ASU affects accounting and disclosure more dramatically for lessees as accounting and disclosure for lessors is mainly unchanged. We adopted this ASU on January 1, 2019. The adoption of this ASU resulted in the recognition of a lease asset and lease liability of $3.8 million, respectively, on our consolidated balance sheet at September 30, 2019.

In March 2017, the FASB issued an ASU that applies to certain callable debt securities where the amortized cost basis is at a premium to the price repayable by the issuer at the earliest call date. Under this guidance, the premium is amortized to the first call date. We adopted this ASU on January 1, 2019. The adoption of this ASU did not have a material impact on our consolidated financial statements.

In June 2018, the FASB issued an ASU that expands the scope of Accounting Standards Codification 718, Compensation-Stock Compensation, to include share-based payment transactions for acquiring goods and services to nonemployees and eliminates the existing accounting model for nonemployee share-based payment awards. We adopted this ASU on January 1, 2019. While this ASU results in an earlier measurement date for our nonemployee restricted stock units that have not vested as of January 1, 2019, there was no impact to our consolidated financial statements upon adoption.

New Accounting Pronouncements

In June 2016, the FASB issued an ASU that significantly changes the impairment model for most financial assets that are measured at amortized cost and certain other instruments from an incurred loss model to an expected loss model that requires these assets be presented at the net amount expected to be collected. In addition, credit losses on available for sale debt securities will be recorded through an allowance account. This ASU will be effective for us on January 1, 2020, with early adoption permitted. Our implementation procedures to date relative to this standard include, but are not limited to, identifying financial assets within the scope of this guidance, developing a current expected credit loss model for our commercial mortgage loans and refining internal processes for financial assets impacted by this guidance. We believe the new impairment model will lead to earlier recognition of credit losses for our commercial mortgage loans.

In August 2018, the FASB issued an ASU that revises certain aspects of the measurement models and disclosure requirements for long duration insurance and investment contracts. The FASB’s objective in issuing this ASU is to improve, simplify, and enhance the accounting for long-duration contracts. The revisions include updating cash flow assumptions in the calculation of the liability for traditional life products, introducing the term ‘market risk benefit’ ("MRB") and requiring all contract features meeting the definition of an MRB to be measured at fair value, simplifying the method used to amortize deferred policy acquisition costs and deferred sales inducements to a constant basis over the expected term of the related contracts rather than based on gross profits and enhancing disclosure requirements. While this ASU is effective for us on January 1, 2022, the transition date (the remeasurement date) is January 1, 2020. Early adoption of this ASU is permitted. We are in the process of evaluating the impact this guidance will have on our consolidated financial statements.

2. Fair Values of Financial Instruments

The following sets forth a comparison of the carrying amounts and fair values of our financial instruments:

	September 30, 2019		December 31, 2018	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
	(Dollars in thousands)			
Assets				
Fixed maturity securities, available for sale	$ 51,854,384	$ 51,854,384	$ 45,923,727	$ 45,923,727
Mortgage loans on real estate	3,212,075	3,293,106	2,943,091	2,920,612
Derivative instruments	963,081	963,081	205,149	205,149
Other investments	694,416	694,416	355,531	348,970
Cash and cash equivalents	1,138,737	1,138,737	344,396	344,396
Coinsurance deposits	5,072,015	4,602,181	4,954,068	4,553,790
Interest rate caps	17	17	597	597
Interest rate swap	—	—	354	354
Counterparty collateral	—	—	33,101	33,101
Liabilities				
Policy benefit reserves	60,996,752	51,320,260	57,249,510	49,180,143
Single premium immediate annuity (SPIA) benefit reserves	259,634	267,876	270,406	279,077
Notes payable	494,982	526,760	494,591	489,985
Subordinated debentures	243,311	247,283	242,982	215,514
Amounts due under repurchase agreements	48,931	48,931	109,298	109,298
Interest rate swap	906	906	—	—

Fair value is the price that would be received to sell an asset or paid to transfer a liability (exit price) in an orderly transaction between market participants at the measurement date. The objective of a fair value measurement is to determine that price for each financial instrument at each measurement date. We meet this objective using various methods of valuation that include market, income and cost approaches.

We categorize our financial instruments into three levels of fair value hierarchy based on the priority of inputs used in determining fair value. The hierarchy defines the highest priority inputs (Level 1) as quoted prices in active markets for identical assets or liabilities. The lowest priority inputs (Level 3) are our own assumptions about what a market participant would use in determining fair value such as estimated future cash flows. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, a financial instrument's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the financial instrument. We categorize financial assets and liabilities recorded at fair value in the consolidated balance sheets as follows:

Level 1— Quoted prices are available in active markets for identical financial instruments as of the reporting date. We do not adjust the quoted price for these financial instruments, even in situations where we hold a large position and a sale could reasonably impact the quoted price.

Level 2— Quoted prices in active markets for similar financial instruments, quoted prices for identical or similar financial instruments in markets that are not active; and models and other valuation methodologies using inputs other than quoted prices that are observable.

Level 3— Models and other valuation methodologies using significant inputs that are unobservable for financial instruments and include situations where there is little, if any, market activity for the financial instrument. The inputs into the determination of fair value require significant management judgment or estimation. Financial instruments that are included in Level 3 are securities for which no market activity or data exists and for which we used discounted expected future cash flows with our own assumptions about what a market participant would use in determining fair value.

Transfers of securities among the levels occur at times and depend on the type of inputs used to determine fair value of each security. There were no transfers between levels during any period presented.

Our assets and liabilities which are measured at fair value on a recurring basis as of September 30, 2019 and December 31, 2018 are presented below based on the fair value hierarchy levels:

	Total Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
	(Dollars in thousands)			
September 30, 2019				
Assets				
Fixed maturity securities, available for sale:				
United States Government full faith and credit	$ 12,343	$ 6,421	$ 5,922	$ —
United States Government sponsored agencies	695,030	—	695,030	—
United States municipalities, states and territories	4,517,661	—	4,517,661	—
Foreign government obligations	207,420	—	207,420	—
Corporate securities	32,897,127	15	32,897,112	—
Residential mortgage backed securities	1,557,156	—	1,557,156	—
Commercial mortgage backed securities	5,839,510	—	5,839,510	—
Other asset backed securities	6,128,137	—	6,128,137	—
Other investments: equity securities	309,313	301,870	7,443	—
Derivative instruments	963,081	—	963,081	—
Cash and cash equivalents	1,138,737	1,138,737	—	—
Interest rate caps	17	—	17	—
	$ 54,265,532	$ 1,447,043	$ 52,818,489	$ —
Liabilities				
Interest rate swap	$ 906	$ —	$ 906	$ —
Fixed index annuities - embedded derivatives	9,381,094	—	—	9,381,094
	$ 9,382,000	$ —	$ 906	$ 9,381,094
December 31, 2018				
Assets				
Fixed maturity securities, available for sale:				
United States Government full faith and credit	$ 11,652	$ 5,900	$ 5,752	$ —
United States Government sponsored agencies	1,138,529	—	1,138,529	—
United States municipalities, states and territories	4,126,267	—	4,126,267	—
Foreign government obligations	230,274	—	230,274	—
Corporate securities	28,371,514	7	28,371,507	—
Residential mortgage backed securities	1,202,159	—	1,202,159	—
Commercial mortgage backed securities	5,379,003	—	5,379,003	—
Other asset backed securities	5,464,329	—	5,464,329	—
Other investments: equity securities	7,437	—	7,437	—
Derivative instruments	205,149	—	205,149	—
Cash and cash equivalents	344,396	344,396	—	—
Interest rate caps	597	—	597	—
Interest rate swap	354	—	354	—
Counterparty collateral	33,101	—	33,101	—
	$ 46,514,761	$ 350,303	$ 46,164,458	$ —
Liabilities				
Fixed index annuities - embedded derivatives	$ 8,165,405	$ —	$ —	$ 8,165,405

The following methods and assumptions were used in estimating the fair values of financial instruments during the periods presented in these consolidated financial statements.

Fixed maturity securities

The fair values of fixed maturity securities in an active and orderly market are determined by utilizing independent pricing services. The independent pricing services incorporate a variety of observable market data in their valuation techniques, including:

- reported trading prices,
- benchmark yields,
- broker-dealer quotes,
- benchmark securities,
- bids and offers,
- credit ratings,
- relative credit information, and
- other reference data.

The independent pricing services also take into account perceived market movements and sector news, as well as a security's terms and conditions, including any features specific to that issue that may influence risk and marketability. Depending on the security, the priority of the use of observable market inputs may change as some observable market inputs may not be relevant or additional inputs may be necessary.

The independent pricing services provide quoted market prices when available. Quoted prices are not always available due to market inactivity. When quoted market prices are not available, the third parties use yield data and other factors relating to instruments or securities with similar characteristics to determine fair value for securities that are not actively traded. We generally obtain one value from our primary external pricing service. In situations where a price is not available from this service, we may obtain quotes or prices from additional parties as needed. Market indices of similar rated asset class spreads are considered for valuations and broker indications of similar securities are compared. Inputs used by the broker include market information, such as yield data and other factors relating to instruments or securities with similar characteristics. Valuations and quotes obtained from third party commercial pricing services are non-binding and do not represent quotes on which one may execute the disposition of the assets.

We validate external valuations at least quarterly through a combination of procedures that include the evaluation of methodologies used by the pricing services, comparison of the prices to a secondary pricing source, analytical reviews and performance analysis of the prices against trends, and maintenance of a securities watch list. Additionally, as needed we utilize discounted cash flow models or perform independent valuations on a case-by-case basis using inputs and assumptions similar to those used by the pricing services. Although we do identify differences from time to time as a result of these validation procedures, we did not make any significant adjustments as of September 30, 2019 and December 31, 2018.

Mortgage loans on real estate

Mortgage loans on real estate are not measured at fair value on a recurring basis. The fair values of mortgage loans on real estate are calculated using discounted expected cash flows using competitive market interest rates currently being offered for similar loans. The fair values of impaired mortgage loans on real estate that we have considered to be collateral dependent are based on the fair value of the real estate collateral (based on appraised values) less estimated costs to sell. The inputs utilized to determine fair value of all mortgage loans are unobservable market data (competitive market interest rates); therefore, fair value of mortgage loans falls into Level 3 in the fair value hierarchy.

Derivative instruments

The fair values of derivative instruments, primarily call options, are based upon the amount of cash that we will receive to settle each derivative instrument on the reporting date. These amounts are determined by our investment team using industry accepted valuation models and are adjusted for the nonperformance risk of each counterparty net of any collateral held. Inputs include market volatility and risk free interest rates and are used in income valuation techniques in arriving at a fair value for each option contract. The nonperformance risk for each counterparty is based upon its credit default swap rate. We have no performance obligations related to the call options purchased to fund our fixed index annuity policy liabilities.

Other investments

Equity securities are the only financial instruments included in other investments that are measured at fair value on a recurring basis (see determination of fair value above). Financial instruments included in other investments that are not measured at fair value on a recurring basis are policy loans, equity method investments and company owned life insurance ("COLI"). We have not attempted to determine the fair values associated with our policy loans, as we believe any differences between carrying values and the fair values afforded these instruments are immaterial to our consolidated financial position and, accordingly, the cost to provide such disclosure does not justify the benefit to be derived. The fair values of our equity method investments are obtained from third parties and determined by calculating the present value of future cash flows discounted by a risk free rate, a risk spread and a liquidity discount. As the risk spread and liquidity discount are unobservable market inputs, the fair value of our equity method investments falls within Level 3 of the fair value hierarchy. The fair value of our COLI approximates the cash surrender value of the policies and falls within Level 2 of the fair value hierarchy.

Cash and cash equivalents

Amounts reported in the consolidated balance sheets for these instruments are reported at their historical cost which approximates fair value due to the nature of the assets assigned to this category.

Interest rate swap and caps

The fair values of our pay fixed/receive variable interest rate swap and our interest rate caps are obtained from third parties and are determined by discounting expected future cash flows using a projected London Interbank Offered Rate ("LIBOR") for the term of the swap and caps.

Counterparty collateral

Amounts reported in other assets in the consolidated balance sheets for these instruments are reported at their historical cost which approximates fair value due to the nature of the assets assigned to this category.

Policy benefit reserves, coinsurance deposits and SPIA benefit reserves

The fair values of the liabilities under contracts not involving significant mortality or morbidity risks (principally deferred annuities), are stated at the cost we would incur to extinguish the liability (i.e., the cash surrender value) as these contracts are generally issued without an annuitization date. The coinsurance deposits related to the annuity benefit reserves have fair values determined in a similar fashion. For period-certain annuity benefit contracts, the fair value is determined by discounting the benefits at the interest rates currently in effect for newly issued immediate annuity contracts. We are not required to and have not estimated the fair value of the liabilities under contracts that involve significant mortality or morbidity risks, as these liabilities fall within the definition of insurance contracts that are exceptions from financial instruments that require disclosures of fair value. Policy benefit reserves, coinsurance deposits and SPIA benefit reserves are not measured at fair value on a recurring basis. All of the fair values presented within these categories fall within Level 3 of the fair value hierarchy as most of the inputs are unobservable market data.

Notes payable

The fair values of our senior unsecured notes are based upon pricing matrices developed by a third party pricing service when quoted market prices are not available and are categorized as Level 2 within the fair value hierarchy. Notes payable are not remeasured at fair value on a recurring basis.

Subordinated debentures

Fair values for subordinated debentures are estimated using discounted cash flow calculations based principally on observable inputs including our incremental borrowing rates, which reflect our credit rating, for similar types of borrowings with maturities consistent with those remaining for the debt being valued. These fair values are categorized as Level 2 within the fair value hierarchy. Subordinated debentures are not measured at fair value on a recurring basis.

Amounts due under repurchase agreements

The amounts reported in the consolidated balance sheets for short term indebtedness under repurchase agreements with variable interest rates approximate their fair values.

Fixed index annuities - embedded derivatives

We estimate the fair value of the embedded derivative component of our fixed index annuity policy benefit reserves at each valuation date by (i) projecting policy contract values and minimum guaranteed contract values over the expected lives of the contracts and (ii) discounting the excess of the projected contract value amounts at the applicable risk free interest rates adjusted for our nonperformance risk related to those liabilities. The projections of policy contract values are based on our best estimate assumptions for future policy growth and future policy decrements. Our best estimate assumptions for future policy growth include assumptions for the expected index credit on the next policy anniversary date which are derived from the fair values of the underlying call options purchased to fund such index credits and the expected costs of annual call options we will purchase in the future to fund index credits beyond the next policy anniversary. The projections of minimum guaranteed contract values include the same best estimate assumptions for policy decrements as were used to project policy contract values.

Within this determination we have the following significant unobservable inputs: 1) the expected cost of annual call options we will purchase in the future to fund index credits beyond the next policy anniversary and 2) our best estimates for future policy decrements, primarily lapse, partial withdrawal and mortality rates. As of September 30, 2019 and December 31, 2018, we utilized an estimate of 2.90% and 3.10%, respectively, for the expected cost of annual call options, which are based on estimated long-term account value growth and a historical review of our actual option costs.

Our best estimate assumptions for lapse, partial withdrawal and mortality rates are based on our actual experience and our outlook as to future expectations for such assumptions. These assumptions, which are consistent with the assumptions used in calculating deferred policy acquisition costs and deferred sales inducements, are reviewed on a quarterly basis and are revised as our experience develops and/or as future expectations change. The following table presents average lapse rate and partial withdrawal rate assumptions, by contract duration, used in estimating the fair value of the embedded derivative component of our fixed index annuity policy benefit reserves at each reporting date:

	Average Lapse Rates		**Average Partial Withdrawal Rates**	
Contract Duration (Years)	**September 30, 2019**	**December 31, 2018**	**September 30, 2019**	**December 31, 2018**
1 - 5	0.86%	2.05%	3.35%	3.33%
6 - 10	1.30%	7.28%	4.14%	3.33%
11 - 15	3.48%	11.35%	4.17%	3.35%
16 - 20	9.45%	11.90%	4.08%	3.22%
20+	7.00%	11.57%	3.86%	3.22%

Lapse rates are generally expected to increase as surrender charge percentages decrease. Lapse expectations reflect a significant increase in the year in which the surrender charge period on a contract ends. We review assumptions quarterly and as a result of this review we lowered lapse rate assumptions in the third quarter of 2019 as our experience indicates lapse rates have been lower than previously estimated.

The following table provides a reconciliation of the beginning and ending balances for our Level 3 liabilities, which are measured at fair value on a recurring basis using significant unobservable inputs for the three and nine months ended September 30, 2019 and 2018:

	Three Months Ended September 30,		**Nine Months Ended September 30,**	
	2019	**2018**	**2019**	**2018**
	(Dollars in thousands)			
Fixed index annuities - embedded derivatives				
Beginning balance	$ 9,281,117	$ 8,351,151	$ 8,165,405	$ 8,790,427
Premiums less benefits	74,979	399,234	333,459	1,354,881
Change in fair value, net	24,998	196,808	882,230	(1,198,115)
Ending balance	$ 9,381,094	$ 8,947,193	$ 9,381,094	$ 8,947,193

The fair value of our fixed index annuities embedded derivatives is net of coinsurance ceded of $614.6 million and $538.8 million as of September 30, 2019 and December 31, 2018, respectively. Change in fair value, net for each period in our embedded derivatives is included in change in fair value of embedded derivatives in the unaudited consolidated statements of operations.

Certain derivatives embedded in our fixed index annuity contracts are our most significant financial instrument measured at fair value that are categorized as Level 3 in the fair value hierarchy. The contractual obligations for future annual index credits within our fixed index annuity contracts are treated as a "series of embedded derivatives" over the expected life of the applicable contracts. We estimate the fair value of these embedded derivatives at each valuation date by the method described above under **fixed index annuities - embedded derivatives.** The projections of minimum guaranteed contract values include the same best estimate assumptions for policy decrements as were used to project policy contract values.

The most sensitive assumption in determining policy liabilities for fixed index annuities is the rates used to discount the excess projected contract values. As indicated above, the discount rate reflects our nonperformance risk. If the discount rates used to discount the excess projected contract values at September 30, 2019, were to increase by 100 basis points, the fair value of the embedded derivatives would decrease by $902.0 million recorded through operations as a decrease in the change in fair value of embedded derivatives and there would be a corresponding decrease of $370.5 million to our combined balance for deferred policy acquisition costs and deferred sales inducements recorded through operations as an increase in amortization of deferred policy acquisition costs and deferred sales inducements. A decrease by 100 basis points in the discount rate used to discount the excess projected contract values would increase the fair value of the embedded derivatives by $1.1 billion recorded through operations as an increase in the change in fair value of embedded derivatives and there would be a corresponding increase of $462.4 million to our combined balance for deferred policy acquisition costs and deferred sales inducements recorded through operations as a decrease in amortization of deferred policy acquisition costs and deferred sales inducements.

3. Investments

At September 30, 2019 and December 31, 2018, the amortized cost and fair value of fixed maturity securities were as follows:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(Dollars in thousands)			
September 30, 2019				
Fixed maturity securities, available for sale:				
United States Government full faith and credit	$ 11,832	$ 511	$ —	$ 12,343
United States Government sponsored agencies	663,662	33,420	(2,052)	695,030
United States municipalities, states and territories	4,053,836	464,539	(714)	4,517,661
Foreign government obligations	186,979	20,441	—	207,420
Corporate securities	30,042,589	2,959,486	(104,948)	32,897,127
Residential mortgage backed securities	1,434,116	124,648	(1,608)	1,557,156
Commercial mortgage backed securities	5,564,871	279,881	(5,242)	5,839,510
Other asset backed securities	6,212,671	107,933	(192,467)	6,128,137
	$ 48,170,556	$ 3,990,859	$ (307,031)	$ 51,854,384
December 31, 2018				
Fixed maturity securities, available for sale:				
United States Government full faith and credit	$ 11,872	$ 102	$ (322)	$ 11,652
United States Government sponsored agencies	1,208,468	13,095	(83,034)	1,138,529
United States municipalities, states and territories	3,880,703	261,222	(15,658)	4,126,267
Foreign government obligations	226,860	7,573	(4,159)	230,274
Corporate securities	28,483,138	727,105	(838,729)	28,371,514
Residential mortgage backed securities	1,134,623	71,661	(4,125)	1,202,159
Commercial mortgage backed securities	5,492,271	21,558	(134,826)	5,379,003
Other asset backed securities	5,693,255	41,308	(270,234)	5,464,329
	$ 46,131,190	$ 1,143,624	$ (1,351,087)	$ 45,923,727

The amortized cost and fair value of fixed maturity securities at September 30, 2019, by contractual maturity, are shown below. Actual maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. All of our mortgage and other asset backed securities provide for periodic payments throughout their lives and are shown below as separate lines.

	Available for sale	
	Amortized Cost	Fair Value
	(Dollars in thousands)	
Due in one year or less	$ 404,010	$ 409,265
Due after one year through five years	5,612,668	5,824,616
Due after five years through ten years	10,399,862	11,063,045
Due after ten years through twenty years	10,051,773	11,398,510
Due after twenty years	8,490,585	9,634,145
	34,958,898	38,329,581
Residential mortgage backed securities	1,434,116	1,557,156
Commercial mortgage backed securities	5,564,871	5,839,510
Other asset backed securities	6,212,671	6,128,137
	$ 48,170,556	$ 51,854,384

Net unrealized gains (losses) on available for sale fixed maturity securities reported as a separate component of stockholders' equity were comprised of the following:

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Net unrealized gains (losses) on available for sale fixed maturity securities	$ 3,683,828	$ (207,463)
Adjustments for assumed changes in amortization of deferred policy acquisition costs and deferred sales inducements	(1,637,819)	112,571
Deferred income tax valuation allowance reversal	22,534	22,534
Deferred income tax benefit (expense)	(429,114)	19,926
Net unrealized gains (losses) reported as accumulated other comprehensive income (loss)	$ 1,639,429	$ (52,432)

The National Association of Insurance Commissioners ("NAIC") assigns designations to fixed maturity securities. These designations range from Class 1 (highest quality) to Class 6 (lowest quality). In general, securities are assigned a designation based upon the ratings they are given by the Nationally Recognized Statistical Rating Organizations ("NRSRO’s"). The NAIC designations are utilized by insurers in preparing their annual statutory statements. NAIC Class 1 and 2 designations are considered "investment grade" while NAIC Class 3 through 6 designations are considered "non-investment grade." Based on the NAIC designations, we had 98% and 97% of our fixed maturity portfolio rated investment grade at September 30, 2019 and December 31, 2018, respectively.

The following table summarizes the credit quality, as determined by NAIC designation, of our fixed maturity portfolio as of the dates indicated:

	September 30, 2019		December 31, 2018	
NAIC Designation	Amortized Cost	Fair Value	Amortized Cost	Fair Value
	(Dollars in thousands)			
1	$ 27,657,160	$ 30,351,227	$ 26,588,352	$ 26,921,843
2	19,171,556	20,232,420	17,901,161	17,528,072
3	1,179,714	1,145,174	1,396,650	1,269,242
4	126,833	101,830	173,987	137,991
5	29,759	16,920	23,836	19,453
6	5,534	6,813	47,204	47,126
	$ 48,170,556	$ 51,854,384	$ 46,131,190	$ 45,923,727

The following table shows our investments' gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities (consisting of 886 and 2,715 securities, respectively) have been in a continuous unrealized loss position, at September 30, 2019 and December 31, 2018:

	Less than 12 months		12 months or more		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
	(Dollars in thousands)					
September 30, 2019						
Fixed maturity securities, available for sale:						
United States Government sponsored agencies	$ 119,718	$ (282)	$ 203,230	$ (1,770)	$ 322,948	$ (2,052)
United States municipalities, states and territories	97,111	(668)	3,116	(46)	100,227	(714)
Corporate securities:						
Finance, insurance and real estate	330,617	(3,576)	144,633	(2,095)	475,250	(5,671)
Manufacturing, construction and mining	135,697	(1,003)	56,550	(3,921)	192,247	(4,924)
Utilities and related sectors	56,274	(2,272)	50,072	(4,928)	106,346	(7,200)
Wholesale/retail trade	18,356	(293)	121,902	(13,234)	140,258	(13,527)
Services, media and other	188,946	(10,486)	424,760	(63,140)	613,706	(73,626)
Residential mortgage backed securities	116,116	(614)	11,918	(994)	128,034	(1,608)
Commercial mortgage backed securities	239,503	(1,355)	203,268	(3,887)	442,771	(5,242)
Other asset backed securities	1,739,759	(48,538)	2,386,760	(143,929)	4,126,519	(192,467)
	$ 3,042,097	$ (69,087)	$ 3,606,209	$ (237,944)	$ 6,648,306	$ (307,031)
December 31, 2018						
Fixed maturity securities, available for sale:						
United States Government full faith and credit	$ 543	$ (3)	$ 7,785	$ (319)	$ 8,328	$ (322)
United States Government sponsored agencies	30,089	(949)	953,421	(82,085)	983,510	(83,034)
United States municipalities, states and territories	340,103	(6,816)	162,997	(8,842)	503,100	(15,658)
Foreign government obligations	98,511	(1,748)	11,859	(2,411)	110,370	(4,159)
Corporate securities:						
Finance, insurance and real estate	2,501,640	(87,220)	884,870	(77,507)	3,386,510	(164,727)
Manufacturing, construction and mining	2,045,859	(84,972)	349,738	(34,635)	2,395,597	(119,607)
Utilities and related sectors	2,313,271	(82,119)	591,482	(45,838)	2,904,753	(127,957)
Wholesale/retail trade	1,032,603	(51,228)	198,805	(26,326)	1,231,408	(77,554)
Services, media and other	4,618,477	(196,520)	1,072,722	(152,364)	5,691,199	(348,884)
Residential mortgage backed securities	145,613	(2,638)	22,689	(1,487)	168,302	(4,125)
Commercial mortgage backed securities	2,141,560	(37,150)	2,090,835	(97,676)	4,232,395	(134,826)
Other asset backed securities	4,073,249	(252,265)	271,994	(17,969)	4,345,243	(270,234)
	$ 19,341,518	$ (803,628)	$ 6,619,197	$ (547,459)	$ 25,960,715	$ (1,351,087)

The unrealized losses at September 30, 2019 are principally related to timing of the purchases of these securities, which carry less yield than those available at September 30, 2019. Approximately 68% and 87% of the unrealized losses on fixed maturity securities shown in the above table for September 30, 2019 and December 31, 2018, respectively, are on securities that are rated investment grade, defined as being the highest two NAIC designations.

Because we did not have the intent to sell fixed maturity securities with unrealized losses and it was not more likely than not that we would be required to sell these securities prior to recovery of the amortized cost, which may be maturity, we did not consider these investments to be other than temporarily impaired as of September 30, 2019 and December 31, 2018.

Changes in net unrealized gains/losses on investments for the three and nine months ended September 30, 2019 and 2018 are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Fixed maturity securities held for investment carried at amortized cost	$ —	$ 2,947	$ —	$ (5,519)
Fixed maturity securities available for sale carried at fair value	$ 990,481	$ (311,954)	$ 3,891,291	$ (2,122,555)
Adjustment for effect on other balance sheet accounts:				
Deferred policy acquisition costs and deferred sales inducements	(245,044)	172,566	(1,750,390)	1,132,853
Deferred income tax asset/liability	(155,992)	29,270	(449,040)	207,837
	(401,036)	201,836	(2,199,430)	1,340,690
Change in net unrealized gains/losses on investments carried at fair value	$ 589,445	$ (110,118)	$ 1,691,861	$ (781,865)

Proceeds from sales of available for sale securities for the nine months ended September 30, 2019 and 2018 were $707.5 million and $1.8 billion, respectively. Scheduled principal repayments, calls and tenders for available for sale fixed maturity securities for the nine months ended September 30, 2019 and 2018 were $1.5 billion and $997.6 million, respectively.

Realized gains and losses on sales are determined on the basis of specific identification of investments based on the trade date. Net realized gains (losses) on investments, excluding net OTTI losses for the three and nine months ended September 30, 2019 and 2018, are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Available for sale fixed maturity securities:				
Gross realized gains	$ 6,164	$ 505	$ 12,590	$ 2,845
Gross realized losses	(1,586)	(1,913)	(5,667)	(43,648)
	4,578	(1,408)	6,923	(40,803)
Other investments:				
Gross realized gains	—	—	7,296	—
Gross realized losses	—	—	(14,446)	—
	—	—	(7,150)	—
Mortgage loans on real estate:				
Increase (decrease) in allowance for credit losses	(250)	(1,255)	160	(785)
Recovery of specific allowance	—	467	—	1,189
Gain on sale of mortgage loans	—	—	—	124
	(250)	(788)	160	528
	$ 4,328	$ (2,196)	$ (67)	$ (40,275)

Losses on available for sale fixed maturity securities in 2019 and 2018 were realized primarily due to strategies to reposition the fixed maturity security portfolio that result in improved net investment income, credit risk or duration profiles as they pertain to our asset liability management.

We review and analyze all investments on an ongoing basis for changes in market interest rates and credit deterioration. This review process includes analyzing our ability to recover the amortized cost basis of each investment that has a fair value that is materially lower than its amortized cost and requires a high degree of management judgment and involves uncertainty. The evaluation of securities for other than temporary impairments is a quantitative and qualitative process, which is subject to risks and uncertainties.

We have a policy and process to identify securities that could potentially have impairments that are other than temporary. This process involves monitoring market events and other items that could impact issuers. The evaluation includes but is not limited to such factors as:

- the length of time and the extent to which the fair value has been less than amortized cost or cost;
- whether the issuer is current on all payments and all contractual payments have been made as agreed;
- the remaining payment terms and the financial condition and near-term prospects of the issuer;
- the lack of ability to refinance due to liquidity problems in the credit market;
- the fair value of any underlying collateral;
- the existence of any credit protection available;
- our intent to sell and whether it is more likely than not we would be required to sell prior to recovery for debt securities;

- consideration of rating agency actions; and
- changes in estimated cash flows of mortgage and asset backed securities.

We determine whether other than temporary impairment losses should be recognized for debt securities by assessing all facts and circumstances surrounding each security. Where the decline in fair value of debt securities is attributable to changes in market interest rates or to factors such as market volatility, liquidity and spread widening, and we anticipate recovery of all contractual or expected cash flows, we do not consider these investments to be other than temporarily impaired because we do not intend to sell these investments and it is not more likely than not we will be required to sell these investments before a recovery of amortized cost, which may be maturity.

If we intend to sell a debt security or if it is more likely than not that we will be required to sell a debt security before recovery of its amortized cost basis, other than temporary impairment has occurred and the difference between amortized cost and fair value will be recognized as a loss in operations.

If we do not intend to sell and it is not more likely than not we will be required to sell the debt security but also do not expect to recover the entire amortized cost basis of the security, an impairment loss would be recognized in operations in the amount of the expected credit loss. We determine the amount of expected credit loss by calculating the present value of the cash flows expected to be collected discounted at each security's acquisition yield based on our consideration of whether the security was of high credit quality at the time of acquisition. The difference between the present value of expected future cash flows and the amortized cost basis of the security is the amount of credit loss recognized in operations. The remaining amount of the other than temporary impairment is recognized in other comprehensive income (loss).

The determination of the credit loss component of a mortgage backed security is based on a number of factors. The primary consideration in this evaluation process is the issuer's ability to meet current and future interest and principal payments as contractually stated at time of purchase. Our review of these securities includes an analysis of the cash flow modeling under various default scenarios considering independent third party benchmarks, the seniority of the specific tranche within the structure of the security, the composition of the collateral and the actual default, loss severity and prepayment experience exhibited. With the input of third party assumptions for default projections, loss severity and prepayment expectations, we evaluate the cash flow projections to determine whether the security is performing in accordance with its contractual obligation.

We utilize the models from a leading structured product software specialist serving institutional investors. These models incorporate each security's seniority and cash flow structure. In circumstances where the analysis implies a potential for principal loss at some point in the future, we use the "best estimate" cash flow projection discounted at the security's effective yield at acquisition to determine the amount of our potential credit loss associated with this security. The discounted expected future cash flows equates to our expected recovery value. Any shortfall of the expected recovery when compared to the amortized cost of the security will be recorded as the credit loss component of other than temporary impairment.

The cash flow modeling is performed on a security-by-security basis and incorporates actual cash flows on the residential mortgage backed securities through the current period, as well as the projection of remaining cash flows using a number of assumptions including default rates, prepayment rates and loss severity rates. The default curves we use are tailored to the Prime or Alt-A residential mortgage backed securities that we own, which assume lower default rates and loss severity for Prime securities versus Alt-A securities. These default curves are scaled higher or lower depending on factors such as current underlying mortgage loan performance, rating agency loss projections, loan to value ratios, geographic diversity, as well as other appropriate considerations.

The determination of the credit loss component of a corporate bond is based on the underlying financial performance of the issuer and their ability to meet their contractual obligations. Considerations in our evaluation include, but are not limited to, credit rating changes, financial statement and ratio analysis, changes in management, significant changes in credit spreads, breaches of financial covenants and a review of the economic outlook for the industry and markets in which they trade. In circumstances where an issuer appears unlikely to meet its future obligation, or the security's price decline is deemed other than temporary, an estimate of credit loss is determined. Credit loss is calculated using default probabilities as derived from the credit default swaps markets in conjunction with recovery rates derived from independent third party analysis or a best estimate of credit loss. This credit loss rate is then incorporated into a present value calculation based on an expected principal loss in the future discounted at the yield at the date of purchase and compared to amortized cost to determine the amount of credit loss associated with the security.

In addition, for debt securities which we do not intend to sell and it is not more likely than not we will be required to sell, but our intent changes due to changes or events that could not have been reasonably anticipated, an other than temporary impairment charge is recognized. Once an impairment charge has been recorded, we then continue to review the other than temporarily impaired securities for appropriate valuation on an ongoing basis. Unrealized losses may be recognized in future periods through a charge to earnings should we later conclude that the decline in fair value below amortized cost is other than temporary pursuant to our accounting policy described above. The use of different methodologies and assumptions to determine the fair value of investments and the timing and amount of impairments may have a material effect on the amounts presented in our consolidated financial statements.

The following table summarizes other than temporary impairments for the three and nine months ended September 30, 2019 and 2018, by asset type:

	Number of Securities	Total OTTI Losses	Portion of OTTI Losses Recognized in (from) Other Comprehensive Income	Net OTTI Losses Recognized in Operations
			(Dollars in thousands)	
Three months ended September 30, 2019				
Fixed maturity securities, available for sale:				
Residential mortgage backed securities	1	$ (101)	$ —	$ (101)
Three months ended September 30, 2018				
Fixed maturity securities, available for sale:				
Corporate securities:				
Capital goods	1	$ (719)	$ —	$ (719)
Consumer discretionary	6	(5,968)	—	(5,968)
Energy	2	(1,212)	—	(1,212)
Financials	5	(3,495)	—	(3,495)
Information technology	1	(550)	—	(550)
Telecommunications	2	(249)	—	(249)
Transportation	1	(178)	—	(178)
Utilities	1	(94)	—	(94)
Commercial mortgage backed securities	1	(1,908)	—	(1,908)
	20	$ (14,373)	$ —	$ (14,373)
Nine months ended September 30, 2019				
Fixed maturity securities, available for sale:				
Residential mortgage backed securities	3	$ (101)	$ (215)	$ (316)
Commercial mortgage backed securities	1	(349)	—	(349)
Other asset backed securities	1	(649)	—	(649)
	5	$ (1,099)	$ (215)	$ (1,314)
Nine months ended September 30, 2018				
Fixed maturity securities, available for sale:				
Corporate securities:				
Capital goods	1	$ (719)	$ —	$ (719)
Consumer discretionary	7	(6,875)	—	(6,875)
Energy	2	(1,212)	—	(1,212)
Financials	5	(3,495)	—	(3,495)
Information technology	1	(550)	—	(550)
Telecommunications	2	(249)	—	(249)
Transportation	1	(178)	—	(178)
Utilities	1	(94)	—	(94)
Residential mortgage backed securities	3	(63)	(295)	(358)
Commercial mortgage backed securities	1	(1,908)	—	(1,908)
Other asset backed securities	1	(682)	(1,356)	(2,038)
	25	$ (16,025)	$ (1,651)	$ (17,676)

The cumulative portion of other than temporary impairments determined to be credit losses which have been recognized in operations for debt securities are summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Cumulative credit loss at beginning of period	$ (165,651)	$ (156,469)	$ (175,398)	$ (157,066)
Additions for the amount related to credit losses for which OTTI has not previously been recognized	—	(14,373)	(998)	(16,025)
Additional credit losses on securities for which OTTI has previously been recognized	(101)	—	(316)	(1,651)
Accumulated losses on securities that were disposed of during the period	10,775	—	21,735	3,900
Cumulative credit loss at end of period	$ (154,977)	$ (170,842)	$ (154,977)	$ (170,842)

The following table summarizes the cumulative noncredit portion of OTTI and the change in fair value since recognition of OTTI, both of which were recognized in other comprehensive income, by major type of security, for securities that are part of our investment portfolio at September 30, 2019 and December 31, 2018:

	Amortized Cost	OTTI Recognized in Other Comprehensive Income (Loss)	Change in Fair Value Since OTTI was Recognized	Fair Value
	(Dollars in thousands)			
September 30, 2019				
Fixed maturity securities, available for sale:				
Corporate securities	$ 28,728	$ (3,700)	$ 10,088	$ 35,116
Residential mortgage backed securities	198,959	(151,562)	180,704	228,101
Commercial mortgage backed securities	12,867	—	271	13,138
Other asset backed securities	977	—	326	1,303
	$ 241,531	$ (155,262)	$ 191,389	$ 277,658
December 31, 2018				
Fixed maturity securities, available for sale:				
Corporate securities	$ 69,580	$ (3,700)	$ 6,195	$ 72,075
Residential mortgage backed securities	245,691	(167,846)	199,191	277,036
Commercial mortgage backed securities	35,244	—	—	35,244
Other asset backed securities	1,692	—	326	2,018
	$ 352,207	$ (171,546)	$ 205,712	$ 386,373

4. Mortgage Loans on Real Estate

Our mortgage loan portfolio is summarized in the following table. There were commitments outstanding of $173.3 million at September 30, 2019.

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Principal outstanding	$ 3,221,152	$ 2,952,464
Loan loss allowance	(8,079)	(8,239)
Deferred prepayment fees	(998)	(1,134)
Carrying value	$ 3,212,075	$ 2,943,091

The portfolio consists of commercial mortgage loans collateralized by the related properties and diversified as to property type, location and loan size. Our mortgage lending policies establish limits on the amount that can be loaned to one borrower and other criteria to attempt to reduce the risk of default. The mortgage loan portfolio is summarized by geographic region and property type as follows:

	September 30, 2019		December 31, 2018	
	Principal	Percent	Principal	Percent
	(Dollars in thousands)			
Geographic distribution				
East	$ 600,204	18.6%	$ 586,773	19.9%
Middle Atlantic	240,241	7.5%	168,969	5.7%
Mountain	372,437	11.6%	357,642	12.1%
New England	9,220	0.3%	9,418	0.3%
Pacific	579,831	18.0%	521,363	17.7%
South Atlantic	739,498	22.9%	694,599	23.5%
West North Central	281,067	8.7%	291,890	9.9%
West South Central	398,654	12.4%	321,810	10.9%
	$ 3,221,152	100.0%	$ 2,952,464	100.0%
Property type distribution				
Office	$ 249,703	7.7%	$ 268,932	9.1%
Medical Office	30,930	1.0%	33,467	1.1%
Retail	1,185,510	36.8%	1,091,627	37.0%
Industrial/Warehouse	859,410	26.7%	762,887	25.8%
Apartment	695,726	21.6%	600,638	20.3%
Agricultural	39,205	1.2%	25,000	0.9%
Mixed use/other	160,668	5.0%	169,913	5.8%
	$ 3,221,152	100.0%	$ 2,952,464	100.0%

Our financing receivables currently consist of one portfolio segment which is our commercial mortgage loan portfolio. These are mortgage loans with collateral consisting of commercial real estate and borrowers consisting mostly of limited liability partnerships or limited liability corporations.

We evaluate our mortgage loan portfolio for the establishment of a loan loss allowance by specific identification of impaired loans and the measurement of an estimated loss for each individual loan identified. A mortgage loan is impaired when it is probable that we will be unable to collect all amounts due according to the contractual terms of the loan agreement. If we determine that the value of any specific mortgage loan is impaired, the carrying amount of the mortgage loan will be reduced to its fair value, based upon the present value of expected future cash flows from the loan discounted at the loan's effective interest rate, or the fair value of the underlying collateral less estimated costs to sell.

In addition, we analyze the mortgage loan portfolio for the need of a general loan allowance for probable losses on all other loans on a quantitative and qualitative basis. The amount of the general loan allowance is based upon management's evaluation of the collectability of the loan portfolio, historical loss experience, delinquencies, credit concentrations, underwriting standards and national and local economic conditions.

We rate each of the mortgage loans in our portfolio based on factors such as historical operating performance, loan to value ratio and economic outlook, among others. We calculate a loss factor to apply to each rating based on historical losses we have recognized in our mortgage loan portfolio. We apply the loss factors to the total principal outstanding within each rating category to determine an appropriate estimate of the general loan loss allowance. We also assess the portfolio qualitatively and apply a loss rate to all loans without a specific allowance based on management's assessment of economic conditions, and we apply an additional amount of loss allowance to a group of loans that we have identified as having higher risk of loss.

The following table presents a rollforward of our specific and general valuation allowances for mortgage loans on real estate:

	Three Months Ended September 30, 2019		Three Months Ended September 30, 2018	
	Specific Allowance	General Allowance	Specific Allowance	General Allowance
	(Dollars in thousands)			
Beginning allowance balance	$ (229)	$ (7,600)	$ (696)	$ (5,630)
Charge-offs	—	—	—	—
Recoveries	—	—	467	—
Change in provision for credit losses	—	(250)	(1,255)	—
Ending allowance balance	$ (229)	$ (7,850)	$ (1,484)	$ (5,630)

	Nine Months Ended September 30, 2019		Nine Months Ended September 30, 2018	
	Specific Allowance	General Allowance	Specific Allowance	General Allowance
	(Dollars in thousands)			
Beginning allowance balance	$ (229)	$ (8,010)	$ (1,418)	$ (6,100)
Charge-offs	—	—	—	—
Recoveries	—	—	1,189	—
Change in provision for credit losses	—	160	(1,255)	470
Ending allowance balance	$ (229)	$ (7,850)	$ (1,484)	$ (5,630)

The specific allowance represents the total credit loss allowances on loans which are individually evaluated for impairment. The general allowance is for the group of loans discussed above which are collectively evaluated for impairment. The following table presents the total outstanding principal of loans evaluated for impairment by basis of impairment method:

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Individually evaluated for impairment	$ 1,235	$ 1,253
Collectively evaluated for impairment	3,219,917	2,951,211
Total loans evaluated for impairment	$ 3,221,152	$ 2,952,464

Charge-offs include allowances that have been established on loans that were satisfied either by taking ownership of the collateral or by some other means such as discounted pay-off or loan sale. When ownership of the property is taken it is recorded at the lower of the mortgage loan's carrying value or the property's fair value (based on appraised values) less estimated costs to sell. The real estate owned is recorded as a component of Other investments and the mortgage loan is recorded as fully paid, with any allowance for credit loss that has been established charged off. Fair value of the real estate is determined by third party appraisal. Recoveries are situations where we have received a payment from the borrower in an amount greater than the carrying value of the loan (principal outstanding less specific allowance). We did not own any real estate during the three and nine months ended September 30, 2019 and 2018.

We analyze credit risk of our mortgage loans by analyzing all available evidence on loans that are delinquent and loans that are in a workout period.

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Credit Exposure - By Payment Activity		
Performing	$ 3,221,152	$ 2,952,464
In workout	—	—
Collateral dependent	—	—
	$ 3,221,152	$ 2,952,464

Loans that are categorized as "in workout" consist of loans that we have agreed to lower or no mortgage payments for a period of time while the borrowers address cash flow and/or operational issues. The key features of these workouts have been determined on a loan-by-loan basis. Most of these loans are in a period of low cash flow due to tenants vacating their space or tenants requesting rent relief during difficult economic periods. Generally, we have allowed the borrower a six month interest only period and in some cases a twelve month period of interest only. Interest only workout loans are expected to return to their regular debt service payments after the interest only period. Interest only loans that are not fully amortizing will have a larger balance at their balloon date than originally contracted. Fully amortizing loans that are in interest only periods will have larger debt service payments for their remaining term due to lost principal payments during the interest only period. In limited circumstances we have allowed borrowers to pay the principal portion of their loan payment into an escrow account that can be used for capital and tenant improvements for a period of not more than twelve months. In these situations new loan amortization schedules are calculated based on the principal not collected during this twelve month workout period and larger payments are collected for the remaining term of each loan. In all cases, the original interest rate and maturity date have not been modified, and we have not forgiven any principal amounts.

Mortgage loans are considered delinquent when they become 60 days or more past due. In general, when loans become 90 days past due, become collateral dependent or enter a period with no debt service payments required we place them on non-accrual status and discontinue recognizing interest income. If payments are received on a delinquent loan, interest income is recognized to the extent it would have been recognized if normal principal and interest would have been received timely. If payments are received to bring a delinquent loan back to current we will resume accruing interest income on that loan. There were no loans in non-accrual status at September 30, 2019 and December 31, 2018, respectively.

We define collateral dependent loans as those mortgage loans for which we will depend on the value of the collateral real estate to satisfy the outstanding principal of the loan.

All of our commercial mortgage loans depend on the cash flow of the borrower to be at a sufficient level to service the principal and interest payments as they come due. In general, cash inflows of the borrowers are generated by collecting monthly rent from tenants occupying space within the borrowers' properties. Our borrowers face collateral risks such as tenants going out of business, tenants struggling to make rent payments as they become due, and tenants canceling leases and moving to other locations. We have a number of loans where the real estate is occupied by a single tenant. Our borrowers sometimes face both a reduction in cash flow on their mortgage property as well as a reduction in the fair value of the real estate collateral. If borrowers are unable to replace lost rent revenue and increases in the fair value of their property do not materialize, we could potentially incur more losses than what we have allowed for in our specific and general loan loss allowances.

Aging of financing receivables is summarized in the following table, with loans in a "workout" period as of the reporting date considered current if payments are current in accordance with agreed upon terms:

	30 - 59 Days	60 - 89 Days	90 Days and Over	Total Past Due	Current	Collateral Dependent Receivables	Total Financing Receivables
				(Dollars in thousands)			
Commercial Mortgage Loans							
September 30, 2019	$ —	$ —	$ —	$ —	$ 3,221,152	$ —	$ 3,221,152
December 31, 2018	$ —	$ —	$ —	$ —	$ 2,952,464	$ —	$ 2,952,464

Financing receivables summarized in the following two tables represent all loans that we are either not currently collecting, or those we feel it is probable we will not collect all amounts due according to the contractual terms of the loan agreements (all loans that we have worked with the borrower to alleviate short-term cash flow issues, loans delinquent for 60 days or more at the reporting date, loans we have determined to be collateral dependent and loans that we have recorded specific impairments on that we feel may continue to have performance issues).

	Recorded Investment	Unpaid Principal Balance	Related Allowance
		(Dollars in thousands)	
September 30, 2019			
Mortgage loans with an allowance	$ 1,006	$ 1,235	$ (229)
Mortgage loans with no related allowance	—	—	—
	$ 1,006	$ 1,235	$ (229)
December 31, 2018			
Mortgage loans with an allowance	$ 1,024	$ 1,253	$ (229)
Mortgage loans with no related allowance	—	—	—
	$ 1,024	$ 1,253	$ (229)

		Average Recorded Investment		Interest Income Recognized
		(Dollars in thousands)		
Three months ended September 30, 2019				
Mortgage loans with an allowance	$	1,009	$	17
Mortgage loans with no related allowance		—		—
	$	1,009	$	17
Three months ended September 30, 2018				
Mortgage loans with an allowance	$	2,337	$	37
Mortgage loans with no related allowance		—		—
	$	2,337	$	37
Nine months ended September 30, 2019				
Mortgage loans with an allowance	$	1,015	$	52
Mortgage loans with no related allowance		—		—
	$	1,015	$	52
Nine months ended September 30, 2018				
Mortgage loans with an allowance	$	2,386	$	136
Mortgage loans with no related allowance		—		—
	$	2,386	$	136

A Troubled Debt Restructuring ("TDR") is a situation where we have granted a concession to a borrower for economic or legal reasons related to the borrower's financial difficulties that we would not otherwise consider. A mortgage loan that has been granted new terms, including workout terms as described previously, would be considered a TDR if it meets conditions that would indicate a borrower is experiencing financial difficulty and the new terms constitute a concession on our part. We analyze all loans where we have agreed to workout terms and all loans that we have refinanced to determine if they meet the definition of a TDR. We consider the following factors in determining whether or not a borrower is experiencing financial difficulty:

- borrower is in default,
- borrower has declared bankruptcy,
- there is growing concern about the borrower's ability to continue as a going concern,
- borrower has insufficient cash flows to service debt,
- borrower's inability to obtain funds from other sources, and
- there is a breach of financial covenants by the borrower.

If the borrower is determined to be in financial difficulty, we consider the following conditions to determine if the borrower is granted a concession:

- assets used to satisfy debt are less than our recorded investment,
- interest rate is modified,
- maturity date extension at an interest rate less than market rate,
- capitalization of interest,
- delaying principal and/or interest for a period of three months or more, and
- partial forgiveness of the balance or charge-off.

Mortgage loan workouts, refinances or restructures that are classified as TDRs are individually evaluated and measured for impairment. There were no mortgage loans on commercial real estate that we determined to be a TDR at September 30, 2019 and December 31, 2018.

5. Derivative Instruments

None of our derivatives qualify for hedge accounting, thus, any change in the fair value of the derivatives is recognized immediately in the consolidated statements of operations. The fair value of our derivative instruments, including derivative instruments embedded in fixed index annuity contracts, presented in the consolidated balance sheets are as follows:

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Assets		
Derivative instruments		
Call options	$ 963,081	$ 205,149
Other assets		
Interest rate caps	17	597
Interest rate swap	—	354
	$ 963,098	$ 206,100
Liabilities		
Policy benefit reserves - annuity products		
Fixed index annuities - embedded derivatives, net	$ 9,381,094	$ 8,165,405
Other liabilities		
Interest rate swap	906	—
	$ 9,382,000	$ 8,165,405

The changes in fair value of derivatives included in the unaudited consolidated statements of operations are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Change in fair value of derivatives:				
Call options	$ (19,997)	$ 594,872	$ 442,111	$ 273,946
Interest rate swap	(3)	258	(1,059)	1,658
Interest rate caps	(42)	181	(580)	829
	$ (20,042)	$ 595,311	$ 440,472	$ 276,433
Change in fair value of embedded derivatives:				
Fixed index annuities - embedded derivatives	$ 24,998	$ 196,808	$ 882,230	$ (1,198,115)
Other changes in difference between policy benefit reserves computed using derivative accounting vs. long-duration contracts accounting	187,280	186,908	423,933	612,650
	$ 212,278	$ 383,716	$ 1,306,163	$ (585,465)

The amounts presented as "Other changes in difference between policy benefit reserves computed using derivative accounting vs. long-duration contracts accounting" represents the total change in the difference between policy benefit reserves for fixed index annuities computed under the derivative accounting standard and the long-duration contracts accounting standard at each balance sheet date, less the change in fair value of our fixed index annuities embedded derivatives that is presented as Level 3 liabilities in Note 2.

We have fixed index annuity products that guarantee the return of principal to the policyholder and credit interest based on a percentage of the gain in a specified market index. When fixed index annuity deposits are received, a portion of the deposit is used to purchase derivatives consisting of call options on the applicable market indices to fund the index credits due to fixed index annuity policyholders. Substantially all such call options are one year options purchased to match the funding requirements of the underlying policies. The call options are marked to fair value with the change in fair value included as a component of revenues. The change in fair value of derivatives includes the gains or losses recognized at the expiration of the option term and the changes in fair value for open positions. On the respective anniversary dates of the index policies, the index used to compute the index credit is reset and we purchase new call options to fund the next index credit. We manage the cost of these purchases through the terms of our fixed index annuities, which permit us to change caps, participation rates, and/or asset fees, subject to guaranteed minimums on each policy's anniversary date. By adjusting caps, participation rates, or asset fees, we can generally manage option costs except in cases where the contractual features would prevent further modifications.

Our strategy attempts to mitigate any potential risk of loss due to the nonperformance of the counterparties to these call options through a regular monitoring process which evaluates the program's effectiveness. We do not purchase call options that would require payment or collateral to another institution and our call options do not contain counterparty credit-risk-related contingent features. We are exposed to risk of loss in the event of nonperformance by the counterparties and, accordingly, we purchase our option contracts from multiple counterparties and evaluate the creditworthiness of all counterparties prior to purchase of the contracts. All of these options have been purchased from nationally recognized financial institutions with a Standard and Poor's credit rating of A- or higher at the time of purchase and the maximum credit exposure to any single counterparty is subject to concentration limits. We also have credit support agreements that allow us to request the counterparty to provide collateral to us when the fair value of our exposure to the counterparty exceeds specified amounts.

The notional amount and fair value of our call options by counterparty and each counterparty's current credit rating are as follows:

			September 30, 2019		December 31, 2018	
Counterparty	**Credit Rating (S&P)**	**Credit Rating (Moody's)**	**Notional Amount**	**Fair Value**	**Notional Amount**	**Fair Value**
				(Dollars in thousands)		
Bank of America	A+	Aa2	$ 3,938,470	$ 46,637	$ 6,518,808	$ 6,704
Barclays	A	A2	4,549,168	141,155	2,301,414	27,032
Canadian Imperial Bank of Commerce	A+	Aa2	4,321,739	126,868	4,856,150	29,313
Citibank, N.A.	A+	Aa3	4,064,075	83,451	4,792,208	27,239
Credit Suisse	A+	A1	4,739,536	77,910	2,877,916	12,887
J.P. Morgan	A+	Aa2	4,772,783	101,072	3,701,964	17,564
Morgan Stanley	A+	A1	1,990,733	21,001	3,560,044	1,561
Royal Bank of Canada	AA-	A2	2,720,343	82,946	1,871,305	14,011
Societe Generale	A	A1	3,205,393	106,016	2,343,165	21,681
SunTrust	A-	Baa1	2,017,444	58,986	1,755,030	12,047
Wells Fargo	A+	Aa2	3,656,074	112,408	4,618,569	33,398
Exchange traded			201,850	4,631	224,204	1,712
			$ 40,177,608	$ 963,081	$ 39,420,777	$ 205,149

As of September 30, 2019 and December 31, 2018, we held $0.9 billion and $0.2 billion, respectively, of cash and cash equivalents and other investments from counterparties for derivative collateral, which is included in Other liabilities on our consolidated balance sheets. This derivative collateral limits the maximum amount of economic loss due to credit risk that we would incur if parties to the call options failed completely to perform according to the terms of the contracts to $68.4 million and $16.1 million at September 30, 2019 and December 31, 2018, respectively.

The future index credits on our fixed index annuities are treated as a "series of embedded derivatives" over the expected life of the applicable contract. We do not purchase call options to fund the index liabilities which may arise after the next policy anniversary date. We must value both the call options and the related forward embedded options in the policies at fair value.

We entered into an interest rate swap and interest rate caps to manage interest rate risk associated with the floating rate component on certain of our subordinated debentures. See Note 10 in our Annual Report on Form 10-K for the year ended December 31, 2018 for more information on our subordinated debentures. The terms of the interest rate swap provide that we pay a fixed rate of interest and receive a floating rate of interest. The terms of the interest rate caps limit the three month LIBOR to 2.50%. The interest rate swap and caps are not effective hedges under accounting guidance for derivative instruments and hedging activities. Therefore, we record the interest rate swap and caps at fair value and any net cash payments received or paid are included in the change in fair value of derivatives in the unaudited consolidated statements of operations.

Details regarding the interest rate swap are as follows:

					September 30, 2019	December 31, 2018
Maturity Date	**Notional Amount**	**Receive Rate**	**Pay Rate**	**Counterparty**	**Fair Value**	
					(Dollars in thousands)	
March 15, 2021	$ 85,500	LIBOR	2.415%	SunTrust	$ (906)	$ 354

Details regarding the interest rate caps are as follows:

Maturity Date	Notional Amount	Floating Rate	Cap Rate	Counterparty	September 30, 2019 Fair Value	December 31, 2018 Fair Value
					(Dollars in thousands)	
July 7, 2021	$ 40,000	LIBOR	2.50%	SunTrust	$ 8	$ 302
July 8, 2021	12,000	LIBOR	2.50%	SunTrust	3	91
July 29, 2021	27,000	LIBOR	2.50%	SunTrust	6	204
	$ 79,000				$ 17	$ 597

The interest rate swap converts floating rates to fixed rates until March 2021. The interest rate caps cap our interest rates until July 2021. As of September 30, 2019, we deposited $0.8 million of collateral with the counterparty to the swap.

6. Notes Payable and Amounts Due Under Repurchase Agreements

Notes payable includes the following:

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Senior notes due 2027		
Principal	$ 500,000	$ 500,000
Unamortized debt issue costs	(4,733)	(5,102)
Unamortized discount	(285)	(307)
	$ 494,982	$ 494,591

On June 16, 2017, we issued $500 million aggregate principal amount of senior unsecured notes due 2027 which bear interest at 5.0% per year and will mature on June 15, 2027 (the "2027 Notes"). The 2027 Notes were issued at a $0.3 million discount, which is being amortized over the term of the 2027 Notes using the effective interest method. Contractual interest is payable semi-annually in arrears each June 15th and December 15th. The initial transaction fees and costs totaling $5.8 million were capitalized as deferred financing costs and are being amortized over the term of the 2027 Notes using the effective interest method.

As part of our investment strategy, we enter into securities repurchase agreements (short-term collateralized borrowings). When we do borrow cash on these repurchase agreements, we pledge collateral in the form of debt securities with fair values approximately equal to the amount due and we use the cash to purchase debt securities ahead of the time we collect the cash from selling annuity policies to avoid a lag between the investment of funds and the obligation to credit interest to policyholders. We earn investment income on the securities purchased with these borrowings at a rate in excess of the cost of these borrowings. Such borrowings averaged $9.7 million and $39.4 million during the three and nine months ended September 30, 2019, respectively, compared to $5.1 million and $41.4 million for the same periods in 2018. The maximum amount borrowed was $243.6 million and $544.1 million during the nine months ended September 30, 2019 and 2018, respectively. The weighted average interest rate on amounts due under repurchase agreements was 2.25% and 2.97% for the three and nine months ended September 30, 2019, respectively, compared to 0.00% and 1.66% for the same periods in 2018.

7. Commitments and Contingencies

We are occasionally involved in litigation, both as a defendant and as a plaintiff. In addition, state regulatory bodies, such as state insurance departments, the Securities and Exchange Commission ("SEC"), the Department of Labor, and other regulatory bodies regularly make inquiries and conduct examinations or investigations concerning our compliance with, among other things, insurance laws, securities laws, and the Employee Retirement Income Security Act of 1974, as amended.

In accordance with applicable accounting guidelines, we establish an accrued liability for litigation and regulatory matters when those matters present loss contingencies that are both probable and estimable. As a litigation or regulatory matter is developing we, in conjunction with outside counsel, evaluate on an ongoing basis whether the matter presents a loss contingency that meets conditions indicating the need for accrual and/or disclosure, and if not the matter will continue to be monitored for further developments. If and when the loss contingency related to litigation or regulatory matters is deemed to be both probable and estimable, we will establish an accrued liability with respect to that matter and will continue to monitor the matter for further developments that may affect the amount of the accrued liability.

There can be no assurance that any pending or future litigation will not have a material adverse effect on our business, financial condition, or results of operations.

In addition to our commitments to fund mortgage loans, we have unfunded commitments at September 30, 2019 to limited partnerships of $32.3 million and to fixed maturity securities of $138.5 million.

8. Earnings Per Share

The following table sets forth the computation of earnings per common share and earnings per common share - assuming dilution:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands, except per share data)			
Numerator:				
Net income - numerator for earnings per common share	$ 37,360	$ 169,328	$ 25,940	$ 404,193
Denominator:				
Weighted average common shares outstanding	91,251,590	90,485,567	91,080,681	90,278,209
Effect of dilutive securities:				
Stock options and deferred compensation agreements	190,137	705,465	326,306	750,588
Restricted stock and restricted stock units	268,830	459,854	340,875	326,613
Denominator for earnings per common share - assuming dilution	91,710,557	91,650,886	91,747,862	91,355,410
Earnings per common share	$ 0.41	$ 1.87	$ 0.28	$ 4.48
Earnings per common share - assuming dilution	$ 0.41	$ 1.85	$ 0.28	$ 4.42

During the three months ended September 30, 2019, there were 551,585 options to purchase shares of our common stock outstanding, with an exercise price of $24.79, excluded from the computation of diluted earnings per share. There were no options to purchase shares of our common stock outstanding excluded from the computation of diluted earnings per share during the nine months ended September 30, 2019 or during the three and nine months ended September 30, 2018, as the exercise price of all options outstanding was less than the average market price of our common shares for those periods.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Management's discussion and analysis reviews our unaudited consolidated financial position at September 30, 2019, and the unaudited consolidated results of operations for the three and nine month periods ended September 30, 2019 and 2018, and where appropriate, factors that may affect future financial performance. This analysis should be read in conjunction with our unaudited consolidated financial statements and notes thereto appearing elsewhere in this Form 10-Q, and the audited consolidated financial statements, notes thereto and selected consolidated financial data appearing in our Annual Report on Form 10-K for the year ended December 31, 2018.

Cautionary Statement Regarding Forward-Looking Information

All statements, trend analyses and other information contained in this report and elsewhere (such as in filings by us with the SEC, press releases, presentations by us or our management or oral statements) relative to markets for our products and trends in our operations or financial results, as well as other statements including words such as "anticipate", "believe", "plan", "estimate", "expect", "intend", and other similar expressions, constitute forward-looking statements. We caution that these statements may and often do vary from actual results and the differences between these statements and actual results can be material. Accordingly, we cannot assure you that actual results will not differ materially from those expressed or implied by the forward-looking statements. Factors that could contribute to these differences include, among other things:

- general economic conditions and other factors, including prevailing interest rate levels and stock and credit market performance which may affect (among other things) our ability to sell our products, our ability to access capital resources and the costs associated therewith, the fair value of our investments, which could result in impairments and other than temporary impairments, and certain liabilities, and the lapse rate and profitability of policies;
- customer response to new products and marketing initiatives;
- changes in Federal income tax laws and regulations which may affect the relative income tax advantages of our products;
- increasing competition in the sale of annuities;
- regulatory changes or actions, including those relating to regulation of financial services affecting (among other things) bank sales and underwriting of insurance products and regulation of the sale, underwriting and pricing of products; and
- the risk factors or uncertainties listed from time to time in our filings with the SEC.

For a detailed discussion of these and other factors that might affect our performance, see Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2018 and Item 1A of our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2019.

Our Business and Profitability

We specialize in the sale of individual annuities (primarily fixed index deferred annuities). Under U.S. GAAP, premium collections for deferred annuities are reported as deposit liabilities instead of as revenues. Similarly, cash payments to policyholders are reported as decreases in the liabilities for policyholder account balances and not as expenses. Sources of revenues for products accounted for as deposit liabilities are net investment income, surrender charges assessed against policy withdrawals and fees deducted from policyholder account balances for lifetime income benefit riders, net realized gains (losses) on investments and changes in fair value of derivatives. Components of expenses for products accounted for as deposit liabilities are interest sensitive and index product benefits (primarily interest credited to account balances and changes in the liability for lifetime income benefit riders), changes in fair value of embedded derivatives, amortization of deferred sales inducements and deferred policy acquisition costs, other operating costs and expenses and income taxes.

Our business model contemplates continued growth in invested assets and non-GAAP operating income while maintaining a high quality investment portfolio that will not experience significant losses from impairments of invested assets. We are committed to maintaining a high quality investment portfolio with limited exposure to below investment grade securities and other riskier assets. Growth in invested assets is predicated on a continuation of our high sales achievements of the last five years while at the same time maintaining a high level of retention of the funds received.

Our profitability depends in large part upon:

- the amount of assets under our management,
- investment spreads we earn on our policyholder account balances,
- our ability to manage our investment portfolio to maximize returns and minimize risks such as interest rate changes and defaults or impairment of investments,
- our ability to appropriately price for lifetime income benefit riders offered on certain of our fixed rate and fixed index annuity policies,
- our ability to manage interest rates credited to policyholders and costs of the options purchased to fund the annual index credits on our fixed index annuities,
- our ability to manage the costs of acquiring new business (principally commissions paid to agents and distribution partners and bonuses credited to policyholders),
- our ability to manage our operating expenses, and
- income taxes.

Earnings from products accounted for as deposit liabilities are primarily generated from the excess of net investment income earned over the interest credited or the cost of providing index credits to the policyholder, or the "investment spread." Our investment spread is summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Average yield on invested assets	4.59%	4.54%	4.53%	4.46%
Aggregate cost of money	1.84%	1.87%	1.87%	1.84%
Aggregate investment spread	2.75%	2.67%	2.66%	2.62%
Impact of:				
Investment yield - additional prepayment income	0.11%	0.11%	0.06%	0.08%
Cost of money benefit from over hedging	0.02%	0.07%	0.04%	0.05%

The cost of money for fixed index annuities and average crediting rates for fixed rate annuities are computed based upon policyholder account balances and do not include the impact of amortization of deferred sales inducements. See Critical Accounting Policies - Deferred Policy Acquisition Costs and Deferred Sales Inducements included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018. With respect to our fixed index annuities, the cost of money includes the average crediting rate on amounts allocated to the fixed rate strategy and expenses we incur to fund the annual index credits. Proceeds received upon expiration of call options purchased to fund annual index credits are recorded as part of the change in fair value of derivatives, and are largely offset by an expense for interest credited to annuity policyholder account balances. See Critical Accounting Policies - Policy Liabilities for Fixed Index Annuities and Financial Condition - Derivative Instruments included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018.

We continue to be in the midst of an unprecedented period of low interest rates and low yields for investments with the credit quality we prefer which presents a strong headwind to achieving our target rate for investment spread. In response, we have been reducing policyholder crediting rates for new annuities and existing annuities since the fourth quarter of 2011. We continue to have flexibility to reduce our crediting rates if necessary and could decrease our cost of money by approximately 59 basis points if we reduce current rates to guaranteed minimums. In addition, starting in 2017 we began to invest in asset classes that were not traditionally in our portfolio, focusing on investments with less liquidity that provide higher yields and have a track record of positive credit performance. We are looking to improve our investment yield through the opportunistic replacement of lower yielding securities with higher yielding securities. During 2018 we sold $2.1 billion in book value of lower yielding securities for a yield pickup of approximately 170 basis points on these investments. While we anticipated pursuing additional portfolio realignment opportunities in 2019, market conditions have not been conducive and the execution of any realignment transactions during 2019 is unlikely. Investment yields on fixed income securities purchased and commercial mortgage loans funded in 2019 decreased compared to 2018 due to a general decline in interest rates and credit spreads tightening.

Life insurance companies are subject to the NAIC risk-based capital ("RBC") requirements which are intended to be used by insurance regulators as an early warning tool to identify deteriorating or weakly capitalized insurance companies for the purpose of initiating regulatory action. Rating agencies utilize a form of RBC to partially determine capital strength of insurance companies. Our RBC ratio at December 31, 2018 was 360%, and our estimated RBC ratio at September 30, 2019 was 366%.

Results of Operations for the Three and Nine Months Ended September 30, 2019 and 2018

Annuity deposits by product type collected during the three and nine months ended September 30, 2019 and 2018, were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
American Equity Investment Life Insurance Company:				
Fixed index annuities	$ 1,054,796	$ 830,759	$ 3,293,458	$ 2,616,784
Annual reset fixed rate annuities	2,340	8,390	9,402	40,062
Multi-year fixed rate annuities	593	360	1,307	3,249
Single premium immediate annuities	3,314	4,977	7,129	20,920
	1,061,043	844,486	3,311,296	2,681,015
Eagle Life Insurance Company:				
Fixed index annuities	166,081	163,871	579,119	497,554
Annual reset fixed rate annuities	—	450	193	1,071
Multi-year fixed rate annuities	79,000	34,851	151,572	96,294
	245,081	199,172	730,884	594,919
Consolidated:				
Fixed index annuities	1,220,877	994,630	3,872,577	3,114,338
Annual reset fixed rate annuities	2,340	8,840	9,595	41,133
Multi-year fixed rate annuities	79,593	35,211	152,879	99,543
Single premium immediate annuities	3,314	4,977	7,129	20,920
Total before coinsurance ceded	1,306,124	1,043,658	4,042,180	3,275,934
Coinsurance ceded	86,090	109,201	212,641	327,943
Net after coinsurance ceded	$ 1,220,034	$ 934,457	$ 3,829,539	$ 2,947,991

Annuity deposits before and after coinsurance ceded increased 25% and 31%, respectively, during the third quarter of 2019 compared to the same period in 2018, and increased 23% and 30%, respectively, during the nine months ended September 30, 2019 compared to the same period in 2018. The increases in sales for the three and nine months ended September 30, 2019 compared to the same periods in 2018 were primarily attributable to the launch of new products during 2018 and improvements in our competitive position in the accumulation and guaranteed income markets. These factors were partially mitigated by continued competitive pressures within each of our distribution channels. We continue to face a challenging environment for sales of fixed index annuities due to a highly competitive market.

We coinsure 80% of the annuity deposits received from multi-year rate guaranteed annuities and 20% of certain fixed index annuities sold by Eagle Life Insurance Company ("Eagle Life") through broker/dealers and banks. The decreases in coinsurance ceded premiums were attributable to a decrease in the coinsurance percentage for fixed index annuities sold by Eagle Life from 50% for the 2018 periods to 20% for the 2019 periods partially offset by increases in deposits received from multi-year rate guaranteed annuities during the three and nine months ended September 30, 2019 as compared to the same periods in 2018.

Net income decreased to $37.4 million in the third quarter of 2019 and to $25.9 million for the nine months ended September 30, 2019 compared to $169.3 million and $404.2 million for the same periods in 2018**.**

Net income, in general, has been positively impacted by the growth in the volume of business in force and the investment spread earned on this business. The average amount of annuity account balances outstanding (net of annuity liabilities ceded under coinsurance agreements) increased 5% to $52.7 billion for the third quarter of 2019 and 5% to $52.0 billion for the nine months ended September 30, 2019, compared to $50.3 billion and $49.5 billion for the same periods in 2018. Our investment spread measured in dollars was $344.0 million for the third quarter of 2019 and $975.3 million for the nine months ended September 30, 2019 compared to $309.0 million and $893.9 million for the same periods in 2018. As previously mentioned, our investment spread has been positively impacted by our opportunistic replacement of lower yielding securities with higher yielding securities during 2018, however yields in general continue to be negatively impacted by the extended low interest rate environment (see **Net investment income**).

Net income is also impacted by the change in fair value of derivatives and embedded derivatives which fluctuates from period to period based upon changes in fair values of call options purchased to fund the annual index credits for fixed index annuities and changes in interest rates used to discount the embedded derivative liability. Net income for the three and nine months ended September 30, 2019 was negatively impacted by decreases in the discount rates used to estimate the fair value of our embedded derivative liabilities, the impact of which was partially offset by decreases in amortization of deferred policy acquisition costs and deferred sales inducements related to the change in fair value of derivatives and embedded derivatives. Net income for the three and nine months ended September 30, 2018 was positively impacted by increases in the discount rates used to estimate our embedded derivative liabilities, the impact of which was partially offset by increases in amortization of deferred policy acquisition costs and deferred sales inducements related to the change in fair value of derivatives and embedded derivatives (see **Change in fair value of derivatives**, **Change in fair value of embedded derivatives**, **Amortization of deferred sales inducements** and **Amortization of deferred policy acquisition costs**).

We periodically revise the key assumptions used in the calculation of amortization of deferred policy acquisition costs and deferred sales inducements retrospectively through an unlocking process when estimates of current or future gross profits/margins (including the impact of realized investment gains and losses) to be realized from a group of products are revised. In addition, we periodically revise the assumptions used in determining the liability for lifetime income benefit riders and the embedded derivative component of our fixed index annuity policy benefit reserves as experience develops that is different from our assumptions.

Net income for the 2019 and 2018 periods includes effects from revisions to assumptions as follows:

	Three and Nine Months Ended September 30,	
	2019	**2018**
	(Dollars in thousands)	
Decrease in amortization of deferred sales inducements	$ (104,707)	$ (21,465)
Decrease in amortization of deferred policy acquisition costs	(192,982)	(30,572)
Increase (decrease) in interest sensitive and index product benefits	315,383	(53,607)
Increase in change in fair value of embedded derivatives	28,208	8,458
Effect on net income	(35,987)	76,194

We review these assumptions quarterly and as a result of this review, we made updates to assumptions in the third quarter of 2019 and 2018. In addition, we implemented an enhanced actuarial valuation system during the third quarter of 2019, and as a result, our third quarter 2019 assumption updates include model refinements resulting from the implementation.

The most significant assumption changes from the 2019 review were to lapse and utilization assumptions. We have credible lapse and utilization data based upon a comprehensive experience study spanning over 10 years on our products with lifetime income benefit riders and have experienced lapse rates that are lower than previously estimated.

Lower lapse assumptions result in an expectation that more policyholders will turn on their lifetime income benefit than previously anticipated which results in a greater amount of benefit payments in excess of account value and the need for a greater liability for lifetime income benefit riders. The decrease in lapse rate assumptions also results in policies being in force for a longer period of time and an increase in expected gross profits as compared to previous estimates. The higher level of expected future gross profits results in an increase in the balances of deferred policy acquisition costs and deferred sales inducements.

Our experience study also indicated that the ultimate utilization of certain lifetime income benefit riders is expected to be less than our prior assumptions and the timing of utilization of lifetime income benefit riders is later than in our prior assumptions. We have reduced our ultimate utilization assumptions for fee riders from 75% to 60% and for no-fee riders from 37.5% to 30%, for policies issued in 2014 and prior years. The net effect of the utilization assumption revisions resulted in a decrease in the liability for lifetime income benefit riders and partially offset the increase in the reserve for lifetime income benefit riders from the change in lapse assumptions.

In addition, we revised our assumptions regarding future crediting rates on policies. We are assuming a 3.80% U.S. Treasury rate with a 20 year mean revision period. Our assumption for aggregate spread is 2.60% which translates to an ultimate discount rate of 2.90%. While the aggregate spread of 2.60% did not change from prior estimates, our estimates of the profitability of individual cohorts has changed with the use of an aggregate portfolio yield across all cohorts. This assumption revision resulted in a change in the allocation of profitability by cohort, which caused a reduction in the deferred policy acquisition costs and deferred sales inducements assets and partially offset the increase in the deferred policy acquisition costs and deferred sales inducements assets from the change in lapse assumptions.

The most significant revisions to the calculation of the fair value of the embedded derivative component of our fixed index annuity policy benefit reserves in the third quarter of 2019 were to decrease lapse rate assumptions as noted above. The impact of the lapse rate assumption changes was partially offset by a decrease in the option budget from 3.10% to 2.90% as a result of a revised estimate of the cost of options over the 20 year mean reversion period.

The most significant revisions from the 2018 review were account balance true-ups which were favorable to us due to stronger index credits than we assumed due to strong equity market performance and adjustments to generally decrease lapse rate assumptions to reflect better persistency experienced than assumed. The favorable impact of the account balance true-ups and lapse rate assumption changes was partially offset by revisions to lower our future investment spread assumptions primarily due to an increase in the cost of money we had been experiencing.

The 2018 revisions to the liability for lifetime income benefit riders were consistent with the revisions used in the calculation of amortization of deferred policy acquisition costs and deferred sales inducements described above. The 2018 revisions were primarily attributable to account balance true-ups and future investment spread assumptions. The impact of the account balance true-ups and future investment spread changes was partially offset by the lapse rate assumption changes described above.

The most significant revisions to the calculation of the fair value of the embedded derivative component of our fixed index annuity policy benefit reserves in the third quarter of 2018 were to decrease lapse rate assumptions consistent with the 2018 changes for deferred policy acquisition costs, deferred sales inducements and the liability for lifetime income benefit riders

Net income for the three and nine months ended September 30, 2018 was negatively impacted by realized losses on the sale of fixed maturity securities due to a strategy to reposition the fixed maturity security portfolio. Net realized losses on investments for the three and nine months ended September 30, 2018 were $2.2 million and $40.3 million (see **Net realized gains on investments, excluding OTTI losses**).

Net income for the three and nine months ended September 30, 2018 benefited from a discrete tax item for a worthless stock deduction related to a wholly-owned subsidiary which reduced income tax expense by approximately $7.4 million.

Non-GAAP operating income, a non-GAAP financial measure, increased to $233.4 million in the third quarter of 2019 and to $422.3 million for the nine months ended September 30, 2019 compared to $171.1 million and $335.4 million for the same periods in 2018.

In addition to net income, we have consistently utilized non-GAAP operating income, a non-GAAP financial measure commonly used in the life insurance industry, as an economic measure to evaluate our financial performance. Non-GAAP operating income equals net income adjusted to eliminate the impact of items that fluctuate from quarter to quarter in a manner unrelated to core operations, and we believe measures excluding their impact are useful in analyzing operating trends. The most significant adjustments to arrive at non-GAAP operating income eliminate the impact of fair value accounting for our fixed index annuity business and are not economic in nature but rather impact the timing of reported results. We believe the combined presentation and evaluation of non-GAAP operating income together with net income provides information that may enhance an investor's understanding of our underlying results and profitability.

Non-GAAP operating income is not a substitute for net income determined in accordance with GAAP. The adjustments made to derive non-GAAP operating income are important to understand our overall results from operations and, if evaluated without proper context, non-GAAP operating income possesses material limitations. As an example, we could produce a low level of net income or a net loss in a given period, despite strong operating performance, if in that period we experience significant net realized losses from our investment portfolio. We could also produce a high level of net income in a given period, despite poor operating performance, if in that period we generate significant net realized gains from our investment portfolio. As an example of another limitation of non-GAAP operating income, it does not include the decrease in cash flows expected to be collected as a result of credit loss OTTI. Therefore, our management reviews net realized investment gains (losses) and analyses of our net investment income, including impacts related to OTTI write-downs, in connection with their review of our investment portfolio. In addition, our management examines net income as part of their review of our overall financial results.

The adjustments made to net income to arrive at non-GAAP operating income for the three and nine months ended September 30, 2019 and 2018 are set forth in the table that follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Reconciliation from net income to non-GAAP operating income:				
Net income	$ 37,360	$ 169,328	$ 25,940	$ 404,193
Adjustments to arrive at non-GAAP operating income:				
Net realized investment gains/losses, including OTTI	(3,175)	10,278	(245)	35,925
Change in fair value of derivatives and embedded derivatives - fixed index annuities	250,186	545	500,998	(108,367)
Change in fair value of derivatives - debt	(76)	(597)	1,414	(3,168)
Income taxes	(50,940)	(8,491)	(105,759)	6,822
Non-GAAP operating income	$ 233,355	$ 171,063	$ 422,348	$ 335,405

The amounts disclosed in the reconciliation above are presented net of related adjustments to amortization of deferred sales inducements and deferred policy acquisition costs where applicable.

Non-GAAP operating income for the 2019 and 2018 periods includes effects from revisions to assumptions as follows:

	Three and Nine Months Ended September 30,	
	2019	2018
	(Dollars in thousands)	
Decrease in amortization of deferred sales inducements	$ (184,882)	$ (20,466)
Decrease in amortization of deferred policy acquisition costs	(288,332)	(28,702)
Increase (decrease) in interest sensitive and index product benefits	315,383	(53,607)
Effect on non-GAAP operating income	123,739	80,576

The impact to net income and non-GAAP operating income from assumption revisions varies due to the impact of fair value accounting for our fixed index annuity business as non-GAAP operating income eliminates the impact of fair value accounting for our fixed index annuity business. While the assumption revisions made during the third quarter of 2019 and 2018 were consistently applied, the impact to net income and non-GAAP operating income varies due to different amortization rates being applied to gross profit adjustments included in the valuation.

Annuity product charges (surrender charges assessed against policy withdrawals and fees deducted from policyholder account balances for lifetime income benefit riders) increased 9% to $63.6 million in the third quarter of 2019 and 8% to $177.3 million for the nine months ended September 30, 2019 compared to $58.4 million and $164.1 million for the same periods in 2018. The components of annuity product charges are set forth in the table that follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Surrender charges	$ 20,537	$ 17,132	$ 56,473	$ 49,934
Lifetime income benefit riders (LIBR) fees	43,110	41,233	120,840	114,160
	$ 63,647	$ 58,365	$ 177,313	$ 164,094
Withdrawals from annuity policies subject to surrender charges	$ 201,392	$ 161,653	$ 511,236	$ 428,248
Average surrender charge collected on withdrawals subject to surrender charges	10.2%	10.6%	11.0%	11.7%
Fund values on policies subject to LIBR fees	$ 5,674,545	$ 5,578,775	$ 16,365,077	$ 15,846,057
Weighted average per policy LIBR fee	0.76%	0.74%	0.74%	0.72%

The increases in annuity product charges were attributable to increases in fees assessed for lifetime income benefit riders due to a larger volume of business in force subject to the fee and increases in the average fees being charged due to higher fees on new products as compared to prior periods and to increases in surrender charges due to increases in withdrawals from annuity policies subject to surrender charges due to a larger volume of business in force and policyholder behavior, which were partially offset by lower average surrender charges collected on those withdrawals. See **Interest sensitive and index product benefits** below for corresponding expense recognized on lifetime income benefit riders.

Net investment income increased 7% to $590.4 million in the third quarter of 2019 and 8% to $1.7 billion for the nine months ended September 30, 2019 compared to $549.4 million and $1.6 billion for the same periods in 2018. The increases were principally attributable to the growth in our annuity business and corresponding increases in our invested assets. Average invested assets excluding derivative instruments (on an amortized cost basis) increased 6% to $51.5 billion for the third quarter of 2019 and 6% to $50.7 billion for the nine months ended September 30, 2019 compared to $48.5 billion and $47.7 billion for the same periods in 2018.

The average yield earned on average invested assets was 4.59% for the third quarter of 2019 and 4.53% for the nine months ended September 30, 2019 compared to 4.54% and 4.46% for the same periods in 2018. The increases in average yield earned for the three and nine months ended September 30, 2019 compared to the same periods in 2018 were primarily attributable to our opportunistic replacement of lower yielding securities with higher yielding securities throughout 2018 as previously discussed. In addition, the increase in average yield earned for the nine months ended September 30, 2019 compared to the same period in 2018 is due to increases in investment income on our floating rate investment securities due to an increase in the average benchmark rates associated with these investments during the nine months ended September 30, 2019 as compared to the same period in 2018. The average yield on fixed income securities purchased and commercial mortgage loans funded during the three and nine months ended September 30, 2019 was 3.30% and 3.95%, respectively, compared to 4.97% and 4.73% for the same periods in 2018.

Change in fair value of derivatives consists of call options purchased to fund annual index credits on fixed index annuities, and an interest rate swap and interest rate caps that hedge our floating rate subordinated debentures. The components of change in fair value of derivatives are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Call options:				
Gain (loss) on option expiration	$ (106,440)	$ 213,789	$ (272,603)	$ 684,295
Change in unrealized gains/losses	86,443	381,083	714,714	(410,349)
Interest rate swap	(3)	258	(1,059)	1,658
Interest rate caps	(42)	181	(580)	829
	$ (20,042)	$ 595,311	$ 440,472	$ 276,433

The differences between the change in fair value of derivatives between periods for call options are primarily due to the performance of the indices upon which our call options are based which impacts the fair values and changes in the fair values of those call options between periods. A substantial portion of our call options are based upon the S&P 500 Index with the remainder based upon other equity and bond market indices. The range of index appreciation (after applicable caps, participation rates and asset fees) for options expiring during the three and nine months ended September 30, 2019 and 2018 is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
S&P 500 Index				
Point-to-point strategy	0.0% - 7.0%	1.0% - 9.6%	0.0% - 7.0%	1.0% - 13.9%
Monthly average strategy	0.0% - 3.5%	1.0% - 8.1%	0.0% - 6.9%	0.6% - 8.1%
Monthly point-to-point strategy	0.0% - 2.1%	0.0% - 12.8%	0.0% - 4.3%	0.0% - 17.5%
Fixed income (bond index) strategies	0.0% - 10.0%	0.0% - 5.1%	0.0% - 10.0%	0.0% - 5.1%

The change in fair value of derivatives is also influenced by the aggregate cost of options purchased. The aggregate cost of options has decreased due to a decrease in the average cost of options for the three and nine months ended September 30, 2019, compared to the same periods in 2018, partially offset by an increase in the amount of fixed index annuities in force during 2019 compared to 2018. The aggregate cost of options is also influenced by the amount of policyholder funds allocated to the various indices and market volatility which affects option pricing. See Critical Accounting Policies - Policy Liabilities for Fixed Index Annuities included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018.

Net realized gains (losses) on investments, excluding OTTI losses include gains and losses on the sale of securities and other investments and impairment losses on mortgage loans on real estate which fluctuate from year to year due to changes in the interest rate and economic environment and the timing of the sale of investments, as well as gains (losses) recognized on real estate owned due to any sales and impairments on long-lived assets. See Note 3 to our unaudited consolidated financial statements for a detailed presentation of the types of investments that generated the gains (losses) and Financial Condition - Investments and Note 4 to our unaudited consolidated financial statements for discussion of allowance for credit losses recognized on mortgage loans on real estate.

Net OTTI losses recognized in operations were $0.1 million and $1.3 million for the three and nine months ended September 30, 2019 compared to $14.4 million and $17.7 million for the same periods in 2018. See Financial Condition - Other Than Temporary Impairments for additional discussion of other than temporary impairments recognized during the periods presented.

Interest sensitive and index product benefits increased 21% to $500.3 million in the third quarter of 2019 and decreased 34% to $888.1 million for the nine months ended September 30, 2019 compared to $413.1 million and $1.4 billion for the same periods in 2018. The components of interest sensitive and index product benefits are summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Index credits on index policies	$ 92,343	$ 369,011	$ 310,020	$ 1,127,556
Interest credited (including changes in minimum guaranteed interest for fixed index annuities)	51,706	54,762	153,110	166,040
Lifetime income benefit riders	356,236	(10,684)	424,932	61,539
	$ 500,285	$ 413,089	$ 888,062	$ 1,355,135

The decreases in index credits were attributable to changes in the level of appreciation of the underlying indices (see discussion above under **Change in fair value of derivatives**) and the amount of funds allocated by policyholders to the respective index options. Total proceeds received upon expiration of the call options purchased to fund the annual index credits were $95.5 million and $320.4 million for the three and nine months ended September 30, 2019, compared to $378.1 million and $1,145.3 million for the same periods in 2018. The decreases in interest credited were due to decreases in the amount of annuity liabilities outstanding receiving a fixed rate of interest and decreases in the average rate credited to the annuity liabilities outstanding receiving a fixed rate of interest. The increases in benefits recognized for lifetime income benefit riders were due to the impact of revisions of assumptions used in determining the liability for lifetime income benefit riders which caused an increase in the liability for lifetime income benefit riders in 2019 and a decrease in the liability for lifetime income benefit riders in 2018 (See **Net income** above for a discussion of of the impact of revisions of assumptions). Interest sensitive and index product benefits also increased in 2019 due to an increase in the number of policies with lifetime income benefit riders in 2019 compared to 2018, which correlates to the increase in fees discussed in **Annuity product charges**.

The liability (net of coinsurance ceded) for lifetime income benefit riders was $1.2 billion and $808.2 million at September 30, 2019 and December 31, 2018, respectively.

Amortization of deferred sales inducements, in general, has been increasing each period due to growth in our annuity business and the deferral of sales inducements incurred with respect to sales of premium bonus annuity products. Bonus products represented 78% and 81% of our net annuity account values at September 30, 2019 and September 30, 2018, respectively. The increases in amortization from these factors have been affected by amortization associated with fair value accounting for derivatives and embedded derivatives utilized in our fixed index annuity business and amortization associated with net realized gains (losses) on investments and net OTTI losses recognized in operations. Fair value accounting for derivatives and embedded derivatives utilized in our fixed index annuity business creates differences in the recognition of revenues and expenses from derivative instruments including the embedded derivative liabilities in our fixed index annuity contracts. The change in fair value of the embedded derivatives will not correspond to the change in fair value of the derivatives (purchased call options), because the purchased call options are one-year options while the options valued in the fair value of embedded derivatives cover the expected lives of the contracts which typically exceed ten years.

Amortization of deferred sales inducements is summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Amortization of deferred sales inducements before gross profit adjustments	$ (113,177)	$ 48,025	$ 24,512	$ 183,460
Gross profit adjustments:				
Fair value accounting for derivatives and embedded derivatives	57,102	9,912	(26,319)	59,763
Net realized gains (losses) on investments and net OTTI losses recognized in operations	306	(2,693)	(868)	(9,444)
Amortization of deferred sales inducements after gross profit adjustments	$ (55,769)	$ 55,244	$ (2,675)	$ 233,779

See **Net income** and **Non-GAAP operating income** above for discussion of the impact of unlocking on amortization of deferred sales inducements for the three and nine months ended September 30, 2019 and 2018. See Critical Accounting Policies - Deferred Policy Acquisition Costs and Deferred Sales Inducements included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018.

Change in fair value of embedded derivatives includes changes in the fair value of our fixed index annuity embedded derivatives (see Note 5 to our unaudited consolidated financial statements). The components of change in fair value of embedded derivatives are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Fixed index annuities - embedded derivatives	$ 24,998	$ 196,808	$ 882,230	$ (1,198,115)
Other changes in difference between policy benefit reserves computed using derivative accounting vs. long-duration contracts accounting	187,280	186,908	423,933	612,650
	$ 212,278	$ 383,716	$ 1,306,163	$ (585,465)

The change in fair value of the fixed index annuity embedded derivatives resulted from (i) changes in the expected index credits on the next policy anniversary dates, which are related to the change in fair value of the call options acquired to fund those index credits discussed above in **Change in fair value of derivatives**; (ii) changes in the discount rates used in estimating our embedded derivative liabilities; and (iii) the growth in the host component of the policy liability. The amounts presented as "Other changes in difference between policy benefit reserves computed using derivative accounting vs. long-duration contracts accounting" represent the total change in the difference between policy benefit reserves for fixed index annuities computed under the derivative accounting standard and the long-duration contracts accounting standard at each balance sheet date, less the change in fair value of our fixed index annuities embedded derivative. See Critical Accounting Policies - Policy Liabilities for Fixed Index Annuities included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018.

The primary reasons for the decrease in the change in fair value of the fixed index annuity embedded derivatives during the three months ended September 30, 2019 was a decrease in the expected index credits on the next policy anniversary dates resulting from a smaller increase in the fair value of the call options acquired to fund these index credits during the three months ended September 30, 2019 as compared to the same period of 2018 which was partially offset by decreases in the discount rates for the three months ended September 30, 2019 as compared to increases in the discount rates for the three months ended September 30, 2018. The discount rates used in estimating our embedded derivative liabilities fluctuate based on changes in the general level of interest rates and credit spreads.

The primary reasons for the increase in the change in fair value of the fixed index annuity embedded derivatives during the nine months ended September 30, 2019 were increases in the expected index credits on the next policy anniversary dates resulting from increases in the fair value of the call options acquired to fund these index credits during the nine months ended September 30, 2019 as compared to decreases in the expected index credits on the next policy anniversary dates resulting from decreases in the fair value of the call options acquired to fund these index credits during the nine months ended September 30, 2018 and decreases in the discount rates for the nine months ended September 30, 2019 as compared to increases in the discount rates for the same period of 2018. The discount rates used in estimating our embedded derivative liabilities fluctuate based on changes in the general level of interest rates and credit spreads. See **Net income** above for discussion of the impact of unlocking on the fair value of the fixed index annuity embedded derivative for the three and nine months ended September 30, 2019 and 2018.

Amortization of deferred policy acquisition costs, in general, has been increasing each period due to the growth in our annuity business and the deferral of policy acquisition costs incurred with respect to sales of annuity products. The increases in amortization from these factors have been affected by amortization associated with fair value accounting for derivatives and embedded derivatives utilized in our fixed index annuity business and amortization associated with net realized gains (losses) on investments and net OTTI losses recognized in operations. As discussed above, fair value accounting for derivatives and embedded derivatives utilized in our fixed index annuity business creates differences in the recognition of revenues and expenses from derivative instruments including the embedded derivative liabilities in our fixed index annuity contracts.

Amortization of deferred policy acquisition costs is summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Amortization of deferred policy acquisition costs before gross profit adjustments	$ (182,353)	$ 69,652	$ 19,162	$ 262,807
Gross profit adjustments:				
Fair value accounting for derivatives and embedded derivatives	60,674	15,000	(64,259)	86,517
Net realized gains (losses) on investments and net OTTI losses recognized in operations	745	(3,599)	(759)	(12,583)
Amortization of deferred policy acquisition costs after gross profit adjustments	$ (120,934)	$ 81,053	$ (45,856)	$ 336,741

See **Net income** and **Non-GAAP operating income** above for discussion of the impact of unlocking on amortization of deferred policy acquisition costs for the three and nine months ended September 30, 2019 and 2018. See Critical Accounting Policies - Deferred Policy Acquisition Costs and Deferred Sales Inducements included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018.

Other operating costs and expenses increased 21% to $38.6 million in the third quarter of 2019 and 20% to $115.0 million for the nine months ended September 30, 2019 compared to $31.9 million and $95.7 million for the same periods in 2018 and are summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Salary and benefits	$ 20,170	$ 18,291	$ 61,263	$ 52,225
Risk charges	10,031	7,828	28,062	23,364
Other	8,353	5,805	25,634	20,115
Total other operating costs and expenses	$ 38,554	$ 31,924	$ 114,959	$ 95,704

Salary and benefits for the three and nine months ended September 30, 2019 reflect increases of $1.4 million and $4.4 million, respectively, due to an increased number of employees related to our growth and increases of $0.1 million and $3.4 million, respectively, for expense recognized under our equity and cash incentive compensation programs ("incentive compensation programs"). The increases in expenses related to our incentive compensation programs were primarily due to increases in the expected payouts due to a larger number of employees participating in the programs and higher potential payouts for certain employees participating in the programs. The increase in expenses related to our incentive compensation programs for the three months ended September 30, 2019 due to the factors described above was offset by expense related to our incentive compensation programs recognized during the three months ended September 30, 2018 as a result of an increase in the expected payout under our incentive compensation programs for 2018.

The increases in reinsurance risk charges expense for the three and nine months ended September 30, 2019 compared to the same periods in 2018 were due to increases in the amount of excess regulatory reserves ceded to an unaffiliated reinsurer pursuant to a reinsurance agreement primarily as a result of the replacement of the previous agreement with a new agreement effective April 1, 2019. The impact from increasing the amount of excess regulatory reserves ceded was partially offset by a lower risk charge percentage in the new agreement. The excess regulatory reserves ceded at September 30, 2019 and 2018 were $1,132.2 million and $769.3 million, respectively.

Other expenses increased for the three and nine months ended September 30, 2019 compared to the same periods in 2018 primarily as a result of increases in consulting and professional services fees, increases in depreciation and maintenance expenses primarily related to software and hardware assets, increases in licensing fees which are based on the level of policyholder funds under management allocated to index strategies and increases in non-deferrable trail commissions.

Income tax expense was $13.6 million in the third quarter of 2019 and $8.8 million for the nine months ended September 30, 2019 compared to $38.3 million and $95.3 million for the same periods in 2018. The changes in income tax expense were primarily due to changes in income before income taxes. The effective income tax rates for the three and nine months ended September 30, 2019 were 26.8% and 25.3%, respectively, and 18.5% and 19.1% for the same periods in 2018, respectively.

Income tax expense and the resulting effective tax rate are based upon two components of income before income taxes ("pretax income") that are taxed at different tax rates. Life insurance income is generally taxed at an effective rate of approximately 21.6% reflecting the absence of state income taxes for substantially all of the states that the life insurance subsidiaries do business in. The income for the parent company and other non-life insurance subsidiaries (the "non-life insurance group") is generally taxed at an effective tax rate of 29.5% reflecting the combined federal / state income tax rates. The effective income tax rates resulting from the combination of the income tax provisions for the life / non-life sources of income vary from period to period based primarily on the relative size of pretax income from the two sources.

The effective income tax rate was impacted by a discrete tax item related to share-based compensation that provided a tax benefit (expense) for the three and nine months ended September 30, 2019 of approximately $(0.1) million and $1.3 million, respectively, and $0.1 million and $2.5 million for the same periods in 2018, respectively. In addition, the effective tax rate for the three and nine months ended September 30, 2018 benefited from a discrete tax item for a worthless stock deduction related to a wholly-owned subsidiary which reduced income tax expense by approximately $7.4 million. Income tax expense for the three and nine months ended September 30, 2019 reflects an increase in income tax expense of approximately $2.5 million related to the reversal of the impact of capital losses expected to be carried back to periods in which a 35% statutory rate was in effect. Income tax expense for the three months ended September 30, 2018 reflects an increase in income tax expense of $1.0 million and income tax expense for the nine months ended September 30, 2018 reflects a decrease in income tax expense of $2.1 million as a result of changes in capital losses expected to be carried back to periods in which a 35% statutory tax rate was in effect. The effective income tax rates excluding the impact of the discrete items and the impact of the expected loss carrybacks were 21.50% and 21.53%, respectively, for the three and nine months ended September 30, 2019 and 21.58% and 21.49% for the same periods in 2018, respectively.

Financial Condition

Investments

Our investment strategy is to maintain a predominantly investment grade fixed income portfolio, provide adequate liquidity to meet our cash obligations to policyholders and others and maximize current income and total investment return through active investment management. Consistent with this strategy, our investments principally consist of fixed maturity securities and mortgage loans on real estate.

Insurance statutes regulate the type of investments that our life subsidiaries are permitted to make and limit the amount of funds that may be used for any one type of investment. In light of these statutes and regulations and our business and investment strategy, we generally seek to invest in United States government and government-sponsored agency securities, corporate securities, residential and commercial mortgage backed securities, other asset backed securities and United States municipalities, states and territories securities rated investment grade by established NRSRO's or in securities of comparable investment quality, if not rated, and commercial mortgage loans on real estate.

The composition of our investment portfolio is summarized as follows:

	September 30, 2019		December 31, 2018	
	Carrying Amount	Percent	Carrying Amount	Percent
	(Dollars in thousands)			
Fixed maturity securities:				
United States Government full faith and credit	$ 12,343	—%	$ 11,652	—%
United States Government sponsored agencies	695,030	1.2%	1,138,529	2.3%
United States municipalities, states and territories	4,517,661	8.0%	4,126,267	8.3%
Foreign government obligations	207,420	0.4%	230,274	0.5%
Corporate securities	32,897,127	58.0%	28,371,514	57.4%
Residential mortgage backed securities	1,557,156	2.7%	1,202,159	2.4%
Commercial mortgage backed securities	5,839,510	10.3%	5,379,003	10.9%
Other asset backed securities	6,128,137	10.8%	5,464,329	11.1%
Total fixed maturity securities	51,854,384	91.4%	45,923,727	92.9%
Mortgage loans on real estate	3,212,075	5.7%	2,943,091	6.0%
Derivative instruments	963,081	1.7%	205,149	0.4%
Other investments	694,416	1.2%	355,531	0.7%
	$ 56,723,956	100.0%	$ 49,427,498	100.0%

Fixed Maturity Securities

Our fixed maturity security portfolio is managed to minimize risks such as interest rate changes and defaults or impairments while earning a sufficient and stable return on our investments. The largest portion of our fixed maturity securities are in investment grade (NAIC designation 1 or 2) publicly traded or privately placed corporate securities.

A summary of our fixed maturity securities by NRSRO ratings is as follows:

	September 30, 2019		December 31, 2018	
Rating Agency Rating	Carrying Amount	Percent of Fixed Maturity Securities	Carrying Amount	Percent of Fixed Maturity Securities
	(Dollars in thousands)			
Aaa/Aa/A	$ 30,619,526	59.0%	$ 27,052,481	58.9%
Baa	19,931,665	38.4%	17,265,590	37.6%
Total investment grade	50,551,191	97.4%	44,318,071	96.5%
Ba	1,022,165	2.0%	1,191,772	2.6%
B	84,566	0.2%	139,313	0.3%
Caa	102,503	0.2%	122,717	0.3%
Ca and lower	93,959	0.2%	151,854	0.3%
Total below investment grade	1,303,193	2.6%	1,605,656	3.5%
	$ 51,854,384	100.0%	$ 45,923,727	100.0%

The NAIC's Securities Valuation Office ("SVO") is responsible for the day-to-day credit quality assessment and the valuation of fixed maturity securities owned by state regulated insurance companies. The purpose of such assessment and valuation is for determining regulatory capital requirements and regulatory reporting. Insurance companies report ownership to the SVO when such securities are eligible for regulatory filings. The SVO conducts credit analysis on these securities for the purpose of assigning a NAIC designation and/or unit price. Typically, if a security has been rated by a NRSRO, the SVO utilizes that rating and assigns a NAIC designation based upon the following system:

NAIC Designation	NRSRO Equivalent Rating
1	Aaa/Aa/A
2	Baa
3	Ba
4	B
5	Caa
6	Ca and lower

For most of the bonds held in our portfolio the NAIC designation matches the NRSRO equivalent rating. However, for certain loan-backed and structured securities, as defined by the NAIC, the NAIC rating is not always equivalent to the NRSRO rating presented in the previous table. The NAIC has adopted revised rating methodologies for certain loan-backed and structured securities comprised of non-agency residential mortgage backed securities ("RMBS") and commercial mortgage backed securities ("CMBS"). The NAIC's objective with the revised rating methodologies for these structured securities is to increase the accuracy in assessing expected losses and use the improved assessment to determine a more appropriate capital requirement for such structured securities. The revised methodologies reduce regulatory reliance on rating agencies and allow for greater regulatory input into the assumptions used to estimate expected losses from structured securities.

The use of this process by the SVO may result in certain non-agency RMBS and CMBS being assigned a NAIC designation that is higher than the equivalent NRSRO rating. The NAIC designations for non-agency RMBS and CMBS are based on security level expected losses as modeled by an independent third party (engaged by the NAIC) and the statutory carrying value of the security, including any purchase discounts or impairment charges previously recognized. Evaluation of non-agency RMBS and CMBS held by insurers using the NAIC rating methodologies is performed on an annual basis.

As stated previously, our fixed maturity security portfolio is managed to minimize risks such as defaults or impairments while earning a sufficient and stable return on our investments. Our strategy has been to invest primarily in investment grade fixed maturity securities. Investment grade is NAIC 1 and 2 securities and Baa3/BBB- and better securities on the NRSRO scale. This strategy meets the objective of minimizing risk while also managing asset capital charges on a regulatory capital basis.

A summary of our fixed maturity securities by NAIC designation is as follows:

	September 30, 2019				December 31, 2018			
NAIC Designation	Amortized Cost	Fair Value	Carrying Amount	Percent of Total Carrying Amount	Amortized Cost	Fair Value	Carrying Amount	Percent of Total Carrying Amount
	(Dollars in thousands)				(Dollars in thousands)			
1	$ 27,657,160	$ 30,351,227	$ 30,351,227	58.5%	$ 26,588,352	$ 26,921,843	$ 26,921,843	58.6%
2	19,171,556	20,232,420	20,232,420	39.0%	17,901,161	17,528,072	17,528,072	38.2%
3	1,179,714	1,145,174	1,145,174	2.2%	1,396,650	1,269,242	1,269,242	2.8%
4	126,833	101,830	101,830	0.2%	173,987	137,991	137,991	0.3%
5	29,759	16,920	16,920	0.1%	23,836	19,453	19,453	—%
6	5,534	6,813	6,813	—%	47,204	47,126	47,126	0.1%
	$ 48,170,556	$ 51,854,384	$ 51,854,384	100.0%	$ 46,131,190	$ 45,923,727	$ 45,923,727	100.0%

The amortized cost and fair value of fixed maturity securities at September 30, 2019, by contractual maturity, are presented in Note 3 to our unaudited consolidated financial statements in this Form 10-Q, which is incorporated by reference in this Item 2.

Unrealized Losses

The amortized cost and fair value of fixed maturity securities that were in an unrealized loss position were as follows:

	Number of Securities	Amortized Cost	Unrealized Losses	Fair Value
			(Dollars in thousands)	
September 30, 2019				
Fixed maturity securities, available for sale:				
United States Government full faith and credit	—	$ —	$ —	$ —
United States Government sponsored agencies	4	325,000	(2,052)	322,948
United States municipalities, states and territories	14	100,941	(714)	100,227
Foreign government obligations	—	—	—	—
Corporate securities:				
Finance, insurance and real estate	34	480,921	(5,671)	475,250
Manufacturing, construction and mining	20	197,171	(4,924)	192,247
Utilities and related sectors	13	113,546	(7,200)	106,346
Wholesale/retail trade	10	153,785	(13,527)	140,258
Services, media and other	69	687,332	(73,626)	613,706
Residential mortgage backed securities	21	129,642	(1,608)	128,034
Commercial mortgage backed securities	51	448,013	(5,242)	442,771
Other asset backed securities	650	4,318,986	(192,467)	4,126,519
	886	$ 6,955,337	$ (307,031)	$ 6,648,306
December 31, 2018				
Fixed maturity securities, available for sale:				
United States Government full faith and credit	4	$ 8,650	$ (322)	$ 8,328
United States Government sponsored agencies	23	1,066,544	(83,034)	983,510
United States municipalities, states and territories	136	518,758	(15,658)	503,100
Foreign government obligations	6	114,529	(4,159)	110,370
Corporate securities:				
Finance, insurance and real estate	286	3,551,237	(164,727)	3,386,510
Manufacturing, construction and mining	231	2,515,204	(119,607)	2,395,597
Utilities and related sectors	273	3,032,710	(127,957)	2,904,753
Wholesale/retail trade	103	1,308,962	(77,554)	1,231,408
Services, media and other	529	6,040,083	(348,884)	5,691,199
Residential mortgage backed securities	33	172,427	(4,125)	168,302
Commercial mortgage backed securities	487	4,367,221	(134,826)	4,232,395
Other asset backed securities	604	4,615,477	(270,234)	4,345,243
	2,715	$ 27,311,802	$ (1,351,087)	$ 25,960,715

The decrease in unrealized losses from December 31, 2018 to September 30, 2019 was primarily due to a decrease in interest rates and tightening credit spreads during the nine months ended September 30, 2019. The 10-year U.S. Treasury yields at September 30, 2019 and December 31, 2018 were 1.68% and 2.69%, respectively. The 30-year U.S. Treasury yields at September 30, 2019 and December 31, 2018 were 2.12% and 3.02%, respectively.

The following table sets forth the composition by credit quality (NAIC designation) of fixed maturity securities with gross unrealized losses:

NAIC Designation	Carrying Value of Securities with Gross Unrealized Losses	Percent of Total	Gross Unrealized Losses	Percent of Total
	(Dollars in thousands)			
September 30, 2019				
1	$ 2,671,365	40.2%	$ (48,090)	15.7%
2	3,297,633	49.6%	(159,140)	51.8%
3	578,481	8.7%	(55,742)	18.1%
4	83,382	1.2%	(31,181)	10.2%
5	16,920	0.3%	(12,840)	4.2%
6	525	—%	(38)	—%
	$ 6,648,306	100.0%	$ (307,031)	100.0%
December 31, 2018				
1	$ 13,302,253	51.2%	$ (552,455)	40.9%
2	11,301,715	43.5%	(622,053)	46.0%
3	1,170,941	4.5%	(129,441)	9.6%
4	127,222	0.5%	(40,927)	3.0%
5	19,453	0.1%	(4,383)	0.3%
6	39,131	0.2%	(1,828)	0.2%
	$ 25,960,715	100.0%	$ (1,351,087)	100.0%

Our investments' gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities (consisting of 886 and 2,715 securities, respectively) have been in a continuous unrealized loss position at September 30, 2019 and December 31, 2018, along with a description of the factors causing the unrealized losses is presented in Note 3 to our unaudited consolidated financial statements in this Form 10-Q, which is incorporated by reference in this Item 2.

The amortized cost and fair value of fixed maturity securities in an unrealized loss position and the number of months in a continuous unrealized loss position (fixed maturity securities that carry an NRSRO rating of BBB/Baa or higher are considered investment grade) were as follows:

	Number of Securities	Amortized Cost	Fair Value	Gross Unrealized Losses
		(Dollars in thousands)		
September 30, 2019				
Fixed maturity securities, available for sale:				
Investment grade:				
Less than six months	213	$ 1,834,549	$ 1,813,804	$ (20,745)
Six months or more and less than twelve months	158	1,114,382	1,078,730	(35,652)
Twelve months or greater	391	3,243,312	3,093,191	(150,121)
Total investment grade	762	6,192,243	5,985,725	(206,518)
Below investment grade:				
Less than six months	16	54,712	49,870	(4,842)
Six months or more and less than twelve months	22	107,541	99,693	(7,848)
Twelve months or greater	86	600,841	513,018	(87,823)
Total below investment grade	124	763,094	662,581	(100,513)
	886	$ 6,955,337	$ 6,648,306	$ (307,031)
December 31, 2018				
Fixed maturity securities, available for sale:				
Investment grade:				
Less than six months	770	$ 6,986,778	$ 6,777,338	$ (209,440)
Six months or more and less than twelve months	1,184	12,208,435	11,692,145	(516,290)
Twelve months or greater	606	6,639,807	6,186,550	(453,257)
Total investment grade	2,560	25,835,020	24,656,033	(1,178,987)
Below investment grade:				
Less than six months	59	578,858	533,979	(44,879)
Six months or more and less than twelve months	44	371,075	338,056	(33,019)
Twelve months or greater	52	526,849	432,647	(94,202)
Total below investment grade	155	1,476,782	1,304,682	(172,100)
	2,715	$ 27,311,802	$ 25,960,715	$ (1,351,087)

The amortized cost and fair value of fixed maturity securities (excluding United States Government and United States Government sponsored agency securities) segregated by investment grade (NRSRO rating of BBB/Baa or higher) and below investment grade that had unrealized losses greater than 20% and the number of months in a continuous unrealized loss position were as follows:

	Number of Securities	Amortized Cost	Fair Value	Gross Unrealized Losses
			(Dollars in thousands)	
September 30, 2019				
Investment grade:				
Less than six months	—	$ —	$ —	$ —
Six months or more and less than twelve months	—	—	—	—
Twelve months or greater	—	—	—	—
Total investment grade	—	—	—	—
Below investment grade:				
Less than six months	4	22,745	15,602	(7,143)
Six months or more and less than twelve months	3	33,746	22,336	(11,410)
Twelve months or greater	4	61,974	32,389	(29,585)
Total below investment grade	11	118,465	70,327	(48,138)
	11	$ 118,465	$ 70,327	$ (48,138)
December 31, 2018				
Investment grade:				
Less than six months	5	$ 103,637	$ 78,378	$ (25,259)
Six months or more and less than twelve months	1	20,189	15,225	(4,964)
Twelve months or greater	—	—	—	—
Total investment grade	6	123,826	93,603	(30,223)
Below investment grade:				
Less than six months	13	146,474	108,465	(38,009)
Six months or more and less than twelve months	—	—	—	—
Twelve months or greater	3	45,594	26,665	(18,929)
Total below investment grade	16	192,068	135,130	(56,938)
	22	$ 315,894	$ 228,733	$ (87,161)

The amortized cost and fair value of fixed maturity securities, by contractual maturity, that were in an unrealized loss position are shown below. Actual maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. All of our mortgage and other asset backed securities provide for periodic payments throughout their lives, and are shown below as a separate line.

	Available for sale	
	Amortized Cost	Fair Value
	(Dollars in thousands)	
September 30, 2019		
Due in one year or less	$ 5,079	$ 5,043
Due after one year through five years	124,271	112,148
Due after five years through ten years	481,798	470,116
Due after ten years through twenty years	660,308	633,706
Due after twenty years	787,240	729,969
	2,058,696	1,950,982
Residential mortgage backed securities	129,642	128,034
Commercial mortgage backed securities	448,013	442,771
Other asset backed securities	4,318,986	4,126,519
	$ 6,955,337	$ 6,648,306
December 31, 2018		
Due in one year or less	$ 31,590	$ 30,780
Due after one year through five years	2,596,616	2,534,891
Due after five years through ten years	7,196,565	6,907,961
Due after ten years through twenty years	3,247,923	3,056,474
Due after twenty years	5,083,983	4,684,669
	18,156,677	17,214,775
Residential mortgage backed securities	172,427	168,302
Commercial mortgage backed securities	4,367,221	4,232,395
Other asset backed securities	4,615,477	4,345,243
	$ 27,311,802	$ 25,960,715

International Exposure

We hold fixed maturity securities with international exposure. As of September 30, 2019, 24% of the carrying value of our fixed maturity securities was comprised of corporate debt securities of issuers based outside of the United States and debt securities of foreign governments. All of our fixed maturity securities with international exposure are denominated in U.S. dollars. Our investment professionals analyze each holding for credit risk by economic and other factors of each country and industry. The following table presents our international exposure in our fixed maturity portfolio by country or region:

	September 30, 2019		
	Amortized Cost	Carrying Amount/ Fair Value	Percent of Total Carrying Amount
	(Dollars in thousands)		
GIIPS (1)	$ 251,228	$ 280,532	0.5%
Asia/Pacific	461,327	504,876	1.0%
Non-GIIPS Europe	3,173,619	3,434,218	6.6%
Latin America	296,492	322,571	0.6%
Non-U.S. North America	1,413,332	1,545,172	3.0%
Australia & New Zealand	1,044,654	1,104,272	2.1%
Other	5,621,223	5,499,426	10.6%
	$ 12,261,875	$ 12,691,067	24.4%

(1) Greece, Ireland, Italy, Portugal and Spain ("GIIPS"). All of our exposure in GIIPS are corporate securities with issuers domiciled in these countries. None of our foreign government obligations were held in any of these countries.

All of the securities presented in the table above are investment grade (NAIC designation of either 1 or 2), except for the following:

	September 30, 2019	
	Amortized Cost	Carrying Amount/ Fair Value
	(Dollars in thousands)	
GIIPS	$ 14,534	$ 15,917
Asia/Pacific	11,000	10,440
Non-GIIPS Europe	82,795	79,562
Latin America	59,980	64,017
Non-U.S. North America	50,449	51,259
Other	440,038	395,422
	$ 658,796	$ 616,617

Watch List

At each balance sheet date, we identify invested assets which have characteristics (i.e. significant unrealized losses compared to amortized cost and industry trends) creating uncertainty as to our future assessment of an other than temporary impairment. As part of this assessment, we review not only a change in current price relative to its amortized cost but the issuer's current credit rating and the probability of full recovery of principal based upon the issuer's financial strength. Specifically for corporate issues we evaluate the financial stability and quality of asset coverage for the securities relative to the term to maturity for the issues we own. A security which has a 20% or greater change in market price relative to its amortized cost and/or a possibility of a loss of principal will be included on a list which is referred to as our watch list. We exclude from this list securities with unrealized losses which are related to market movements in interest rates and which have no factors indicating that such unrealized losses may be other than temporary as we do not intend to sell these securities and it is more likely than not we will not have to sell these securities before a recovery is realized. In addition, we exclude our residential and commercial mortgage backed securities as we monitor all of our residential and commercial mortgage backed securities on a quarterly basis for changes in default rates, loss severities and expected cash flows for the purpose of assessing potential other than temporary impairments and related credit losses to be recognized in operations. At September 30, 2019, the amortized cost and fair value of securities on the watch list (all fixed maturity securities) are as follows:

General Description	Number of Securities	Amortized Cost	Unrealized Gains (Losses)	Fair Value	Months in Continuous Unrealized Loss Position	Months Unrealized Losses Greater Than 20%
			(Dollars in thousands)			
Below investment grade						
Corporate securities:						
Consumer discretionary	5	$ 52,607	$ (6,089)	$ 46,518	0 - 56	0 - 19
Energy	4	55,696	(23,734)	31,962	31 - 61	1 - 52
Industrials	1	563	(38)	525	4	—
Materials	1	3,990	980	4,970	—	—
Other asset backed securities:						
Financials	1	977	326	1,303	—	—
Industrials	1	8,559	(2,628)	5,931	47	10
	13	$ 122,392	$ (31,183)	$ 91,209		

We have determined that the unrealized losses of the securities on the watch list are temporary as we do not intend to sell these securities and it is more likely than not we will not have to sell these securities before recovery of their amortized cost. Our analysis of these securities and their credit performance at September 30, 2019 is as follows:

Corporate securities:

Consumer discretionary: The decline in the value of certain of these securities is primarily due to weak operating performance and sales trends. The decrease in sales for certain of these securities related to a domestic based toy manufacturer is attributable to the liquidation of a major toy retailer during the fourth quarter of 2017. While the issuer has seen a decrease in operating performance, it has implemented a plan to reduce costs and stabilize its revenue and is executing on that plan. We have determined that these securities were not other than temporarily impaired due to our evaluation of the operating performance and the creditworthiness of the issuer and the fact that all required payments have been made. The decline in operating performance and sales trends of another of these securities related to a domestic company operating retail chain stores is a result of market deterioration being experienced in many companies within the retail market. We recognized an other than temporary impairment on this issuer during the fourth quarter of 2018 due to our evaluation of the operating performance and the credit worthiness of the issuer. In addition, we included a Brazilian food company whose operating trends came under pressure during 2018 due to export challenges, domestic poultry price weakness and a domestic trucking strike. As one of the world's largest food companies, we believe the company remains a viable entity even though operating metrics have declined. Most recently the company has experienced improvement in financial metrics due to a stronger macro environment for food producers. We have determined that these securities were not other than temporarily impaired due to our evaluation of their operating performance, asset base and creditworthiness of the borrower.

Energy, Industrials and Materials: The decline in the value of these securities relates to continued operational pressure due to past declines in certain commodity prices specific to their businesses. The decline in these commodity prices creates financial challenges as the companies had to realign operations to accommodate the new environment. These issuers are stressed greater than the average company due to their price sensitivity and the specific position they hold in the supply chain. We recognized an other than temporary impairment on one of these issuers during the fourth quarter of 2018 due to our evaluation of the operating performance and the credit worthiness of the issuer. While the remaining issuers have seen their financial and profitability profile weakened, we have determined that the remaining securities were not other than temporarily impaired due to our evaluation of the operating performance and the credit worthiness of the issuer.

Other asset backed securities:

Financials: The decline in value of this security relates directly to the decline in oil prices and the financial stability of its operator. The issuer has direct exposure to the oil market as its primary business is deep water drilling. As oil prices have remained low, the operator of the deep water vessel has experienced financial pressure on its balance sheet and similar vessel sales have been at softer valuations. We recognized an other than temporary impairment on this security during 2018.

Industrials: The decline in the value of this security is driven by poor financial performance of the trust and a decline in the value of the assets backing this security. Following the loss of several major license agreements with major retailers, revenues and cash flows have suffered. While the performance is down, we have determined the value of the underlying assets currently provide adequate debt service coverage and no other than temporary impairment is necessary.

Other Than Temporary Impairments

We have a policy and process to identify securities in our investment portfolio for which we should recognize impairments. See Critical Accounting Policies—Evaluation of Other Than Temporary Impairments included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018.

During the three and nine months ended September 30, 2019, we recognized additional credit losses on residential mortgage backed securities on which we have previously recognized OTTI. In addition, during the nine months ended September 30, 2019, we recognized an OTTI of $0.3 million related to a commercial mortgage backed security due to our intent to sell the security and an OTTI of $0.6 million on an other asset backed security on which we have previously recognized OTTI.

During the three months ended September 30, 2018, we recognized OTTI on corporate and commercial mortgage backed securities due to our intent to sell such securities which were in unrealized loss positions primarily as part of our strategy to improve our investment yield through the opportunistic replacement of lower yielding securities with higher yielding securities. During the nine months ended September 30, 2018, we recognized additional credit losses on residential mortgage backed securities on which we have previously recognized OTTI and we recognized an additional credit loss of $2.0 million on an other asset backed security as potential sales activity related to the asset backing our security led us to conclude that the asset is worth less than our previous estimates. In addition, during the nine months ended September 30, 2018 we recognized an OTTI of $0.9 million on a corporate security issued by a Brazilian food company due to our intent to sell the security, which was in an unrealized loss position.

Several factors led us to believe that full recovery of amortized cost is not expected on the securities for which we recognized credit losses. A discussion of these factors, our policy and process to identify securities that could potentially have impairment that is other than temporary and a summary of OTTI is presented in Note 3 to our unaudited consolidated financial statements in this Form 10-Q, which is incorporated by reference in this Item 2.

Mortgage Loans on Real Estate

Our commercial mortgage loan portfolio consists of mortgage loans collateralized by the related properties and diversified as to property type, location and loan size. Our mortgage lending policies establish limits on the amount that can be loaned to one borrower and other criteria to attempt to reduce the risk of default. Our commercial mortgage loans on real estate are reported at cost, net of loan loss allowances and deferred prepayment fees. At September 30, 2019 and December 31, 2018, the largest principal amount outstanding for any single mortgage loan was $23.3 million and $23.8 million, respectively, and the average loan size was $4.1 million and $3.8 million, respectively. In addition, the average loan to value ratio for the overall portfolio was 54.0% and 53.6% at September 30, 2019 and December 31, 2018, respectively, based upon the underwriting and appraisal at the time the loan was made. This loan to value is indicative of our conservative underwriting policies and practices for making commercial mortgage loans and may not be indicative of collateral values at the current reporting date. Our current practice is to only obtain market value appraisals of the underlying collateral at the inception of the loan unless we identify indicators of impairment in our ongoing analysis of the portfolio, in which case, we either calculate a value of the collateral using a capitalization method or obtain a third party appraisal of the underlying collateral. The commercial mortgage loan portfolio is summarized by geographic region and property type in Note 4 to our unaudited consolidated financial statements in this Form 10-Q, incorporated by reference in this Item 2.

In the normal course of business, we commit to fund commercial mortgage loans up to 90 days in advance. At September 30, 2019, we had commitments to fund commercial mortgage loans totaling $173.3 million, with interest rates ranging from 3.60% to 5.78%. During 2019 and 2018, due to historically low interest rates, the commercial mortgage loan industry has been very competitive. This competition has resulted in a number of borrowers refinancing with other lenders. For the nine months ended September 30, 2019, we received $127.5 million in cash for loans being paid in full compared to $141.4 million for the nine months ended September 30, 2018. Some of the loans being paid off have either reached their maturity or are nearing maturity; however, some borrowers are paying the prepayment fee and refinancing at a lower rate.

See Note 4 to our unaudited consolidated financial statements, incorporated by reference for a presentation of our specific and general loan loss allowances, impaired loans, foreclosure activity and troubled debt restructure analysis.

We have a process by which we evaluate the credit quality of each of our commercial mortgage loans. This process utilizes each loan's debt service coverage ratio as a primary metric. A summary of our portfolio by debt service coverage ratio (based on most recent information collected) follows:

	September 30, 2019		December 31, 2018	
	Principal Outstanding	Percent of Total Principal Outstanding	Principal Outstanding	Percent of Total Principal Outstanding
	(Dollars in thousands)			
Debt Service Coverage Ratio:				
Greater than or equal to 1.5	$ 2,368,521	73.5%	$ 2,121,785	71.9%
Greater than or equal to 1.2 and less than 1.5	694,645	21.6%	645,470	21.8%
Greater than or equal to 1.0 and less than 1.2	128,519	4.0%	127,083	4.3%
Less than 1.0	29,467	0.9%	58,126	2.0%
	$ 3,221,152	100.0%	$ 2,952,464	100.0%

All of our mortgage loans (based on principal outstanding) that have a debt service coverage ratio of less than 1.0 are performing under the original contractual loan terms at September 30, 2019.

Mortgage loans summarized in the following table represent all loans that we are either not currently collecting or those we feel it is probable we will not collect all amounts due according to the contractual terms of the loan agreements (all loans that we have worked with the borrower to alleviate short-term cash flow issues, loans delinquent for 60 days or more at the reporting date, loans we have determined to be collateral dependent and loans that we have recorded specific impairments on that we feel may continue to have performance issues).

	September 30, 2019	December 31, 2018
	(Dollars in thousands)	
Impaired mortgage loans with an allowance	$ 1,235	$ 1,253
Impaired mortgage loans with no related allowance	—	—
Allowance for probable loan losses	(229)	(229)
Net carrying value of impaired mortgage loans	$ 1,006	$ 1,024

At September 30, 2019, we had no commercial mortgage loans that were delinquent (60 days or more past due at the reporting date) in their principal and interest payments.

Derivative Instruments

Our derivative instruments primarily consist of call options purchased to provide the income needed to fund the annual index credits on our fixed index annuity products. The fair value of the call options is based upon the amount of cash that would be required to settle the call options obtained from the counterparties adjusted for the nonperformance risk of the counterparty. The nonperformance risk for each counterparty is based upon its credit default swap rate. We have no performance obligations related to the call options.

None of our derivatives qualify for hedge accounting, thus, any change in the fair value of the derivatives is recognized immediately in the consolidated statements of operations. A presentation of our derivative instruments along with a discussion of the business strategy involved with our derivatives is included in Note 5 to our unaudited consolidated financial statements in this Form 10-Q, which is incorporated by reference in this Item 2.

Liquidity and Capital Resources

Our insurance subsidiaries continue to have adequate cash flows from annuity deposits and investment income to meet their policyholder and other obligations. Net cash flows from annuity deposits and funds returned to policyholders as surrenders, withdrawals and death claims were $1.5 billion for the nine months ended September 30, 2019 compared to $952.3 million for the nine months ended September 30, 2018, with the increase attributable to a $895.4 million increase in net annuity deposits after coinsurance, which was partially offset by a $371.0 million (after coinsurance) increase in funds returned to policyholders. We continue to invest the net proceeds from policyholder transactions and investment activities in high quality fixed maturity securities and fixed rate commercial mortgage loans.

We, as the parent company, are a legal entity separate and distinct from our subsidiaries, and have no business operations. We need liquidity primarily to service our debt (senior notes and subordinated debentures issued to subsidiary trusts), pay operating expenses and pay dividends to stockholders. Our assets consist primarily of the capital stock and surplus notes of our subsidiaries. Accordingly, our future cash flows depend upon the availability of dividends, surplus note interest payments and other statutorily permissible payments from our subsidiaries, such as payments under our investment advisory agreements and tax allocation agreement with our subsidiaries. These sources provide adequate cash flow for us to meet our current and reasonably foreseeable future obligations.

The ability of our life insurance subsidiaries to pay dividends or distributions, including surplus note payments, will be limited by applicable laws and regulations of the states in which our life insurance subsidiaries are domiciled, which subject our life insurance subsidiaries to significant regulatory restrictions. These laws and regulations require, among other things, our insurance subsidiaries to maintain minimum solvency requirements and limit the amount of dividends these subsidiaries can pay.

Currently, American Equity Investment Life Insurance Company ("American Equity Life") may pay dividends or make other distributions without the prior approval of the Iowa Insurance Commissioner, unless such payments, together with all other such payments within the preceding twelve months, exceed the greater of (1) American Equity Life's net gain from operations for the preceding calendar year, or (2) 10% of American Equity Life's statutory capital and surplus at the preceding December 31. For 2019, up to $325.2 million can be distributed as dividends by American Equity Life without prior approval of the Iowa Insurance Commissioner. In addition, dividends and surplus note payments may be made only out of statutory earned surplus, and all surplus note payments are subject to prior approval by regulatory authorities in the life subsidiary's state of domicile. American Equity Life had $2.0 billion of statutory earned surplus at September 30, 2019.

The maximum distribution permitted by law or contract is not necessarily indicative of an insurer's actual ability to pay such distributions, which may be constrained by business and regulatory considerations, such as the impact of such distributions on surplus, which could affect the insurer's ratings or competitive position, the amount of premiums that can be written and the ability to pay future dividends or make other distributions. Further, state insurance laws and regulations require that the statutory surplus of our life subsidiaries following any dividend or distribution must be reasonable in relation to their outstanding liabilities and adequate for their financial needs. Along with solvency regulations, the primary driver in determining the amount of capital used for dividends is the level of capital needed to maintain desired financial strength ratings from rating agencies. Both regulators and rating agencies could become more conservative in their methodology and criteria, including increasing capital requirements for our insurance subsidiaries which, in turn, could negatively affect the cash available to us from insurance subsidiaries. As of September 30, 2019, we estimate American Equity Life has sufficient statutory capital and surplus, combined with capital available to the holding company, to maintain this rating objective. However, this capital may not be sufficient if significant future losses are incurred or a rating agency modifies its rating criteria and access to additional capital could be limited.

The transfer of funds by American Equity Life is also restricted by a covenant in our line of credit agreement which requires American Equity Life to maintain a minimum RBC ratio of 275% and a minimum level of statutory surplus equal to the sum of 1) 80% of statutory surplus at June 30, 2016, 2) 50% of the statutory net income for each fiscal quarter ending after June 30, 2016, and 3) 50% of all capital contributed to American Equity Life after June 30, 2016. American Equity Life's RBC ratio was 360% at December 31, 2018. Under this agreement, we are also required to maintain a maximum ratio of adjusted debt to total adjusted capital of 0.35.

Cash and cash equivalents of the parent holding company at September 30, 2019, were $57.7 million. The parent holding company contributed $50 million of cash to American Equity Life during the second quarter of 2019. In addition, we have a $150 million revolving line of credit, with no borrowings outstanding, available through September 2021 for general corporate purposes of the parent company and its subsidiaries. We also have the ability to issue equity, debt or other types of securities through one or more methods of distribution. The terms of any offering would be established at the time of the offering, subject to market conditions.

New Accounting Pronouncements

See Note 1 to our unaudited consolidated financial statements in this Form 10-Q, which is incorporated by reference in this Item 2.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We seek to invest our available funds in a manner that will maximize shareholder value and fund future obligations to policyholders and debtors, subject to appropriate risk considerations. We seek to meet this objective through investments that: (i) consist substantially of investment grade fixed maturity securities, (ii) have projected returns which satisfy our spread targets, and (iii) have characteristics which support the underlying liabilities. Many of our products incorporate surrender charges, market interest rate adjustments or other features to encourage persistency.

We seek to maximize the total return on our fixed maturity securities through active investment management. Accordingly, we have determined that our available for sale portfolio of fixed maturity securities is available to be sold in response to: (i) changes in market interest rates, (ii) changes in relative values of individual securities and asset sectors, (iii) changes in prepayment risks, (iv) changes in credit quality outlook for certain securities, (v) liquidity needs, and (vi) other factors.

Interest rate risk is our primary market risk exposure. Substantial and sustained increases and decreases in market interest rates can affect the profitability of our products, the fair value of our investments, and the amount of interest we pay on our floating rate subordinated debentures. Our floating rate trust preferred securities bear interest at the three month LIBOR plus 3.50% - 4.00%. Our outstanding balance of floating rate trust preferred securities was $164.5 million at September 30, 2019, of which $85.5 million has been swapped to a fixed rate until March 2021 and $79.0 million has been capped until July 2021 (see Note 5 to our unaudited consolidated financial statements in this Form 10-Q). The profitability of most of our products depends on the spreads between interest yield on investments and rates credited on insurance liabilities. We have the ability to adjust crediting rates (caps, participation rates or asset fee rates for fixed index annuities) on substantially all of our annuity liabilities at least annually (subject to minimum guaranteed values). In addition, substantially all of our annuity products have surrender and withdrawal penalty provisions designed to encourage persistency and to help ensure targeted spreads are earned. However, competitive factors, including the impact of the level of surrenders and withdrawals, may limit our ability to adjust or maintain crediting rates at levels necessary to avoid narrowing of spreads under certain market conditions.

A major component of our interest rate risk management program is structuring the investment portfolio with cash flow characteristics consistent with the cash flow characteristics of our insurance liabilities. We use models to simulate cash flows expected from our existing business under various interest rate scenarios. These simulations enable us to measure the potential gain or loss in fair value of our interest rate-sensitive financial instruments, to evaluate the adequacy of expected cash flows from our assets to meet the expected cash requirements of our liabilities and to determine if it is necessary to lengthen or shorten the average life and duration of our investment portfolio. The "duration" of a security is the time weighted present value of the security's expected cash flows and is used to measure a security's sensitivity to changes in interest rates. When the durations of assets and liabilities are similar, exposure to interest rate risk is minimized because a change in value of assets should be largely offset by a change in the value of liabilities.

If interest rates were to increase 10% (21 basis points) from levels at September 30, 2019, we estimate that the fair value of our fixed maturity securities would decrease by approximately $791.2 million. The impact on stockholders' equity of such decrease (net of income taxes and certain adjustments for changes in amortization of deferred policy acquisition costs and deferred sales inducements) would be a decrease of $359.4 million in accumulated other comprehensive income (loss) and a decrease in stockholders' equity. The models used to estimate the impact of a 10% change in market interest rates incorporate numerous assumptions, require significant estimates and assume an immediate and parallel change in interest rates without any management of the investment portfolio in reaction to such change. Consequently, potential changes in value of our financial instruments indicated by the simulations will likely be different from the actual changes experienced under given interest rate scenarios, and the differences may be material. Because we actively manage our investments and liabilities, our net exposure to interest rates can vary over time. However, any such decreases in the fair value of our fixed maturity securities (unless related to credit concerns of the issuer requiring recognition of an other than temporary impairment) would generally be realized only if we were required to sell such securities at losses prior to their maturity to meet our liquidity needs, which we manage using the surrender and withdrawal provisions of our annuity contracts and through other means. See Financial Condition - Liquidity for Insurance Operations included in Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2018 for a further discussion of liquidity risk.

The amortized cost of fixed maturity securities that will be callable at the option of the issuer, excluding securities with a make-whole provision, was $8.9 billion as of September 30, 2019. We have reinvestment risk related to these redemptions to the extent we cannot reinvest the net proceeds in assets with credit quality and yield characteristics similar to the redeemed bonds. Such reinvestment risk typically occurs in a declining rate environment. Should rates decline to levels which tighten the spread between our average portfolio yield and average cost of interest credited on annuity liabilities, we have the ability to reduce crediting rates (caps, participation rates or asset fees for fixed index annuities) on most of our annuity liabilities to maintain the spread at our targeted level. At September 30, 2019, approximately 99% of our annuity liabilities were subject to annual adjustment of the applicable crediting rates at our discretion, limited by minimum guaranteed crediting rates specified in the policies. At September 30, 2019, approximately 18% of our annuity liabilities were at minimum guaranteed crediting rates.

We purchase call options on the applicable indices to fund the annual index credits on our fixed index annuities. These options are primarily one-year instruments purchased to match the funding requirements of the underlying policies. Fair value changes associated with those investments are substantially offset by an increase or decrease in the amounts added to policyholder account balances for fixed index products. The difference between proceeds received at expiration of these options and index credits, as shown in the following table, is primarily due to over-hedging as a result of policyholder behavior being different than our expectations.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(Dollars in thousands)			
Proceeds received at expiration of options related to such credits	$ 95,491	$ 378,149	$ 320,381	$ 1,145,322
Annual index credits to policyholders on their anniversaries	92,343	369,011	310,020	1,127,556

On the anniversary dates of the index policies, we purchase new one-year call options to fund the next annual index credits. The risk associated with these prospective purchases is the uncertainty of the cost, which will determine whether we are able to earn our spread on our index business. We manage this risk through the terms of our fixed index annuities, which permit us to change caps, participation rates and asset fees, subject to contractual features. By modifying caps, participation rates or asset fees, we can limit option costs to budgeted amounts, except in cases where the contractual features would prevent further modifications. Based upon actuarial testing which we conduct as a part of the design of our index products and on an ongoing basis, we believe the risk that contractual features would prevent us from controlling option costs is not material.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

In accordance with the Securities Exchange Act Rules 13a-15(e) and 15d-15(e), our management, under the supervision of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report on Form 10-Q. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded the design and operation of our disclosure controls and procedures were effective as of September 30, 2019 in recording, processing, summarizing and reporting, on a timely basis, information required to be disclosed by us in the reports that we file or submit under the Exchange Act.

During the quarter ended September 30, 2019, we implemented an enhanced actuarial valuation system that is used in the calculations of deferred policy acquisition costs, deferred sales inducements and policy liabilities for fixed index and fixed rate annuities. During implementation, we followed a development process that required significant planning, design and testing to ensure an ongoing effective control environment. In connection with the implementation, we evaluated and, where appropriate, made changes to the affected internal controls to maintain and enhance, through increased automation and further integration of related actuarial processes, the effectiveness of internal control over financial reporting. There were no other changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

See Note 7 - Commitments and Contingencies to the unaudited consolidated financial statements in this Form 10-Q, which is incorporated by reference in this Item 1, for litigation and regulatory disclosures.

Item 1A. Risk Factors

Our 2018 Annual Report on Form 10-K described our Risk Factors. We added the Risk Factor titled ***Securities Lending*** in our Form 10-Q for the quarterly period ended March 31, 2019 due to our our participation in a securities lending program commencing during the first quarter of 2019. There have been no other material changes to the Risk Factors during the nine months ended September 30, 2019.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Securities

The following table presents the amount of our share purchase activity for the periods indicated:

Period	Total Number of Shares Purchased (a)	Average Price Paid Per Share
January 1, 2019 - January 31, 2019	—	$ —
February 1, 2019 - February 28, 2019	—	$ —
March 1, 2019 - March 31, 2019	—	$ —
April 1, 2019 - April 30, 2019	—	$ —
May 1, 2019 - May 31, 2019	—	$ —
June 1, 2019 - June 30, 2019	14,538	$ 28.09
July 1, 2019 - July 31, 2019	822	$ 26.49
August 1, 2019 - August 31, 2019	755	$ 23.97
September 1, 2019 - September 30, 2019	—	$ —
Total	16,115	

(a) Includes the number of shares of common stock utilized to execute certain stock incentive awards.

Item 6. Exhibits

Exhibit Number	Description
31.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following materials from American Equity Investment Life Holding Company's Quarterly Report on Form 10-Q for the period ended September 30, 2019 formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of Comprehensive Income (Loss), (iv) the Consolidated Statements of Changes in Stockholders' Equity, (v) the Consolidated Statements of Cash Flows and (vi) the Notes to Unaudited Consolidated Financial Statements.
104	The cover page from American Equity Investment Life Holding Company's Quarterly Report on Form 10-Q for the period ended September 30, 2019 formatted in iXBRL and contained in Exhibit 101.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Date: November 8, 2019	AMERICAN EQUITY INVESTMENT LIFE HOLDING COMPANY
	By: /s/ John M. Matovina
	John M. Matovina, Chief Executive Officer and President
	(Principal Executive Officer)
	By: /s/ Ted M. Johnson
	Ted M. Johnson, Chief Financial Officer and Treasurer
	(Principal Financial Officer)
	By: /s/ Scott A. Samuelson
	Scott A. Samuelson, Vice President and Chief Accounting Officer
	(Principal Accounting Officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John M. Matovina, certify that:

1. I have reviewed this quarterly report on Form 10-Q of American Equity Investment Life Holding Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2019

By: /s/ JOHN M. MATOVINA

John M. Matovina, Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Ted M. Johnson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of American Equity Investment Life Holding Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2019

By: /s/ TED M. JOHNSON

Ted M. Johnson, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Exhibit 32.1

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

In connection with the Quarterly Report of American Equity Investment Life Holding Company (the "Company") on Form 10-Q for the period ended September 30, 2019 as filed with the Securities and Exchange Commission on or about the date hereof (the "Report"), I, John M. Matovina, Chief Executive Officer and President of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934;

and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 8, 2019

By: /s/ JOHN M. MATOVINA

John M. Matovina, Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 32.2

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

In connection with the Quarterly Report of American Equity Investment Life Holding Company (the "Company") on Form 10-Q for the period ended September 30, 2019 as filed with the Securities and Exchange Commission on or about the date hereof (the "Report"), I, Ted M. Johnson, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934;

and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 8, 2019	By:	/s/ TED M. JOHNSON
		Ted M. Johnson, Chief Financial Officer and Treasurer *(Principal Financial Officer)*