KANSAS CITY LIFE INSURANCE COMPANY

2019 ANNUAL REPORT

KANSAS CITY LIFE INSURANCE COMPANY

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Financial Information

Amounts in thousands, except share data, security counts, claim counts, or as otherwise noted.

Kansas City Life Insurance Company
Consolidated Balance Sheets

	December 31	
	2019	2018
ASSETS		
Investments:		
Fixed maturity securities available for sale, at fair value (amortized cost: 2019 - $2,776,856; 2018 - $2,693,860)	$ 2,951,137	$ 2,704,079
Equity securities, at fair value (cost: 2019 - $10,614; 2018 - $14,614)	11,272	14,424
Mortgage loans	577,699	639,559
Real estate	183,016	186,994
Policy loans	87,499	88,066
Short-term investments	75,426	58,712
Other investments	9,156	5,355
Total investments	3,895,205	3,697,189
Cash	14,234	31,689
Accrued investment income	32,142	31,535
Deferred acquisition costs	286,682	291,168
Reinsurance recoverables	378,772	366,196
Other assets	181,629	179,975
Separate account assets	431,201	373,734
Total assets	$ 5,219,865	$ 4,971,486
LIABILITIES		
Future policy benefits	$ 1,331,215	$ 1,279,034
Policyholder account balances	2,237,700	2,261,860
Policy and contract claims	55,997	47,274
Other policyholder funds	170,776	174,984
Other liabilities	182,245	142,894
Separate account liabilities	431,201	373,734
Total liabilities	4,409,134	4,279,780
STOCKHOLDERS' EQUITY		
Common stock, par value $1.25 per share		
Authorized 36,000,000 shares, issued 18,496,680 shares	23,121	23,121
Additional paid in capital	41,025	41,025
Retained earnings	928,380	914,411
Accumulated other comprehensive income (loss)	59,506	(45,550)
Treasury stock, at cost (2019 and 2018 - 8,813,266 shares)	(241,301)	(241,301)
Total stockholders' equity	810,731	691,706
Total liabilities and stockholders' equity	$ 5,219,865	$ 4,971,486

See accompanying Notes to Consolidated Financial Statements

Kansas City Life Insurance Company
Consolidated Statements of Comprehensive Income

	Year Ended December 31		
	2019	2018	2017
REVENUES			
Insurance revenues:			
Net premiums	$ 223,227	$ 193,593	$ 179,936
Contract charges	125,886	116,916	114,028
Total insurance revenues	349,113	310,509	293,964
Investment revenues:			
Net investment income	148,349	141,315	145,825
Net investment gains	9,133	2,840	4,555
Total investment revenues	157,482	144,155	150,380
Other revenues	6,098	6,368	6,413
Total revenues	512,693	461,032	450,757
BENEFITS AND EXPENSES			
Policyholder benefits	257,621	227,202	210,799
Interest credited to policyholder account balances	78,520	74,308	72,921
Amortization of deferred acquisition costs	35,948	40,616	34,770
Operating expenses	111,154	101,720	102,898
Total benefits and expenses	483,243	443,846	421,388
Income before income tax expense (benefit)	29,450	17,186	29,369
Income tax expense (benefit)	5,023	1,514	(22,172)
NET INCOME	$ 24,427	$ 15,672	$ 51,541
COMPREHENSIVE INCOME (LOSS), NET OF TAXES			
Changes in:			
Net unrealized gains (losses) on securities available for sale	$ 129,609	$ (65,062)	$ 788
Effect on deferred acquisition costs, value of business acquired, and deferred revenue liabilities	(11,608)	8,867	1,254
Policyholder liabilities	(15,987)	11,354	2,008
Benefit plan obligations	3,042	(5,823)	6,439
Other comprehensive income (loss)	105,056	(50,664)	10,489
COMPREHENSIVE INCOME (LOSS)	$ 129,483	$ (34,992)	$ 62,030
Basic and diluted earnings per share:			
Net income	$ 2.52	$ 1.62	$ 5.32

See accompanying Notes to Consolidated Financial Statements

Kansas City Life Insurance Company
Consolidated Statements of Stockholders' Equity

	Year Ended December 31		
	2019	2018	2017
COMMON STOCK, beginning and end of year	$ 23,121	$ 23,121	$ 23,121
ADDITIONAL PAID IN CAPITAL, beginning and end of year	41,025	41,025	41,025
RETAINED EARNINGS			
Beginning of year	914,411	908,022	868,054
Net income	24,427	15,672	51,541
Stockholder dividends (2019, 2018, and 2017 - $1.08 per share)	(10,458)	(10,457)	(10,458)
Cumulative effect of adoption of new accounting principle	—	1,174	(1,115)
End of year	928,380	914,411	908,022
ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)			
Beginning of year	(45,550)	6,288	(5,316)
Other comprehensive income (loss)	105,056	(50,664)	10,489
Cumulative effect of adoption of new accounting principle	—	(1,174)	1,115
End of year	59,506	(45,550)	6,288
TREASURY STOCK, at cost, beginning and end of year	(241,301)	(241,301)	(241,301)
TOTAL STOCKHOLDERS' EQUITY	$ 810,731	$ 691,706	$ 737,155

See accompanying Notes to Consolidated Financial Statements

Kansas City Life Insurance Company
Consolidated Statements of Cash Flows

	Year Ended December 31		
	2019	2018	2017
OPERATING ACTIVITIES			
Net income	$ 24,427	$ 15,672	$ 51,541
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of investment premium and discount	3,321	3,453	3,026
Depreciation and amortization	8,367	5,802	5,727
Acquisition costs capitalized	(48,443)	(43,389)	(41,845)
Amortization of deferred acquisition costs	35,948	40,616	34,770
Net investment gains	(9,133)	(2,840)	(4,555)
Changes in assets and liabilities:			
Reinsurance recoverables	(12,576)	52,937	2,294
Future policy benefits	32,274	26,248	12,583
Policyholder account balances	(43,516)	(32,096)	(28,338)
Income taxes payable and deferred	5,960	2,477	(25,741)
Other, net	3,503	(3,798)	5,054
Net cash provided	132	65,082	14,516
INVESTING ACTIVITIES			
Purchases:			
Fixed maturity securities	(342,477)	(275,591)	(332,552)
Equity securities	—	(58)	(45)
Mortgage loans	(25,036)	(65,557)	(105,354)
Real estate	(1,975)	(7,282)	(5,304)
Policy loans	(10,969)	(9,469)	(11,006)
Other investments	(2,712)	(2,074)	(1,242)
Property and equipment	(2,379)	(20,448)	(2,289)
Sales or maturities, calls, and principal paydowns:			
Fixed maturity securities	263,411	307,167	326,923
Equity securities	4,000	824	4,075
Mortgage loans	87,157	75,636	85,891
Real estate	3,084	12,734	2,205
Policy loans	11,535	11,685	12,722
Other investments	2,176	2,712	1,786
Property and equipment	5,572	932	415
Net purchases of short-term investments	(16,714)	(12,930)	(4,669)
Acquisition of Grange Life, net of cash acquired	—	(62,447)	—
Receipts from post-acquisition purchase price adjustments	1,663	—	—
Net cash used	(23,664)	(44,166)	(28,444)

Kansas City Life Insurance Company
Consolidated Statements of Cash Flows (Continued)

	Year Ended December 31		
	2019	2018	2017
FINANCING ACTIVITIES			
Deposits on policyholder account balances	$ 223,058	$ 217,344	$ 226,313
Withdrawals from policyholder account balances	(207,242)	(206,444)	(203,249)
Net transfers from separate accounts	3,500	4,386	5,625
Change in other deposits	(2,666)	(3,560)	(4,429)
Cash dividends to stockholders	(10,458)	(10,457)	(10,458)
Post-acquisition contingent liability fulfillment	(115)	—	—
Net cash provided	6,077	1,269	13,802
Increase (decrease) in cash	(17,455)	22,185	(126)
Cash at beginning of year	31,689	9,504	9,630
Cash at end of year	$ 14,234	$ 31,689	$ 9,504

See accompanying Notes to Consolidated Financial Statements

Kansas City Life Insurance Company
Notes to Consolidated Financial Statements

1. Nature of Operations and Significant Accounting Policies

Business

Kansas City Life Insurance Company is a Missouri domiciled stock life insurance company which, with its subsidiaries, is licensed to sell insurance products in 49 states and the District of Columbia. The consolidated entity (the Company) offers a diversified portfolio of individual insurance, annuity, and group life and health products through its four life insurance companies. Kansas City Life Insurance Company (Kansas City Life) is the parent company. Sunset Life Insurance Company of America (Sunset Life), Old American Insurance Company (Old American), and Grange Life Insurance Company (Grange Life) are wholly-owned insurance subsidiaries. The Company also has non-insurance subsidiaries that individually and collectively are not material. The terms "the Company," "we," "us," and "our" are used in these consolidated financial statements to refer to Kansas City Life Insurance Company and its subsidiaries.

We have three reportable business segments, which are defined based on the nature of the products and services offered: Individual Insurance, Group Insurance, and Old American. For additional information on our segments, please see Note 18 - Segment Information.

Basis of Presentation

The consolidated financial statements and the accompanying notes to the consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and include the accounts of Kansas City Life and its subsidiaries, principally Sunset Life, Old American, and Grange Life. Significant intercompany transactions have been eliminated in consolidation and certain immaterial reclassifications have been made to prior period results to conform with the current period's presentation.

Business Changes

There were no business changes during 2019.

In October 2018, the Company acquired all of the issued and outstanding stock of Grange Life Insurance Company from Grange Mutual Casualty Company, for approximately $75 million, subject to certain adjustments under the terms of the agreement. For additional information regarding the acquisition of Grange Life, please see Note 2 - Acquisition.

Use of Estimates

The preparation of the consolidated financial statements requires management of the Company to make estimates and assumptions relating to the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenue and expenses during the period. These estimates are inherently subject to change and actual results could differ from these estimates. Significant estimates required in the preparation of the consolidated financial statements include the fair value of invested assets, deferred acquisition costs (DAC), deferred income taxes, goodwill and other intangibles, value of business acquired (VOBA), deferred revenue liability (DRL), policyholder account balances, future policy benefits, policy and contract claim liabilities, reinsurance, and pension and other postemployment benefits.

Significant Accounting Policies

Investments

Valuation of Investments and Other-than-Temporary Impairments

Our principal investments are in fixed maturity securities, mortgage loans, and real estate; all of which are exposed to at least three primary sources of investment risk, including: credit, interest rate, and liquidity.

Fixed maturity securities, which are all classified as available for sale, are carried at fair value in the Consolidated Balance Sheets, with unrealized gains or losses recorded in accumulated other comprehensive income (loss). The unrealized gains or losses are recorded net of the adjustment to policyholder liabilities, DAC, VOBA, and DRL to reflect what would have been earned had those gains or losses been realized and the proceeds reinvested. The adjustments to DAC, VOBA, and DRL represent changes in the amortization that would have been required as a charge or credit to income had such unrealized amounts been realized. The adjustments to policyholder liabilities represent the increase from using a discount rate that would have been required if such unrealized gains or losses had been realized and the proceeds reinvested at current market interest rates, which were different from the then-current effective portfolio rate. The amortized cost of a security is adjusted for declines in value that are determined to be other-than-temporary. Other-than-temporary impairment losses are reported as a component of investment revenues in the Consolidated Statements of Comprehensive Income, which also presents the amount of non-credit impairment losses for certain fixed maturity securities that are reported in accumulated other comprehensive income (loss). See Note 4 - Investments for additional discussion of our considerations related to other-than-temporary impairments. For additional information regarding fair value, please see Note 5 - Fair Value Measurements.

Equity securities are carried at fair value. Beginning with the adoption of Accounting Standards Update (ASU) No. 2016-01 on January 1, 2018, changes in the fair value of equity securities are recognized through net income. Prior to January 1, 2018, unrealized gains or losses were recorded in accumulated other comprehensive income (loss).

Mortgage loans are stated at cost, adjusted for amortization of premium and accrual of discount, less an allowance for loan losses. A loan is considered impaired if it is probable that all contractual amounts due will not be collected. The allowance for loan losses is maintained at a level believed by management to be adequate to absorb potential future incurred credit losses. Management's periodic evaluation and assessment of the adequacy of the allowance is based on known and inherent risks in the portfolio, historical and industry data, current economic conditions, and other relevant factors, along with specific risks related to specific loans. Loans in foreclosure, loans considered to be impaired, and loans with amounts past due 90 days or more are placed on non-accrual status.

Real estate consists of directly owned investments and real estate joint ventures. Real estate that is directly owned is carried at depreciated cost. Real estate joint ventures consist primarily of office buildings, industrial warehouses, unimproved land for future development, and affordable housing real estate joint ventures. Real estate joint ventures are consolidated when required. The initial cost of the non-consolidated affordable housing real estate joint ventures is amortized in proportion to the tax credits and other tax benefits received and the net investment performance is recognized in the Consolidated Statements of Comprehensive Income as a component of income tax expense. The investments in other non-consolidated real estate joint ventures are recorded using the equity method of accounting, in which the initial cost of the investment is adjusted for earnings and cash contributions or distributions.

Policy loans are carried at their outstanding principal amount.

Short-term investments include highly-liquid investments in institutional money market funds that are carried at net asset value (NAV).

The Company has hedge positions classified as derivatives that are included in Other Investments in the Consolidated Balance Sheets. These derivative assets are recorded at fair value and are established in relation to the Company's indexed universal life portfolio. The index credit portion of the reserves associated with the indexed universal life products are considered to be embedded derivatives and are accounted for at fair value and are included in Policyholder Account Balances in the Consolidated Balance Sheets. The value of the reserves will fluctuate depending on market conditions. Changes in market values can result in significant fluctuations to realized gains and losses in the Consolidated Statements of Comprehensive Income.

Investment Income

Investment income is recognized when earned. Premiums and discounts on fixed maturity securities are amortized over the life of the related security as an adjustment to yield using the effective interest method, with the exception of premiums on callable fixed maturity securities, which are amortized to the earliest call date. Realized gains and losses on the sale of investments are determined on the basis of specific security identification recorded on the trade date.

Future Policy Benefits

We establish liabilities for amounts payable under insurance policies, including traditional life insurance, immediate annuities with life contingencies, supplementary contracts with life contingencies, group life insurance, and accident and health insurance. These liabilities originate from new premiums and conversions from other products and are generally payable over an extended period of time.

Liabilities for future policy benefits of traditional life insurance have been computed by a net level premium method based upon estimates at the time of issue or at the time of acquisition for investment yields, mortality, and withdrawals. These estimates include provisions for experience less favorable than initially expected. Mortality assumptions are based on Company experience expressed as a percentage of standard mortality tables. The 2008 Valuation Basic Table, the 2001 Valuation Basic Table, and the 1975-1980 Select and Ultimate Basic Table serve as the bases for most mortality assumptions.

Liabilities for future policy benefits of immediate annuities and supplementary contracts with life contingencies are computed by calculating an actuarial present value of future policy benefits, based upon estimates for investment yields and mortality at the time of issue or at the time of acquisition. The 2012 Individual Annuity Reserving Table, the Annuity 2000 Table, the 1983 Individual Annuity Mortality Table, and the 1971 Individual Annuity Mortality Table serve as the bases for most immediate annuity and supplementary contract mortality assumptions.

Liabilities for future policy benefits of accident and health insurance represent estimates of payments to be made on reported insurance claims, as well as claims incurred-but-not-reported (IBNR). These liabilities are estimated using actuarial analyses and case basis evaluations that are based upon past claims experience, claim trends, and industry experience.

The following table provides detail about the composition of future policy benefits at December 31.

	2019	2018
Life insurance	$ 1,004,148	$ 976,310
Immediate annuities and supplementary contracts with life contingencies	292,590	267,343
Accident and health insurance	34,477	35,381
Future policy benefits	$ 1,331,215	$ 1,279,034

Policyholder Account Balances

Policyholder account balances are deposit-type contracts, including universal life insurance and fixed annuity contracts, and investment-type contracts. Liabilities for policyholder account balances are included without reduction for potential surrender charges. These liabilities originate from new deposits and conversions from other products. Policyholder account balances are equal to cumulative deposits, less contract charges and withdrawals, plus interest credited. Deferred front-end contract charges reduce policyholder account balance liabilities and increase the other policyholder funds liability, and are amortized over the term of the policies in a manner similar to DAC, as discussed below. Interest on policyholder account balances is credited as earned.

On an ongoing basis, we perform testing and analysis on our blocks of business to ensure the assumptions made remain viable. We also periodically perform sensitivity testing on these blocks of business to ensure we maintain the capacity to meet an increase in policyholder benefits, namely increased surrenders, policy loans, or other policyholder elective withdrawals. If it is determined that our established reserves are not adequate, additional reserves will be added.

Crediting rates for universal life insurance and fixed annuity products ranged from 1.00% to 5.50% in 2019, 2018, and 2017.

The following table provides detail about the composition of policyholder account balances at December 31.

	2019	2018
Universal life insurance	$ 1,087,984	$ 1,086,286
Fixed annuities	1,096,588	1,122,776
Immediate annuities and supplementary contracts without life contingencies	53,128	52,798
Policyholder account balances	$ 2,237,700	$ 2,261,860

Deferred Acquisition Costs

DAC, principally agent commissions and other selling, selection, and issue costs, which are related directly to the successful acquisition of new or renewal insurance contracts, are capitalized as incurred. At least annually, we review our DAC capitalization policy and the specific items which are capitalized under existing guidance.

Policy acquisition costs associated with traditional life products are deferred and amortized over the premium paying period. Assumptions related to DAC on traditional life insurance products are typically determined at inception and remain unchanged with any future premium deficiency recorded first as a reduction of DAC.

Policy acquisition costs that relate to interest sensitive and variable insurance products are deferred and amortized in relation to the estimated gross profits to be realized over the lives of the contracts. Estimated gross profits for interest sensitive and variable insurance products are projected using assumptions as to net interest income, net realized investment gains and losses, fees, surrender charges, expenses, and mortality gains and losses, net of reinsurance. At the issuance of policies, projections of estimated gross profits are made. These projections are then replaced by actual gross profits over the lives of the policies. In addition to other factors, emerging experience may lead to a revised outlook for the remaining estimated gross profits. Accordingly, DAC may be recalculated (unlocked) using these new assumptions and any resulting adjustment is included in income in the period such an unlocking is deemed appropriate. See the Unlocking and Refinements in Estimates section below for additional information.

The DAC asset is adjusted to reflect the impact of unrealized gains and losses on fixed maturity securities available for sale, as described in the Investments section above.

DAC is reviewed on an ongoing basis to evaluate whether the unamortized portion exceeds the expected recoverable amounts. If it is determined from emerging experience that the premium margins or expected gross profits are insufficient to amortize DAC, the asset will be adjusted downward with the adjustment recorded as an expense in the current period.

The following table provides information about DAC at December 31.

	2019	2018
Balance at beginning of year	$ 291,168	$ 277,182
Capitalization of commissions and expenses	48,443	43,389
Gross amortization	(48,375)	(53,251)
Accrual of interest	12,427	12,635
Change in DAC due to the change in unrealized investment gains or losses	(16,981)	11,213
Balance at end of year	$ 286,682	$ 291,168

Value of Business Acquired

The concept of VOBA is no longer applied to business combinations. Rather, under current guidance for business combinations, all assets and liabilities are reported at fair value at acquisition and an intangible asset or liability may result due to differences between fair value and consideration paid. However, prior to the adoption of Accounting Standards Codification (ASC) No. 805 Business Combinations, a portion of the purchase price was allocated to a separately identifiable intangible asset, VOBA, when a new block of business was acquired or when an insurance company was purchased. VOBA is established as the actuarially determined present value of future gross profits of the business acquired and is amortized with interest in proportion to future premium revenues or the expected future profits, depending on the type of business acquired. VOBA is reported as a component of other assets with related amortization included in operating expenses. Amortization of VOBA occurs with interest over the anticipated life of the underlying business to which it relates, initially 15 to 30 years. The assumptions regarding future experience on interest sensitive business can affect the carrying value of VOBA, similar to DAC. These assumptions include interest spreads, mortality, expense margins, and policy and premium persistency experience.

The VOBA asset is adjusted to reflect the impact of unrealized gains and losses on fixed maturity securities available for sale, as described in the Investments section above.

VOBA is reviewed on an ongoing basis to evaluate whether the unamortized portion exceeds the expected recoverable amounts. If it is determined from emerging experience that the premium margins or expected gross profits are insufficient to amortize VOBA, the asset will be adjusted downward with an expense recorded in the current period.

The following table provides information about VOBA at December 31.

	2019	2018
Balance at beginning of year	$ 20,306	$ 20,297
Gross amortization	(4,230)	(4,875)
Accrual of interest	1,097	1,286
Change in VOBA due to the change in unrealized investment gains or losses	(4,643)	3,598
Balance at end of year	$ 12,530	$ 20,306

Interest accrued on the VOBA of one block of business was at the rates of 4.21% on the interest sensitive life block and 5.25% on the traditional life block, based upon the credited rates of the VOBA policies. The VOBA on a separate acquired block of business used a 7.00% interest rate on the traditional life portion and a 5.40% interest rate on the interest sensitive portion, based upon rates appropriate at the time of acquisition.

Goodwill and Intangible Asset

We established goodwill for the future economic benefits arising from the acquisition of Grange Life. Goodwill was valued at $43.0 million at December 31, 2018. Subsequent to December 31, 2018, certain post-acquisition adjustments, as defined under the contract, were made that resulted in a decrease of $0.7 million in goodwill. The goodwill balance at December 31, 2019 was $42.3 million. Goodwill is included in Other Assets in the Consolidated Balance Sheets. Under GAAP, goodwill is assessed at least annually for impairment rather than being amortized. As a result of our impairment assessment, we determined that goodwill was not impaired at December 31, 2019.

The acquisition of Grange Life generated an amortizable intangible asset, which is the difference between the fair value and book value of the net reserve liabilities acquired. We evaluated the fair value and book value of all other assets and liabilities acquired and no other intangible assets were recognized at acquisition. The intangible asset was valued at $20.0 million at December 31, 2019 and $21.1 million at December 31, 2018 and is included in Other Assets in the Consolidated Balance Sheets.

Deferred Revenue Liabilities

Deferred revenue liabilities represent the capitalization of revenues received from contracts as compensation for services to be provided by the Company in future periods. Deferred revenue liabilities totaled $37.7 million at December 31, 2019 and $41.6 million at December 31, 2018. Such loads and charges are reported as unearned revenue in the period received and are subsequently recognized as income over the policy benefit period, using the same assumptions and factors used to amortize DAC. Similar to DAC, these amounts are amortized in relation to estimated gross profits for interest sensitive and variable insurance products. However, unlike DAC, the amortization of the DRL results in the recognition of revenue rather than expense. The DRL could be impacted by unlocking and refinements in estimates, as discussed in the following section.

Unlocking and Refinements in Estimates

Models and assumptions used to develop expected gross profits for interest sensitive and variable insurance products are reviewed at least annually based upon management's current view of future events. Key assumptions analyzed include net interest income, net realized investments gains and losses, fees, surrender charges, expenses, and mortality gains and losses, net of reinsurance. Management's view primarily reflects Company experience but can also reflect emerging trends within the industry. Short-term deviations in experience affect the amortization of DAC, VOBA, and DRL in the period, but do not necessarily indicate that a change to the long-term assumptions of future experience is warranted. If it is determined that it is appropriate to change the assumptions related to future experience, then an unlocking adjustment is recognized for the block of business being evaluated. Certain assumptions, such as interest spreads and surrender rates, may be interrelated. As such, unlocking adjustments often reflect revisions to multiple assumptions. The DAC, VOBA, or DRL balance is immediately impacted by any assumption changes, with the change reflected through the Consolidated Statements of Comprehensive Income as an unlocking adjustment. These adjustments can be positive or negative, and adjustments increasing the DAC asset are limited to amounts previously deferred plus interest accrued through the date of the adjustment.

We also consider refinements in estimates due to improved capabilities resulting from administrative or actuarial system enhancements. We consider such enhancements to determine whether and to what extent they are associated with prior periods or simply improvements in the projection of future expected gross profits due to improved functionality. To the extent they represent such improvements, these items are applied to DAC, VOBA, and DRL in a manner similar to unlocking adjustments.

The following tables summarize the effects of the refinements in estimates on all products and unlocking of assumptions on interest sensitive products in the Consolidated Statements of Comprehensive Income for the years ended December 31. Positive numbers are increases to income and negative numbers are reductions to income.

	DAC Amortization	VOBA Amortization	DRL Contract Charges	Net Impact to Pre-Tax Income
2019:				
Unlocking	$ (350)	$ (538)	$ 763	$ (125)
Refinement in estimate	708	—	17	725
	$ 358	$ (538)	$ 780	$ 600

	DAC Amortization	VOBA Amortization	DRL Contract Charges	Net Impact to Pre-Tax Income
2018:				
Unlocking	$ (884)	$ (644)	$ 920	$ (608)
Refinement in estimate	71	—	—	71
	$ (813)	$ (644)	$ 920	$ (537)

	DAC Amortization	VOBA Amortization	DRL Contract Charges	Net Impact to Pre-Tax Income
2017:				
Unlocking	$ (344)	$ (1,246)	$ (46)	$ (1,636)
Refinement in estimate	(1,378)	—	2,004	626
	$ (1,722)	$ (1,246)	$ 1,958	$ (1,010)

The unlocking in 2019 primarily resulted from unlocking surrender rates and reinsurance as well as refinements of expense loads. These were partially offset by interest rate fluctuations. The unlocking in 2018 primarily resulted from interest rate fluctuations. The unlocking and refinements in 2017 were primarily driven by low interest rates and the implementation of specific cost of insurance charges for certain plans. In addition, we recorded a $0.2 million reserve decrease in 2019, a $0.2 million reserve increase in 2018, and a $0.3 million reserve increase in 2017 related to the impacts of unlocking.

Additional refinements were made in 2019 as a result of the completed review of Grange Life valuation models. Most refinements were the result of replacing simpler, more aggregate type calculations or assumptions with more detailed plan specifications or assumptions. We recorded a $3.2 million reserve decrease in 2019 related to the Grange Life model refinements. In addition, these refinements resulted in a $0.4 million increase in DAC included in the table above.

The impact to pre-tax income of all adjustments related to unlocking and refinements in estimates, including insurance revenues, amortization of DAC and VOBA, and policy holder benefits, was an increase of $4.1 million in 2019, a decrease of $0.7 million in 2018, and a decrease of $1.3 million in 2017.

Pensions and Other Postemployment Benefits (OPEB)

The measurement of pension and other postemployment benefit obligations and costs depends on a variety of assumptions. Changes in the valuation of pension obligations and assets supporting this obligation can significantly impact the funded status. Assumptions are made regarding the discount rate, expected long-term rate of return on plan assets, health care claim costs, health care cost trends, retirement rates, and mortality. Generally, the discount rate, expected return on plan assets, and mortality tables have the most significant impact on the cost. The components of benefit cost are included in Operating Expenses in the Consolidated Statements of Comprehensive Income. See Note 13 - Pensions and Other Postemployment Benefits for further details.

Separate Accounts and Guaranteed Minimum Withdrawal Benefits (GMWB)

Separate account assets and liabilities arise from the sale of variable universal life insurance and variable annuity products. The separate account represents funds segregated for the benefit of certain policyholders who bear the investment risk. The assets are

legally segregated and are not subject to claims which may arise from any other business of the Company. The separate account assets and liabilities, which are equal, are recorded at fair value based upon the NAV of the underlying investment holdings as derived from closing prices on a national exchange or as provided by the issuer. Policyholder account deposits and withdrawals, investment income, and realized investment gains and losses are excluded from the amounts reported in the Consolidated Statements of Comprehensive Income. Revenues to the Company from separate accounts are derived from directly-issued policies and contracts, as well as reinsurance assumed business. These revenues consist principally of contract charges, which include maintenance charges, administrative fees, and mortality and expense charges.

We offer a GMWB rider that can be added to new or existing variable annuity contracts. The rider provides an enhanced withdrawal benefit that guarantees a stream of income payments to an owner or annuitant, regardless of the contract account value. The rider is considered to be a financial derivative and, as such, is accounted for at fair value. The value of the rider will fluctuate depending on market conditions, but is principally impacted by stock market volatility, interest rates, and equity market returns. The change in value could have a material impact on earnings. See Note 5 for further details.

Reinsurance

Consistent with the general practice of the life insurance industry, we enter into traditional indemnity reinsurance agreements with other insurance companies to support sales of selected new products and the in force business. We cede reinsurance in force on all of the following bases: automatic and facultative; yearly renewable term (YRT) and coinsurance; and excess and quota share basis. See Note 15 - Reinsurance for additional information pertaining to our significant reinsurers, along with additional information pertaining to reinsurance.

Future policy benefits are not reduced for reinsurance ceded in the Consolidated Balance Sheets. A reinsurance recoverable is established for these items. Reinsurance recoverables include amounts related to paid benefits and estimated amounts related to unpaid policy and contract claims, future policy benefits, and policyholder account balances. All insurance related revenues, benefits, and expenses are reported net of reinsurance ceded in the Consolidated Statements of Comprehensive Income.

We have two large reinsurance assumed arrangements. We acquired a block of traditional life and universal life products in 1997 through a 100% coinsurance and servicing arrangement. These assumed policies and contracts are accounted for in a manner similar to that used for direct business. We also acquired a block of variable universal life insurance policies and variable annuity contracts in 2013. We receive fees based upon both specific transactions and the fund value of the block of policies, as provided under modified coinsurance transactions. Also, as required under modified coinsurance transaction accounting, the separate account fund balances are not recorded as separate accounts on our financial statements. The coinsurance portion of the transaction, which is invested in our fixed funds, is included in Future Policy Benefits in the Consolidated Balance Sheets. We record these fixed fund accounts as a separate block under our general accounts. We receive fees on both the separate accounts and the fixed fund accounts.

Property and Equipment

Property and equipment are stated at cost, depreciated over estimated useful lives using the straight-line method, and are included in Other Assets in the Consolidated Balance Sheets. The home office is depreciated over 10 years to 50 years and furniture and equipment is depreciated over 3 years to 10 years. The following table provides information about property and equipment at December 31.

	2019	2018
Land	$ 766	$ 766
Home office complex	21,562	21,126
Furniture and equipment	35,373	38,050
	57,701	59,942
Accumulated depreciation	(35,198)	(31,958)
Property and equipment	$ 22,503	$ 27,984

Depreciation expense totaled $2.5 million during 2019, $1.8 million during 2018, and $1.5 million during 2017.

Recognition of Revenues

Premiums

Premiums for traditional life insurance products are reported as revenue when due. Premiums for immediate annuities with life contingencies are reported as revenue when received. Premiums on accident and health, disability, and dental insurance are reported as earned ratably over the contract period in proportion to the amount of insurance protection provided. Premiums are reported net of reinsurance, as applicable.

Contract Charges

Contract charges consist of cost of insurance, expense loads, the amortization of unearned revenues, and surrender charges on policyholder account balances. Cost of insurance relates to charges for mortality. These charges are applied to the excess of the mortality benefit over the account value for universal life policies. Expense loads are amounts that are assessed against the policyholder balance as consideration for origination and maintenance of the contract. Surrender charges are fees on policyholder account balances upon cancellation or withdrawal of policyholder account balances consistent with policy terms.

An additional component of contract charges is the recognition over time of the DRL for certain fixed and variable universal life policies. This liability arises from front-end loads on such policies and is recognized into the Consolidated Statements of Comprehensive Income in a manner similar to the amortization of DAC. If it is determined that it is appropriate to change the assumptions of future experience, then an unlocking adjustment is recognized for the block of business being evaluated. Certain assumptions, such as interest spreads and surrender rates, may be interrelated, and unlocking adjustments often reflect revisions to multiple assumptions. In addition, we may also consider refinements in estimates for other unusual or one-time occurrences, such as administrative or actuarial system upgrades. These items are applied to the appropriate financial statement line items, similar to unlocking adjustments.

Deposits

Deposits related to universal life, fixed annuity contracts, and investment-type products are credited to policyholder account balances. Deposits are not recorded as revenue and are shown as a Financing Activity in the Consolidated Statements of Cash Flows. Revenues from such contracts consist of amounts assessed against policyholder account balances for mortality, policy administration, and surrender charges, and are recognized in the period in which the benefits and services are provided as contract charges in the Consolidated Statements of Comprehensive Income.

Revenues from Contracts with Customers

We have certain types of non-insurance and non-investment revenue from contracts with customers. These revenues are recognized when obligations under the terms of the contract are satisfied. The amount of revenue recognized reflects the consideration we expect to be entitled to in exchange for those services. For these revenues, the performance obligation is fulfilled as services are rendered. These revenues equaled less than 1% of our total revenues for the years ended December 31, 2019 and December 31, 2018 and are not material to our consolidated financial statements.

Realized Gains (Losses)

We realize investment gains and losses from several sources, including write-downs of investments, the change in the allowance for mortgage loan losses, sales of investment securities and real estate, and the change in fair value of equity securities and derivative instruments.

Income Taxes

The Company and its subsidiaries file a consolidated federal income tax return that includes Kansas City Life, Sunset Life, Old American, and non-life insurance companies. Grange Life files a separate federal income tax return.

Deferred income taxes are recorded based on the differences between the tax bases of assets and liabilities and the amounts at which they are reported in the consolidated financial statements. Recorded amounts are adjusted to reflect changes in income tax rates and other tax law provisions as they become enacted.

On December 22, 2017, the United States enacted tax reform legislation through the Tax Cuts and Jobs Act (TCJA), which significantly changed the existing U.S. tax laws, including a reduction in the corporate tax rate from 35% to 21%, as well as other changes. As a result of enactment of the legislation, the Company incurred an additional one-time tax expense increase during the fourth quarter of 2018, primarily related to the remeasurement of certain deferred tax assets and liabilities. The change in tax as a result of tax reform was a $30.5 million benefit and a $0.3 million expense as of December 31, 2017 and December 31, 2018, respectively. For additional information, please see Note 12 - Income Taxes.

Deferred income tax assets are subject to ongoing evaluation of whether such assets will be realized. The ultimate realization of deferred income tax assets generally depends on the reversal of deferred tax liabilities and the generation of future taxable income

and realized gains during the periods in which temporary differences become deductible. Deferred income taxes include future deductible differences relating to unrealized losses on investment securities. We evaluate the character and timing of unrealized gains and losses to determine whether future taxable amounts are sufficient to offset future deductible amounts. A valuation allowance against deferred income tax assets may be required if future taxable income of an appropriate amount and character is not expected.

2. Acquisition

On October 1, 2018, the Company acquired all of the issued and outstanding stock of Grange Life Insurance Company (Grange Life) from Grange Mutual Casualty Company, for approximately $75 million, subject to certain adjustments under the terms of the agreement. Additionally, the agreement provides for performance-related contingent consideration based on certain future revenues of both Grange Life and the Company over a three-year period from the closing date.

The purchase price was reduced $1.7 million during 2019 to settle certain items under the terms of the agreement. Management established a contingent commission expense liability of $1.0 million during 2019, resulting in a total purchase price of approximately $74 million.

The acquisition resulted in goodwill, which is included in Other Assets in the Consolidated Balance Sheets. Goodwill was valued at $43.0 million at December 31, 2018. During 2019, goodwill was reduced $0.7 million, the net of the purchase price adjustments mentioned above, resulting in a balance of $42.3 million at December 31, 2019. None of the goodwill is expected to be deductible for tax purposes.

The acquisition generated an amortizable intangible asset, which is the difference between the fair value and book value of the net reserve liabilities acquired. We evaluated the fair value and book value of all other assets and liabilities acquired and no other intangible assets were recognized at acquisition. The intangible asset was valued at $20.0 million at December 31, 2019 and $21.1 million at December 31, 2018 and is included in Other Assets in the Consolidated Balance Sheets.

Grange Life is domiciled in the state of Ohio and is licensed in 15 states to sell traditional life insurance, universal life products, and fixed annuities. The Ohio Department of Insurance approved the transaction. The acquisition of Grange Life expanded our existing block of business and our insurance sales through access to a wider distribution network of independent agents.

Grange Life is included in the Individual Insurance segment. The following table presents the Grange Life assets and liabilities acquired on October 1, 2018. The pro forma combined revenue and earnings of the Company and Grange Life, and other disclosures as may be required, for the current reporting periods as though the acquisition date had been as of January 1, 2018 are not disclosed in this Annual Report. The disclosure of this information is impracticable because Grange Life has not historically prepared GAAP financial statements.

Investments:	
Fixed maturity securities available for sale, at fair value	$ 288,150
Policy loans	12,106
Short-term investments	13,587
Total investments	313,843
Cash	12,073
Reinsurance recoverables	233,486
Other assets	39,658
Total assets	599,060
Future policy benefits:	
Life insurance	311,351
Immediate annuities	1,368
Accident and health insurance	1,017
Policyholder account balances:	
Universal life insurance	172,449
Fixed annuities	54,593
Policy and contract claims	8,849
Other liabilities	17,933
Total liabilities	567,560
Net assets acquired	$ 31,500

The operating results of Grange Life were combined with our operating results subsequent to the acquisition date. Approximately $15.5 million of total revenues and $15.2 million of total benefits, expenses, and income taxes from Grange Life were included in the Consolidated Statements of Comprehensive Income for the year ended December 31, 2018.

3. New Accounting Pronouncements

Accounting Pronouncements Adopted During 2019

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-02 Leases (Topic 842). Topic 842 includes a lessee model that requires most leases to be reported on the balance sheet. This guidance, including subsequently issued amendments, became effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. We adopted this guidance effective January 1, 2019 with no material impact to our consolidated financial statements.

In January 2017, the FASB issued ASU No. 2017-04 Simplifying the Test for Goodwill Impairment. This update simplified the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. Under Step 2, an entity had to perform procedures to determine the fair value at the impairment testing date of its assets and liabilities following the procedure that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. This update also eliminated the requirements for any reporting unit with a zero or negative carrying amount to perform a qualitative assessment. This guidance is effective for fiscal years beginning after December 15, 2020, with early adoption allowed. We early-adopted this guidance effective January 1, 2019 with no material impact to our consolidated financial statements.

In March 2017, the FASB issued ASU No. 2017-08 Premium Amortization on Purchased Callable Debt Securities. The amortization period for premiums is being shortened to the earliest call date. This guidance became effective for fiscal years, and interim periods within those years, beginning after December 15, 2018. We adopted this guidance effective January 1, 2019 with no material impact to our consolidated financial statements.

Accounting Pronouncements Issued, Not Yet Adopted

In June 2016, the FASB issued ASU No. 2016-13 Measurement of Credit Losses on Financial Instruments. Under this guidance, the incurred loss impairment methodology currently used for loans and other financial instruments will be replaced by a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information concerning our credit loss estimates. The measurement of expected credit losses will be based on current, historical, and forecasted information that impacts the collectability of the reported amount. Any credit losses related to available for sale debt securities will be recorded through a valuation allowance that is established and adjusted over time. The valuation allowance will be based on the probability of loss over the life of the instrument. Our investments subject to this guidance include, but are not limited to, fixed maturity securities available for sale, mortgage loans, and reinsurance recoverables. Additional disclosures will be required to provide information regarding significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization's portfolio. The original effective date for this guidance, including subsequently issued amendments, was for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years. In November 2019, the FASB deferred the effective date of this guidance to fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. We are currently evaluating this guidance.

In August 2018, the FASB issued ASU No. 2018-12 Targeted Improvements to the Accounting for Long-Duration Contracts. This update modifies the existing recognition, measurement, presentation, and disclosure requirements in ASC 944 Financial Services - Insurance (Topic 944). It focuses on improving the timeliness of recognizing changes in the liability for future policy benefits and requires that the discount rate assumption be updated at each reporting date. It simplifies the accounting for certain market-based options or guarantees associated with deposit contracts by requiring insurance entities to measure them at fair value. It also simplifies the amortization of deferred acquisition costs by requiring amortization on a constant level basis over the expected term of the related contracts. The original effective date for this guidance was for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. In November 2019, the FASB deferred the effective date of this guidance to fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. We are currently evaluating this guidance.

In August 2018, the FASB issued ASU No. 2018-13 Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement. This update modifies the disclosure requirements for fair value measurements in ASC Topic 820 Fair Value Measurement. Specific fair value measurement disclosure requirements are removed, modified, or added. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The Company adopted this guidance effective January 1, 2020. The guidance will not impact our earnings or financial position as the modifications only impact disclosures.

In August 2018, the FASB issued ASU No. 2018-14 Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans. This update modifies the disclosure requirements in ASC Subtopic 715-20 Compensation - Retirement Benefits - Defined Benefit Plans for employers that sponsor defined benefit pension or other postretirement plans. Specific fair value measurement disclosure requirements are removed, added, or clarified. This guidance is effective for fiscal years ending after December 15, 2020. We are currently evaluating this guidance. However, it will not impact our earnings or financial position as the modifications only impact disclosures.

All other new accounting standards and updates of existing standards issued through the date of this filing were considered by management and did not relate to accounting policies and procedures pertinent to us at this time or were not expected to have a material impact to the consolidated financial statements.

4. Investments

Fixed Maturity Securities

Securities by Asset Class
The following table provides amortized cost and fair value of fixed maturity securities by asset class at December 31, 2019.

	Amortized Cost	Gross Unrealized		Fair Value
		Gains	Losses	
U.S. Treasury securities and obligations of U.S. Government	$ 180,659	$ 11,666	$ 19	$ 192,306
Federal agencies [1]	1,379	107	—	1,486
Federal agency issued residential mortgage-backed securities [1]	107,865	8,491	53	116,303
Subtotal	289,903	20,264	72	310,095
Corporate obligations:				
Industrial	438,868	22,366	79	461,155
Energy	162,863	11,627	6	174,484
Communications and technology	231,255	17,265	5	248,515
Financial	365,621	21,775	454	386,942
Consumer	653,215	31,352	348	684,219
Public utilities	288,736	20,807	383	309,160
Subtotal	2,140,558	125,192	1,275	2,264,475
Corporate private-labeled residential mortgage-backed securities	18,420	1,844	—	20,264
Municipal securities	240,057	28,303	165	268,195
Other	76,417	1,059	1,444	76,032
Redeemable preferred stocks	11,501	575	—	12,076
Total	$ 2,776,856	$ 177,237	$ 2,956	$ 2,951,137

[1] Federal agency securities are not backed by the full faith and credit of the U.S. Government.

The following table provides amortized cost and fair value of fixed maturity securities by asset class at December 31, 2018.

	Amortized Cost	Gross Unrealized		Fair Value
		Gains	Losses	
U.S. Treasury securities and obligations of U.S. Government	$ 179,208	$ 4,320	$ 382	$ 183,146
Federal agencies [1]	2,326	64	—	2,390
Federal agency issued residential mortgage-backed securities [1]	108,943	4,120	146	112,917
Subtotal	290,477	8,504	528	298,453
Corporate obligations:				
Industrial	479,823	6,978	7,110	479,691
Energy	166,231	4,461	4,362	166,330
Communications and technology	247,487	5,655	3,810	249,332
Financial	293,089	3,731	7,446	289,374
Consumer	594,892	4,717	13,963	585,646
Public utilities	266,358	6,265	6,728	265,895
Subtotal	2,047,880	31,807	43,419	2,036,268
Corporate private-labeled residential mortgage-backed securities	26,849	1,993	—	28,842
Municipal securities	246,815	16,557	1,693	261,679
Other	67,338	169	2,080	65,427
Redeemable preferred stocks	14,501	—	1,091	13,410
Total	$ 2,693,860	$ 59,030	$ 48,811	$ 2,704,079

[1] Federal agency securities are not backed by the full faith and credit of the U.S. Government.

Contractual Maturities

The following table provides the distribution of maturities for fixed maturity securities available for sale. Expected maturities may differ from these contractual maturities since issuers or borrowers may have the right to call or prepay obligations.

	December 31, 2019		December 31, 2018	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Due in one year or less	$ 131,443	$ 132,475	$ 118,311	$ 119,083
Due after one year through five years	771,772	802,526	777,498	779,903
Due after five years through ten years	1,061,818	1,131,759	1,088,868	1,080,109
Due after ten years	593,664	649,790	493,252	502,078
Securities with variable principal payments	206,658	222,511	201,430	209,496
Redeemable preferred stocks	11,501	12,076	14,501	13,410
Total	$ 2,776,856	$ 2,951,137	$ 2,693,860	$ 2,704,079

Unrealized Losses on Investments

At the end of each quarter, all fixed maturity securities are reviewed to determine whether impairments exist and whether other-than-temporary impairments should be recorded. This quarterly process includes an assessment of the credit quality of each investment in the entire securities portfolio. Additional reporting and review procedures are conducted for those securities where fair value is less than 90% of amortized cost. A formal review document is prepared no less often than quarterly of all investments where fair value is less than 80% of amortized cost for six months or more and selected investments that have changed significantly from a previous period and that have a decline in fair value greater than 10% of amortized cost.

We consider relevant facts and circumstances in evaluating whether the impairment of a security is other-than-temporary. Relevant facts and circumstances considered include but are not limited to:

- The current fair value of the security as compared to amortized cost;
- The credit rating of the security;
- The extent and the length of time the fair value has been below amortized cost;
- The financial position of the issuer, including the current and future impact of any specific events, material declines in the issuer's revenues, margins, cash positions, liquidity issues, asset quality, debt levels, and income results;
- Significant management or organizational changes of the issuer;
- Significant uncertainty regarding the issuer's industry;
- Violation of financial covenants;
- Consideration of information or evidence that supports timely recovery;
- The intent and ability to hold a security until it recovers in value;
- Whether we intend to sell a fixed maturity security and whether it is more likely than not that we will be required to sell a fixed maturity security before recovery of the amortized cost basis; and
- Other business factors related to the issuer's industry.

To the extent we determine that a fixed maturity security is deemed to be other-than-temporarily impaired, the portion of the impairment that is deemed to be due to credit is charged to earnings in the Consolidated Statements of Comprehensive Income and the cost basis of the underlying investment is reduced. The portion of such impairment that is determined to be non-credit-related is reflected in other comprehensive income (loss) and accumulated other comprehensive income (loss).

There are a number of significant risks and uncertainties inherent in the process of monitoring impairments, determining if an impairment is other-than-temporary, and determining the portion of an other-than-temporary impairment that is due to credit. These risks and uncertainties include but are not limited to:

- The risk that our assessment of an issuer's ability to meet all of its contractual obligations will change based on changes in the credit characteristics of that issuer;
- The risk that the economic outlook will be worse than expected or have more of an impact on the issuer than anticipated;
- The risk that the performance of the underlying collateral for securities could deteriorate in the future and credit enhancement levels and recovery values do not provide sufficient protection to contractual principal and interest;
- The risk that fraudulent, inaccurate, or misleading information could be provided to our credit, investment, and accounting professionals who determine the fair value estimates and accounting treatment for securities;
- The risk that actions of trustees, custodians, or other parties with interests in the security may have an unforeseen adverse impact on our investments;
- The risk that new information obtained or changes in other facts and circumstances may lead us to change our intent to sell the security before it recovers in value;
- The risk that facts and circumstances change such that it becomes more likely than not that we will be required to sell the investment before recovery of the amortized cost basis; and
- The risk that the methodology or assumptions used to develop estimates of the portion of impairments due to credit prove, over time, to be inaccurate or insufficient.

Any of these situations could result in a charge to income in a future period.

Once a security is determined to have met certain of the criteria for consideration as being other-than-temporarily impaired, further information is gathered and evaluated pertaining to the particular security. If the security is an unsecured obligation, the additional research is a top-down approach with particular emphasis on the likelihood of the issuer to meet the contractual terms of the obligation. If the security is secured by an asset or guaranteed by another party, the value of the underlying secured asset or the financial ability of the third-party guarantor is evaluated as a secondary source of repayment. Such research is based upon a top-down approach, narrowing to the specific estimates of value and cash flow of the underlying secured asset or guarantor. If the security is a collateralized obligation, such as a mortgage-backed or other asset-backed instrument, research is also conducted to

obtain and analyze the performance of the collateral relative to expectations at the time of acquisition and with regard to projections for the future. Such analyses are based upon historical results, trends, comparisons to collateral performance of similar securities, and analyses performed by third parties. This information is used to develop projected cash flows that are compared to the amortized cost of the security.

We may selectively determine that we no longer intend to hold a specific issue to its maturity. If we make this determination and the fair value is less than the cost basis, the investment is written down to the fair value and an other-than-temporary impairment is recorded. Subsequently, we seek to obtain the best possible outcome available for this specific issue and record an investment gain or loss at the disposal date. The Company recorded a $0.6 million impairment of this kind in the year ended December 31, 2019. No impairments of this kind were recorded in the years ended December 31, 2018 or December 31, 2017.

A discounted future cash flow calculation becomes the primary determinant of whether any portion and to what extent an unrealized loss is due to credit on loan-backed and similar asset-backed securities. Such indications typically include below investment grade ratings and significant unrealized losses for an extended period of time, among other factors. We identified 10 non-U.S. agency mortgage-backed securities that were determined to have such indications at December 31, 2019. We identified 13 non-U.S. agency mortgage-backed securities that were determined to have such indications at December 31, 2018. A discounted future cash flow analysis was performed for each of these securities to determine if any portion of the impairment was due to credit and deemed to be other-than-temporary. The discount rate used in calculating the present value of future cash flows was the investment yield at the time of purchase for each security. The initial default rates were assumed to remain constant or grade down over time, reflecting our estimate of stabilized collateral performance in the future for such securities. An impairment is recognized as a realized loss in the Consolidated Statements of Comprehensive Income and the carrying value of the security is written down by the same amount. The portion of an impairment that is determined not to be due to credit is recorded as a component of accumulated other comprehensive income (loss) in the Consolidated Balance Sheets. No impairments of this kind were recorded in the years ended December 31, 2019 or December 31, 2018. Impairments of this kind totaling less than $0.1 million were recorded in the year ended December 31, 2017.

Significant unrealized losses on securities can continue for extended periods of time, particularly for certain individual securities. While this can be an indication of potential credit impairments, it can also be an indication of illiquidity in a particular sector or security. In addition, the fair value of an individual security can be heavily influenced by the complexities of varying market sentiment or uncertainty regarding the prospects for an individual security. Based upon the process described above, we are best able to determine if and to what extent credit impairment may exist in these securities by performing present value calculations of projected future cash flows at the conclusion of each reporting period. By reviewing the most recent data available regarding the security and other relevant industry and market factors, we can modify assumptions used in the cash flow projections and determine the best estimate of the portion of any impairment that is due to credit at the conclusion of each period.

We monitor structured securities through a combination of an analysis of vintage, credit ratings, and other factors. Structured securities include asset-backed, residential mortgage-backed securities, collateralized debt obligations, and other collateralized obligations.

The following table provides information regarding fixed maturity securities available for sale with unrealized losses by asset class and by length of time that individual securities have been in a continuous unrealized loss position at December 31, 2019.

	Less Than 12 Months		12 Months or Longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Treasury securities and obligations of U.S. Government	$ 6,249	$ 10	$ 8,778	$ 9	$ 15,027	$ 19
Federal agency issued residential mortgage-backed securities [1]	2,304	53	15	—	2,319	53
Subtotal	8,553	63	8,793	9	17,346	72
Corporate obligations:						
Industrial	6,116	54	3,066	25	9,182	79
Energy	3,078	6	—	—	3,078	6
Communications and technology	1,074	4	1,999	1	3,073	5
Financial	12,327	84	5,520	370	17,847	454
Consumer	22,540	273	8,975	75	31,515	348
Public utilities	21,795	249	5,224	134	27,019	383
Subtotal	66,930	670	24,784	605	91,714	1,275
Municipal securities	12,328	165	—	—	12,328	165
Other	10,298	44	16,100	1,400	26,398	1,444
Total	$ 98,109	$ 942	$ 49,677	$ 2,014	$ 147,786	$ 2,956

[1] Federal agency securities are not backed by the full faith and credit of the U.S. Government.

The following table provides information regarding fixed maturity securities available for sale with unrealized losses by asset class and by length of time that individual securities have been in a continuous unrealized loss position at December 31, 2018.

	Less Than 12 Months		12 Months or Longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Treasury securities and obligations of U.S. Government	$ 14,705	$ 32	$ 27,854	$ 350	$ 42,559	$ 382
Federal agency issued residential mortgage-backed securities [1]	922	5	7,135	141	8,057	146
Subtotal	15,627	37	34,989	491	50,616	528
Corporate obligations:						
Industrial	111,282	2,274	120,592	4,836	231,874	7,110
Energy	45,514	815	60,229	3,547	105,743	4,362
Communications and technology	65,157	1,057	51,688	2,753	116,845	3,810
Financial	59,036	1,122	115,355	6,324	174,391	7,446
Consumer	157,293	2,723	200,584	11,240	357,877	13,963
Public utilities	39,772	1,289	96,603	5,439	136,375	6,728
Subtotal	478,054	9,280	645,051	34,139	1,123,105	43,419
Municipal securities	9,329	78	46,655	1,615	55,984	1,693
Other	10,908	110	38,856	1,970	49,764	2,080
Redeemable preferred stocks	7,202	299	6,208	792	13,410	1,091
Total	$ 521,120	$ 9,804	$ 771,759	$ 39,007	$ 1,292,879	$ 48,811

[1] Federal agency securities are not backed by the full faith and credit of the U.S. Government.

The following table provides information regarding the number of fixed maturity securities with unrealized losses at December 31.

	2019	2018
Below cost for less than one year	63	258
Below cost for one year or more and less than three years	6	287
Below cost for three years or more	14	13
Total	83	558

We do not consider the unrealized losses related to these securities to be credit-related. The unrealized losses at both December 31, 2019 and December 31, 2018 primarily related to changes in interest rates and market spreads subsequent to purchase. A substantial portion of investment securities that have unrealized losses are either corporate debt issued with investment grade credit ratings or other investment securities. Included in other investment securities are commercial mortgage-backed securities and asset-backed securities.

The following table summarizes investments in fixed maturity securities available for sale with unrealized losses at December 31, 2019.

	Amortized Cost	Fair Value	Gross Unrealized Losses
Securities owned without realized impairment:			
Unrealized losses of 10% or less	$ 149,834	$ 147,016	$ 2,818
Unrealized losses of 20% or less and greater than 10%	908	770	138
Subtotal	150,742	147,786	2,956
Unrealized losses greater than 20%:			
Investment grade:			
Less than twelve months	—	—	—
Twelve months or greater	—	—	—
Total investment grade	—	—	—
Below investment grade:			
Less than twelve months	—	—	—
Twelve months or greater	—	—	—
Total below investment grade	—	—	—
Unrealized losses greater than 20%	—	—	—
Subtotal	150,742	147,786	2,956
Securities owned with realized impairment:			
Unrealized losses of 10% or less	—	—	—
Unrealized losses of 20% or less and greater than 10%	—	—	—
Unrealized losses greater than 20%	—	—	—
Subtotal	—	—	—
Total	$ 150,742	$ 147,786	$ 2,956

The following table summarizes investments in fixed maturity securities available for sale with unrealized losses at December 31, 2018.

	Amortized Cost	Fair Value	Gross Unrealized Losses
Securities owned without realized impairment:			
Unrealized losses of 10% or less	$ 1,287,248	$ 1,245,754	$ 41,494
Unrealized losses of 20% or less and greater than 10%	48,260	42,248	6,012
Subtotal	1,335,508	1,288,002	47,506
Unrealized losses greater than 20%:			
Investment grade:			
Less than twelve months	908	678	230
Twelve months or greater	—	—	—
Total investment grade	908	678	230
Below investment grade:			
Less than twelve months	3,987	2,960	1,027
Twelve months or greater	—	—	—
Total below investment grade	3,987	2,960	1,027
Unrealized losses greater than 20%	4,895	3,638	1,257
Subtotal	1,340,403	1,291,640	48,763
Securities owned with realized impairment:			
Unrealized losses of 10% or less	1,287	1,239	48
Unrealized losses of 20% or less and greater than 10%	—	—	—
Unrealized losses greater than 20%	—	—	—
Subtotal	1,287	1,239	48
Total	$ 1,341,690	$ 1,292,879	$ 48,811

The following table provides information on fixed maturity securities available for sale with unrealized losses by actual or equivalent Standard & Poor's rating at December 31, 2019.

	Fair Value	% of Total	Gross Unrealized Losses	% of Total
AAA	$ 5,946	4%	$ 56	2%
AA	50,797	34%	1,755	59%
A	50,612	34%	398	14%
BBB	39,446	27%	733	25%
Total investment grade	146,801	99%	2,942	100%
BB	—	—%	—	—%
B and below	985	1%	14	—%
Total below investment grade	985	1%	14	—%
	$ 147,786	100%	$ 2,956	100%

The following table provides information on fixed maturity securities available for sale with unrealized losses by actual or equivalent Standard & Poor's rating at December 31, 2018.

	Fair Value	% of Total	Gross Unrealized Losses	% of Total
AAA	$ 66,034	5%	$ 1,929	4%
AA	189,896	15%	5,885	12%
A	484,822	38%	18,201	37%
BBB	536,458	41%	20,696	42%
Total investment grade	1,277,210	99%	46,711	95%
BB	6,263	—%	733	2%
B and below	9,406	1%	1,367	3%
Total below investment grade	15,669	1%	2,100	5%
	$ 1,292,879	100%	$ 48,811	100%

Our residential mortgage-backed securities, commercial mortgage-backed securities, and asset-backed securities that were rated below investment grade represented 43% of the fair value of the total below investment grade securities as of December 31, 2019, compared to 61% at December 31, 2018.

We held no non-income producing securities at December 31, 2019 or December 31, 2018.

We did not hold securities of any corporation and its affiliates that exceeded 10% of stockholders' equity at December 31, 2019 or 2018.

The following tables identify structured securities by credit ratings for all vintages owned at December 31.

	2019		
	Fair Value	Amortized Cost	Unrealized Gains (Losses)
Corporate Private-Labeled Residential MBS:			
Investment Grade	$ 1,626	$ 1,583	$ 43
Below Investment Grade	18,638	16,837	1,801
Total residential & non-agency MBS	20,264	18,420	1,844
Other structured securities:			
Investment grade	76,032	76,417	(385)
Below investment grade	—	—	—
Total other structured securities	76,032	76,417	(385)
Total structured securities	$ 96,296	$ 94,837	$ 1,459

	2018		
	Fair Value	Amortized Cost	Unrealized Gains (Losses)
Corporate Private-Labeled Residential MBS:			
Investment Grade	$ 1,707	$ 1,704	$ 3
Below Investment Grade	27,135	25,145	1,990
Total residential & non-agency MBS	28,842	26,849	1,993
Other structured securities:			
Investment grade	64,188	66,052	(1,864)
Below investment grade	1,239	1,286	(47)
Total other structured securities	65,427	67,338	(1,911)
Total structured securities	$ 94,269	$ 94,187	$ 82

The following table provides a reconciliation of credit losses recognized in earnings on fixed maturity securities for which a portion of the other-than-temporary impairment loss was recognized in other comprehensive income (loss) for the years ended December 31.

	2019	2018	2017
Credit losses on securities held at the beginning of the year	$ 4,381	$ 4,399	$ 13,224
Additions for increases (decreases) in the credit loss for which an other-than-temporary impairment was previously recognized when there was no intent to sell the security before recovery of its amortized cost basis	584	—	7
Reductions for securities sold	(520)	(18)	(8,819)
Reductions for increases in cash flows expected to be collected that are recognized over the remaining life of the security	—	—	(13)
Credit losses on securities held at the end of the year	$ 4,445	$ 4,381	$ 4,399

The following table provides the net unrealized gains (losses) reported in accumulated other comprehensive income (loss) on our investments in securities available for sale, at December 31.

	2019	2018	2017
Net unrealized gains	$ 174,281	$ 10,219	$ 94,110
Amounts resulting from:			
DAC, VOBA, and DRL	(16,096)	(1,402)	(12,674)
Policyholder liabilities	(25,480)	(5,244)	(19,616)
Deferred income taxes	(27,866)	(748)	(12,980)
Total	$ 104,839	$ 2,825	$ 48,840

Investment Revenues

The following table provides investment revenues by major category for the years ended December 31.

	2019	2018	2017
Gross investment income:			
Fixed maturity securities	$ 108,421	$ 100,162	$ 103,438
Equity securities	1,019	1,013	928
Mortgage loans	28,257	29,260	30,686
Real estate	20,919	21,760	21,669
Policy loans	5,974	5,667	5,421
Short-term investments	1,345	878	296
Other investments	118	120	105
Total	166,053	158,860	162,543
Less investment expenses	(17,704)	(17,545)	(16,718)
Net investment income	$ 148,349	$ 141,315	$ 145,825

Investment Gains (Losses)

The following table provides net investment gains (losses) by major category for the years ended December 31.

	2019	2018	2017
Fixed maturity securities	$ 2,139	$ (367)	$ 2,470
Equity securities	4,112	(2,005)	1,608
Mortgage loans	293	143	(758)
Real estate	2,589	5,069	1,235
Net investment gains	$ 9,133	$ 2,840	$ 4,555

The following table provides detail concerning investment gains and losses for the year ended December 31.

	2019	2018	2017
Gross gains resulting from:			
Sales of investment securities	$ 138	$ 228	$ 837
Investment securities called and other	2,654	1,282	2,127
Real estate	2,589	4,754	1,236
Disposal of affordable housing real estate joint venture	—	315	—
Total gross gains	5,381	6,579	4,200
Gross losses resulting from:			
Sales of investment securities	(62)	(1,839)	(449)
Investment securities called and other	(7)	(70)	(5)
Sale of real estate and joint ventures	—	—	(1)
Mortgage loans	—	(807)	(12)
Total gross losses	(69)	(2,716)	(467)
Change in allowance for loan losses	293	950	(746)
Change in fair value:			
Equity securities	847	(735)	—
Derivative instruments	3,265	(1,238)	1,575
Total change in fair value	4,112	(1,973)	1,575
Net realized investment gains, excluding other-than-temporary impairment losses	9,717	2,840	4,562
Net impairment losses recognized in earnings:			
Other-than-temporary impairment losses on fixed maturity securities	(580)	—	—
Portion of loss recognized in other comprehensive income (loss)	(4)	—	(7)
Net other-than-temporary impairment losses recognized in earnings	(584)	—	(7)
Net investment gains	$ 9,133	$ 2,840	$ 4,555

The portion of loss recognized in other comprehensive income (loss) represents the non-credit portion of current or prior other-than-temporary impairment. Other-than-temporary impairments of $0.6 million were recorded in earnings during the year ended December 31, 2019. No other-than-temporary impairments were recorded in earnings during the year ended December 31, 2018. Corporate private-labeled residential mortgage-backed and other securities had impairments recorded in earnings of less than $0.1 million during the year ended December 31, 2017.

Proceeds from Sales of Investment Securities

The following table provides proceeds from the sale of fixed maturity and equity securities, excluding maturities and calls, for the years ended December 31. The increase in proceeds in 2018 primarily reflected the sale of fixed maturity securities to fund the acquisition of Grange Life.

	2019	2018	2017
Proceeds	$ 9,615	$ 83,145	$ 35,655

Mortgage Loans

Investments in mortgage loans totaled $577.7 million at December 31, 2019, compared to $639.6 million at December 31, 2018. Our mortgage loans are secured by commercial real estate and are stated at cost, adjusted for premium amortization and discount accretion, less an allowance for loan losses. We believe this allowance is at a level adequate to absorb estimated credit losses and was $2.8 million at December 31, 2019 and $3.1 million at December 31, 2018. The decrease in the allowance for loan losses reflects a reduction in the mortgage loan portfolio. Our periodic evaluation and assessment of the adequacy of the allowance is

based on known and inherent risks in the portfolio, historical and industry data, current economic conditions, and other relevant factors. Please see Note 6 - Financing Receivables for additional information. We do not hold mortgage loans from any single borrower that exceed 5% of stockholders' equity.

We had 15% of our total investments in commercial mortgage loans at December 31, 2019 compared to 17% at December 31, 2018. New commercial loans, including refinanced loans, totaled $29.7 million during 2019 and $69.7 million during 2018. The level of new commercial mortgage loans in any year is influenced by market conditions, as we respond to changes in interest rates, available spreads, borrower demand, and opportunities to acquire loans that meet our yield and quality thresholds.

In addition to the subject collateral underlying the mortgage, we may require some amount of recourse from borrowers as another potential source of repayment should the loan default. Any recourse requirement deemed necessary is determined as part of the underwriting requirements of each loan. We added 14 new loans to the portfolio during 2019, and 69% of the total balance of these loans had some amount of recourse requirement. The average loan-to-value ratio for the overall portfolio was 47% at December 31, 2019, up from 45% at December 31, 2018. These ratios are based upon the current balance of loans relative to the appraisal of value at the time the loan was originated or acquired. Additionally, we may receive fees when borrowers prepay their mortgage loans. The average loan balance was $1.7 million at December 31, 2019 and $1.8 million at December 31, 2018. We have certain mortgage loans that have an unamortized premium, totaling $0.1 million at both December 31, 2019 and December 31, 2018.

The following table identifies the gross mortgage loan principal outstanding and the allowance for loan losses at December 31.

	2019	2018
Principal outstanding	$ 580,535	$ 642,688
Allowance for loan losses	(2,836)	(3,129)
Carrying value	$ 577,699	$ 639,559

The following table summarizes the amount of mortgage loans at December 31, segregated by year of origination. Purchased loans are shown in the year acquired by the Company, although the individual loans may have been initially originated in prior years.

	2019	% of Total	2018	% of Total
Prior to 2011	$ 16,131	3%	$ 34,664	5%
2011	23,347	4%	28,691	4%
2012	42,054	7%	57,854	9%
2013	31,109	5%	36,720	6%
2014	33,954	6%	42,340	7%
2015	98,288	17%	116,628	18%
2016	136,019	23%	148,803	23%
2017	104,592	18%	108,127	17%
2018	65,560	11%	68,861	11%
2019	29,481	6%	—	—%
Principal outstanding	$ 580,535	100%	$ 642,688	100%

The following table identifies mortgage loans by geographic location at December 31.

	2019	% of Total	2018	% of Total
Pacific	$ 115,868	20%	$ 131,594	20%
South Atlantic	88,154	15%	98,430	15%
East north central	83,758	14%	86,487	13%
West south central	82,542	14%	105,927	17%
West north central	67,408	12%	71,833	11%
Middle Atlantic	59,610	10%	61,219	10%
Mountain	45,552	8%	53,697	8%
East south central	29,258	5%	29,758	5%
New England	8,385	2%	3,743	1%
Principal outstanding	$ 580,535	100%	$ 642,688	100%

The following table identifies the concentration of mortgage loans by state greater than 5% of total at December 31.

	2019	% of Total	2018	% of Total
California	$ 92,618	16%	$ 105,735	16%
Texas	81,741	14%	102,638	16%
Minnesota	50,966	9%	54,652	9%
Ohio	38,983	7%	39,028	6%
New Jersey	33,883	6%	36,247	6%
Georgia	24,513	4%	30,760	5%
All others	257,831	44%	273,628	42%
Principal outstanding	$ 580,535	100%	$ 642,688	100%

The following table identifies mortgage loans by property type at December 31.

	2019	% of Total	2018	% of Total
Industrial	$ 386,688	67%	$ 414,076	64%
Office	125,013	22%	149,898	23%
Medical	19,497	3%	19,775	3%
Other [1]	49,337	8%	58,939	10%
Principal outstanding	$ 580,535	100%	$ 642,688	100%

[1] The Other category consists principally of apartments and retail properties.

The following table identifies mortgage loans by maturity at December 31.

	2019	% of Total	2018	% of Total
Due in one year or less	$ 3,184	1%	$ 21,397	3%
Due after one year through five years	41,566	7%	54,671	9%
Due after five years through ten years	166,175	29%	128,713	20%
Due after ten years	369,610	63%	437,907	68%
Principal outstanding	$ 580,535	100%	$ 642,688	100%

The following table identifies the commercial mortgage portfolio by current loan balance as a percentage of the appraised value at the time of origination at December 31.

	2019	% of Total	2018	% of Total
70% or greater	$ 87,776	15%	$ 70,347	11%
50% to 69%	292,982	50%	348,033	54%
Less than 50%	199,777	35%	224,308	35%
Principal outstanding	$ 580,535	100%	$ 642,688	100%

We diversify our commercial mortgage loan portfolio both geographically and by property type to reduce certain risks, including local and regional physical and economic exposures. However, diversification may not always sufficiently mitigate these risks. Concentration risk exposes us to potential losses from an economic downturn, certain catastrophes, and natural disasters that may affect geographic locations where we have mortgage loans. We would not expect an occurrence in any of these geographic locations to have a material adverse effect on our business, financial position, or financial statements. However, we cannot provide assurance that such risks could not have such material adverse effects.

Under the laws of certain states, environmental contamination of a property may result in a lien on the property to secure recovery of the costs of cleanup. In some states, such a lien has priority over the lien of an existing mortgage against such property. As a commercial mortgage lender, we customarily conduct environmental assessments prior to making commercial mortgage loans secured by real estate and before taking title on real estate. Based on our environmental assessments, we believe that any compliance costs associated with environmental laws and regulations or any remediation of affected properties would not have a material adverse effect on our business, financial position, or financial statements. However, we cannot provide assurance that material compliance costs will not be incurred.

We may refinance commercial mortgage loans prior to contractual maturity as a means of retaining loans that meet our underwriting and pricing parameters. We refinanced four loans with a total outstanding balance of $4.7 million during the year ended December 31, 2019. We refinanced one loan with an outstanding balance of $4.2 million during the year ended December 31, 2018. None of these refinancings were the result of troubled debt restructuring.

In the normal course of business, we commit to fund commercial mortgage loans generally up to 120 days in advance. These commitments typically have fixed expiration dates. A small percentage of commitments expire due to the borrower's failure to deliver the requirements of the commitment by the expiration date. In these cases, the commitment fee is retained. For additional information, please see Note 21 - Commitments, Contingent Liabilities, Guarantees, and Indemnifications.

Real Estate

The following table provides information concerning real estate investments by major category at December 31.

	2019	2018
Land	$ 33,955	$ 34,063
Buildings	170,055	168,365
Less accumulated depreciation	(46,431)	(42,766)
Real estate, commercial	157,579	159,662
Real estate, joint ventures	25,437	27,332
Total	$ 183,016	$ 186,994

Investment real estate is depreciated on a straight-line basis over periods ranging from 3 years to 60 years. We had real estate sales of $2.7 million during 2019, $12.5 million during 2018, and $2.1 million during 2017.

We had $25.4 million in real estate joint ventures at December 31, 2019, compared with $27.3 million at December 31, 2018. We are the holder of all shares in three subsidiary real estate joint ventures with a combined carrying value of $20.3 million at December 31, 2019 and $20.7 million at December 31, 2018. Each of the three subsidiaries holds a 50% interest in these separate joint ventures and all are based in Urbandale, Iowa. The Company periodically reviews its real estate and real estate joint ventures for impairment and tests for recoverability whenever events or changes in circumstances indicate the carrying value may not be recoverable and exceeds its estimated fair value. For equity method investees, we consider financial and other information provided

by the investee as well as other known information, including recent market activity and prospects for future activity, in determining whether an impairment has occurred. Based on our reviews performed, we concluded that no impairment existed as of December 31, 2019 or 2018.

We had non-income producing commercial real estate, consisting of vacant properties and properties under development, of $10.0 million at December 31, 2019, compared to $14.7 million at December 31, 2018. In addition, $11.6 million of our real estate joint ventures were non-income producing at December 31, 2019 compared to $12.0 million at December 31, 2018.

5. Fair Value Measurements

Under GAAP, fair value represents 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. We maximize the use of observable inputs and minimize the use of unobservable inputs when developing fair value measurements.

We categorize our financial assets and liabilities measured at fair value in three levels, based on the inputs and assumptions used to determine the fair value. These levels are as follows:

Level 1 - Valuations are based upon unadjusted quoted prices for identical instruments traded in active markets.

Level 2 - Valuations are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market. Valuations are obtained from a third-party pricing service or inputs that are observable or derived principally from or corroborated by observable market data.

Level 3 - Valuations are generated from techniques that use significant assumptions not observable in the market. These unobservable assumptions reflect our assumptions that market participants would use in pricing the asset or liability. Valuation techniques include the use of discounted cash flow models, spread-based models, and similar techniques, using the best information available in the circumstances.

Following is a description of valuation methodologies used for assets and liabilities recorded at fair value and for estimating fair value for financial instruments not recorded at fair value but for which fair value is disclosed.

Assets

Fixed Maturity and Equity Securities

Fixed maturity securities available for sale and equity securities are recorded at fair value on a recurring basis. Fair value measurement is based upon unadjusted quoted prices, if available, except as described in the subsequent paragraphs.

Short-Term Investments

Short-term investments include highly-liquid investments in institutional money market funds that are carried at NAV. The carrying value of short-term investments approximates the fair value and are categorized as Level 1. Fair value is provided for disclosure purposes only.

Other Investments

Other investments include hedge positions classified as derivatives that are established in relation to the Company's indexed universal life portfolio. These positions are recorded at fair value and are classified as Level 3.

Separate Accounts

The separate account assets and liabilities, which are equal, are recorded at fair value based upon NAV of the underlying investment holdings as derived from closing prices on a national exchange or as provided by the issuer. This is the value at which a policyholder could transact with the issuer on that date. Separate accounts are categorized as Level 2.

Liabilities

Investment-Type Liabilities Included in Policyholder Account Balances and Other Policyholder Funds

The fair values of supplementary contracts and annuities without life contingencies are estimated to be the present value of payments at a market yield. The fair values of deposits with no stated maturity are estimated to be the amount payable on demand at the measurement date. These liabilities are categorized as Level 3. We 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. Insurance contracts are excluded from financial instruments that require disclosures of fair value.

Reserves established in relation to the Company's hedge positions on its indexed universal life portfolio are considered to be financial derivatives and are accounted for at fair value. These reserves are classified as level 3.

Guaranteed Minimum Withdrawal Benefits Included in Other Policyholder Funds

Fair value for GMWB rider contracts is a Level 3 valuation, as it is based on models which utilize significant unobservable inputs. These models require actuarial and financial market assumptions, which reflect the assumptions market participants would use in pricing the contract, including adjustments for volatility, risk, and issuer non-performance.

Determination of Fair Value

We utilized external third-party pricing services at both December 31, 2019 and December 31, 2018 to determine the majority of our fair values on fixed maturity and equity securities. At December 31, 2019, approximately 96% of the carrying value of these investments was from an external pricing service, 3% was from brokers, and 1% was derived from internal matrices and calculations. At December 31, 2018, approximately 97% of the carrying value of these investments was from an external pricing service, 2% was from brokers, and 1% was derived from internal matrices and calculations. We review prices received from service providers for reasonableness and unusual fluctuations but generally accept the price identified from the pricing service. In the event a price is not available from the third-party pricing service, we pursue external pricing from brokers. Generally, we pursue and utilize only one broker quote per security. In doing so, we solicit only brokers which have previously demonstrated knowledge and experience of the subject security. If a broker price is not available, we determine a fair value through various valuation techniques that may include discounted cash flows, spread-based models, or similar techniques, depending upon the specific security to be priced. These techniques are primarily applied to private placement securities. We utilize available market information, wherever possible, to identify inputs into the fair value determination, primarily prices and spreads on comparable securities.

Each quarter, we evaluate the prices received from the third-party pricing service and independent brokers to ensure that the prices represent a reasonable estimate of the fair value within the macro-economic environment, sector factors, and overall pricing trends and expectations. We corroborate and validate the pricing source through a variety of procedures that include but are not limited to: comparison to brokers, where possible; a review of third-party pricing service methodologies; back testing; in-depth specific analytics on randomly selected issues; and comparison of prices to actual trades for specific securities where observable data exists. In addition, we analyze the third-party pricing service's methodologies and related inputs and also evaluate the various types of securities in our investment portfolio to determine an appropriate fair value hierarchy. Finally, we also perform additional evaluations when individual prices fall outside tolerance levels when comparing prices received from the third-party pricing service.

Fair value measurements for assets and liabilities where limited or no observable market data exists are calculated using our own estimates and are categorized as Level 3. These estimates are based on current interest rates, credit spreads, liquidity premium or discount, the economic and competitive environment, unique characteristics of the asset or liability, and other pertinent factors. Therefore, these estimates cannot be determined with precision and may not be realized in an actual sale or immediate settlement of the asset or liability. Further, changes in the underlying assumptions used, including discount rates and estimates of future cash flows, could significantly affect the results of current or future values.

Our own estimates of fair value of fixed maturity and equity securities may be derived in a number of ways, including but not limited to: 1) pricing provided by brokers, where the price indicates reliability as to value; 2) fair values of comparable securities, incorporating a spread adjustment for maturity differences, collateralization, credit quality, liquidity, and other items, if applicable; 3) discounted cash flow models and margin spreads; 4) bond yield curves; 5) observable market prices and exchange transaction information not provided by external pricing services; and 6) statement values provided to us by fund managers.

The fair value of the GMWB embedded derivative is calculated using a discounted cash flow valuation model that projects future cash flows under multiple risk neutral stochastic equity scenarios. The risk neutral scenarios are generated using the current swap curve and projected equity volatilities and correlations. The equity correlations are based on historical price observations. For policyholder behavior assumptions, expected lapse and utilization assumptions are used and updated for actual experience. The mortality assumption uses the 2012 Individual Annuity Reserving Table. The present value of cash flows is determined using the discount rate curve, based upon London Interbank Offered Rate (LIBOR) plus a credit spread.

Categories Reported at Fair Value

The following tables present the fair value hierarchy for those assets and liabilities reported at fair value on a recurring basis at December 31.

	2019			
	Level 1	Level 2	Level 3	Total
Assets:				
U.S. Treasury securities and obligations of U.S. Government	$ 15,745	$ 176,561	$ —	$ 192,306
Federal agencies [1]	—	1,486	—	1,486
Federal agency issued residential mortgage-backed securities [1]	—	116,303	—	116,303
Subtotal	15,745	294,350	—	310,095
Corporate obligations:				
Industrial	—	461,155	—	461,155
Energy	—	174,484	—	174,484
Communications and technology	—	248,515	—	248,515
Financial	—	386,942	—	386,942
Consumer	—	684,219	—	684,219
Public utilities	—	309,160	—	309,160
Subtotal	—	2,264,475	—	2,264,475
Corporate private-labeled residential mortgage-backed securities	—	20,264	—	20,264
Municipal securities	—	268,195	—	268,195
Other	—	76,032	—	76,032
Redeemable preferred stocks	—	12,076	—	12,076
Fixed maturity securities	15,745	2,935,392	—	2,951,137
Equity securities	483	10,789	—	11,272
Short-term investments	75,426	—	—	75,426
Other investments	—	—	4,363	4,363
Separate account assets	—	431,201	—	431,201
Total	$ 91,654	$ 3,377,382	$ 4,363	$ 3,473,399
Percent of total	3%	97%	—%	100%
Liabilities:				
Policyholder account balances:				
Indexed universal life	$ —	$ —	$ 3,603	$ 3,603
Other policyholder funds:				
Guaranteed minimum withdrawal benefits	—	—	(959)	(959)
Separate account liabilities	—	431,201	—	431,201
Total	$ —	$ 431,201	$ 2,644	$ 433,845

[1] Federal agency securities are not backed by the full faith and credit of the U.S. Government.

	2018			
	Level 1	Level 2	Level 3	Total
Assets:				
U.S. Treasury securities and obligations of U.S. Government	$ 25,251	$ 157,895	$ —	$ 183,146
Federal agencies [1]	—	2,390	—	2,390
Federal agency issued residential mortgage-backed securities [1]	—	112,917	—	112,917
Subtotal	25,251	273,202	—	298,453
Corporate obligations:				
Industrial	—	479,691	—	479,691
Energy	—	166,330	—	166,330
Communications and technology	—	249,332	—	249,332
Financial	—	289,374	—	289,374
Consumer	—	585,646	—	585,646
Public utilities	—	265,895	—	265,895
Subtotal	—	2,036,268	—	2,036,268
Corporate private-labeled residential mortgage-backed securities	—	28,842	—	28,842
Municipal securities	—	261,679	—	261,679
Other	—	65,427	—	65,427
Redeemable preferred stocks	—	13,410	—	13,410
Fixed maturity securities	25,251	2,678,828	—	2,704,079
Equity securities	4,264	10,160	—	14,424
Short-term investments	58,712	—	—	58,712
Separate account assets	—	373,734	—	373,734
Total	$ 88,227	$ 3,062,722	$ —	$ 3,150,949
Percent of total	3%	97%	—%	100%
Liabilities:				
Other policyholder funds:				
Guaranteed minimum withdrawal benefits	$ —	$ —	$ (3,648)	$ (3,648)
Separate account liabilities	—	373,734	—	373,734
Total	$ —	$ 373,734	$ (3,648)	$ 370,086

[1] Federal agency securities are not backed by the full faith and credit of the U.S. Government.

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the years ended December 31 are summarized below. The fair value of the derivatives included in Other Investments and the related reserves in relation to our indexed universal life portfolio were insignificant at December 31, 2018.

	2019		
	Assets	Liabilities	
	Other Investments	Indexed Universal Life	GMWB
Beginning balance at January 1, 2019	$ 498	$ 352	$ (3,648)
Included in earnings	3,265	3,251	1,338
Included in other comprehensive income (loss)	—	—	—
Purchases, issuances, sales and other dispositions:			
Purchases	2,702	—	—
Issuances	—	—	412
Sales	(2,102)	—	—
Other dispositions	—	—	939
Ending balance	$ 4,363	$ 3,603	$ (959)

	2018
	Liabilities
	GMWB
Beginning balance	$ (3,252)
Included in earnings	(921)
Included in other comprehensive income (loss)	—
Purchases, issuances, sales and other dispositions:	
Purchases	—
Issuances	235
Sales	—
Other dispositions	290
Ending balance	$ (3,648)

We did not have any transfers between any levels during the years ended December 31, 2019, 2018, or 2017.

The $4.4 million of other investments categorized as Level 3 were valued with broker prices using both observable inputs along with unobservable inputs of implied volatility and other inputs in the broker proprietary model. We use the Black Scholes valuation method, including parameters for market volatility, risk-free rate, and index level, for the $3.6 million indexed universal life liabilities categorized as Level 3. We also use a 100% persistency assumption. Persistency of the business is an unobservable input.

The following table presents the valuation method for the GMWB liability categorized as Level 3, as well as the unobservable inputs used in the valuation of those financial instruments at December 31, 2019.

	Fair Value	Valuation Technique	Unobservable Inputs	Range
Embedded Derivative - GMWB	$ (959)	Actuarial cash flow model	Mortality	85% of the 2012 IAR Table
			Lapse	0%-12% depending on product/duration/ funded status of guarantee
			Benefit Utilization	0%-80% depending on age/duration/ funded status of guarantee
			Nonperformance Risk	0.42%-1.16%

The following table presents the valuation method for the GMWB liability categorized as Level 3, as well as the unobservable inputs used in the valuation of those financial instruments at December 31, 2018.

	Fair Value	Valuation Technique	Unobservable Inputs	Range
Embedded Derivative - GMWB	$ (3,648)	Actuarial cash flow model	Mortality	85% of the 2012 IAR Table
			Lapse	0%-12% depending on product/duration/ funded status of guarantee
			Benefit Utilization	0%-80% depending on age/duration/ funded status of guarantee
			Nonperformance Risk	0.40%-1.60%

The GMWB liability is sensitive to changes in observable and unobservable inputs. Observable inputs include risk-free rates, index returns, volatilities, and correlations. Increases in risk-free rates and equity returns reduce the liability, while increases in volatilities increase the liability. Unobservable inputs include mortality, lapse, benefit utilization, and nonperformance risk adjustments. Increases in mortality, lapses, and credit spreads used for nonperformance risk reduce the liability, while increases in benefit utilization increase the liability.

Following are estimates of the impact from changes in unobservable inputs on the GMWB liability at December 31.

	2019	2018
	Increase/(Decrease) in millions	
A 10% increase in the mortality assumption	$ (0.1)	(0.1)
A 10% decrease in the lapse assumption	0.2	—
A 10% increase in the benefit utilization	1.0	—
A 10 basis point increase in the credit spreads used for non-performance	(0.4)	(0.3)

The following tables present a summary of fair value estimates for financial instruments at December 31. Assets and liabilities that are not financial instruments are not included in this disclosure. The total of the fair value calculations presented below may not be indicative of the value that can be obtained.

	2019				
	Fair Value				Carrying Value
	Level 1	Level 2	Level 3	Total	
Assets:					
Investments:					
Fixed maturity securities available for sale	$ 15,745	$ 2,935,392	$ —	$ 2,951,137	$ 2,951,137
Equity securities	483	10,789	—	11,272	11,272
Mortgage loans	—	—	597,577	597,577	577,699
Policy loans	—	—	87,499	87,499	87,499
Other investments	—	—	4,363	4,363	4,363
Short-term investments	75,426	—	—	75,426	75,426
Separate account assets	—	431,201	—	431,201	431,201
Liabilities:					
Individual and group annuities	—	—	1,077,538	1,077,538	1,096,588
Supplementary contracts and annuities without life contingencies	—	—	52,186	52,186	53,128
Separate account liabilities	—	431,201	—	431,201	431,201
Policyholder account balances - indexed universal life	—	—	3,603	3,603	3,603
Other policyholder funds - GMWB	—	—	(959)	(959)	(959)

	2018				
	Fair Value				Carrying Value
	Level 1	Level 2	Level 3	Total	
Assets:					
Investments:					
Fixed maturity securities available for sale	$ 25,251	$ 2,678,828	$ —	$ 2,704,079	$ 2,704,079
Equity securities	4,264	10,160	—	14,424	14,424
Mortgage loans	—	—	640,796	640,796	639,559
Policy loans	—	—	88,066	88,066	88,066
Short-term investments	58,712	—	—	58,712	58,712
Separate account assets	—	373,734	—	373,734	373,734
Liabilities:					
Individual and group annuities	—	—	1,049,195	1,049,195	1,068,577
Supplementary contracts and annuities without life contingencies	—	—	50,805	50,805	52,798
Separate account liabilities	—	373,734	—	373,734	373,734
Other policyholder funds - GMWB	—	—	(3,648)	(3,648)	(3,648)

6. Financing Receivables

We have financing receivables with specific maturity dates that are recognized as assets in the Consolidated Balance Sheets.

The following table identifies financing receivables by classification amount at December 31.

	2019	2018
Receivables:		
Agent receivables, net (allowance $1,482; 2018 - $1,496)	$ 2,432	$ 2,078
Investment-related financing receivables:		
Mortgage loans, net (allowance $2,836; 2018 - $3,129)	577,699	639,559
Total financing receivables	$ 580,131	$ 641,637

Agent Receivables
We have certain agent receivables that are classified as financing receivables. These receivables from agents are specifically assessed for collectibility and are reduced by an allowance for doubtful accounts.

The following table details the gross receivables, allowance, and net receivables for the two types of agent receivables at December 31.

	2019			2018		
	Gross Receivables	Allowance	Net Receivables	Gross Receivables	Allowance	Net Receivables
Agent specific loans	$ 1,245	$ 600	$ 645	$ 1,210	$ 600	$ 610
Other agent receivables	2,669	882	1,787	2,364	896	1,468
Total	$ 3,914	$ 1,482	$ 2,432	$ 3,574	$ 1,496	$ 2,078

The following table details the activity of the allowance for doubtful accounts on agent receivables at December 31. Any recoveries are included as deductions.

	2019	2018
Beginning of year	$ 1,496	$ 817
Additions	50	812
Deductions	(64)	(133)
End of year	$ 1,482	$ 1,496

Mortgage Loans
We classify our mortgage loan portfolio as long-term financing receivables. Mortgage loans are stated at cost, adjusted for amortization of premium and accretion of discount, less an allowance for loan losses. Mortgage loan interest income is recognized on an accrual basis with any premium or discount amortized over the life of the loan. Prepayment and late fees are recorded on the date of collection. Loans in foreclosure, loans considered impaired, or loans past due 90 days or more are placed on non-accrual status. Payments received on loans on non-accrual status for these reasons are applied first to interest income not collected while on non-accrual status, followed by fees, accrued and past-due interest, and principal.

If a mortgage loan is placed on non-accrual status, we do not accrue interest income in the financial statements. The loan is independently monitored and evaluated as to potential impairment or foreclosure. This evaluation includes assessing the probability of receiving future cash flows, along with consideration of many of the factors described below. If delinquent payments are made and the loan is brought current, then we return the loan to active status and accrue income accordingly.

The following table details the mortgage loan portfolio as collectively or individually evaluated for impairment at December 31.

	2019	2018
Mortgage loans collectively evaluated for impairment	$ 508,501	$ 568,521
Mortgage loans individually evaluated for impairment	72,034	74,167
Allowance for loan losses	(2,836)	(3,129)
Carrying value	$ 577,699	$ 639,559

Generally, we consider our mortgage loans to be a portfolio segment. We consider our primary class to be property type. We primarily use loan-to-value as our credit risk quality indicator but also monitor additional secondary risk factors, such as geographic distribution both on a regional and specific state basis. The mortgage loan portfolio segment is presented by property type in a table in Note 4, as are geographic distributions by both region and state. These measures are also supplemented with various other analytics to provide additional information concerning potential impairment of mortgage loans and management's assessment of financing receivables.

There were no mortgage loans that were past due at December 31, 2019 or at December 31, 2018. We had no troubled loans that were restructured or modified during 2019 or 2018.

The following table details the activity within the allowance for mortgage loan losses at December 31. Any recoveries are reflected as deductions.

	2019	2018
Beginning of year	$ 3,129	$ 4,079
Provision	139	323
Deductions	(432)	(1,273)
End of year	$ 2,836	$ 3,129

The Company decreased the allowance for mortgage loan losses $0.3 million in 2019, primarily due to the lower volume of loans. The Company decreased the allowance for mortgage loan losses $1.0 million in 2018, largely due to the settlement of a loan in 2018 that was in the process of foreclosure at December 31, 2017. In addition, the allowance for loan losses decreased due to the lower volume of loans at December 31, 2018.

The allowance for loan losses is monitored and evaluated at multiple levels with a process that includes, but is not limited to, the factors presented below. Generally, we establish the allowance for loan losses using the collectively evaluated impairment methodology at an overall portfolio level and then specifically identify an allowance for loan losses on loans that contain elevated risk profiles. If we determine through our evaluation that a loan has an elevated specific risk profile, we then individually assess the loan’s risk profile and may assign a specific allowance value based on many factors, including those identified below.

Macro-environmental and elevated risk profile considerations:

- Current industry conditions that are affecting the market, including rental and vacancy rates;
- Perceived market liquidity;
- Analysis of the markets and sub-markets in which we have mortgage loans;
- Analysis of industry historical loss and delinquency experience;
- Other factors that we may perceive as important or critical given our portfolio; and
- Analysis of our loan portfolio based on loan size concentrations, geographic concentrations, property type concentrations, maturity concentrations, origination loan-to-value concentrations, and borrower concentrations.

Specific mortgage loan level considerations:

- The payment history of each borrower;
- Negative reports from property inspectors; and
- Each loan’s property financial statement including net operating income, debt service coverage, and occupancy level.

We have not acquired any mortgage loans with deteriorated credit quality during the years presented.

As part of our process of monitoring impairments on loans, there are a number of significant risks and uncertainties inherent in this process. These risks include, but are not limited to:

- The risk that our assessment of a borrower's ability to meet all of its contractual obligations will change based on changes in the credit characteristics of the borrower or property;
- The risk that the economic outlook will be worse than expected or have more of an impact on the borrower than anticipated;
- The risk that the performance of the underlying property could deteriorate in the future;
- The risk that fraudulent, inaccurate, or misleading information could be provided to us;
- The risk that the methodology or assumptions used to develop estimates of the portion of the impairment of the loan prove over time to be inaccurate; and
- The risk that other facts and circumstances change such that it becomes more likely than not that we will not obtain all of the contractual payments.

To the extent our review and evaluation determines a loan is impaired, that amount is charged to the allowance for loan losses and the loan balance is reduced. In the event that a property is foreclosed upon, the carrying value is recorded at fair value, less costs to sell the property at the time of foreclosure, with a charge to the allowance and a corresponding reduction to the mortgage loan asset. The property is then transferred to real estate where we have the ability and intent to manage these properties on an ongoing basis.

7. Variable Interest Entities (VIEs)

We invest in certain affordable housing and real estate joint ventures. These VIEs are included in Real Estate in the Consolidated Balance Sheets.

The assets held in affordable housing real estate joint venture VIEs are primarily residential real estate properties that are restricted to provide affordable housing under federal or state programs for varying periods of time. The restrictions primarily apply to the rents that may be paid by tenants residing in the properties during the term of an agreement to remain in the affordable housing program. Investments in these joint ventures are equity interests in partnerships or limited liability companies that may or may not participate in profits or residual value. Our investments in these entities generate a return primarily through the realization of federal and state income tax credits and other tax benefits, such as tax deductions from operating losses of the investments, over specified time periods. We amortize the initial cost of the investment in proportion to the tax credits and other tax benefits received and recognize the net investment performance in the Consolidated Statements of Comprehensive Income as a component of income tax expense. On December 22, 2017, the newly enacted TCJA changed the expected statutory tax rate for tax years beginning January 1, 2018. The change in tax rate from 35% to 21% required a remeasurement of the unamortized asset related to affordable housing investments. This remeasurement resulted in a decrease to the asset and a nonrecurring increase in amortization of $0.8 million in 2017 that is included in income tax benefit in the Consolidated Statements of Comprehensive Income and the table below. The tax credits reduce tax expense while the amortization increases tax expense.

The following table provides information regarding our VIEs that generate tax credits and related amortization for the years ended December 31.

	2019	2018	2017
Federal income tax credits realized	$ 2,608	$ 2,752	$ 2,752
Amortization	1,421	1,452	1,592
Amortization related to tax rate change	—	—	768

Our investments in other real estate VIEs are recorded using the equity method. Cash distributions from the VIE and cash contributions to the VIE are recorded as decreases or increases, respectively, in the carrying value of the VIE. Certain other equity investments in VIEs, where permitted, are recorded on an amortized cost basis. The operating performance of investments in the VIE is recorded in the Consolidated Statements of Comprehensive Income as investment income or as a component of income tax expense, depending upon the nature and primary design of the investment. We evaluate the carrying value of VIEs for impairment on an ongoing basis to assess whether the carrying value is expected to be realized during the anticipated life of the investment. No impairments were recorded during the years ended December 31, 2019, 2018, or 2017.

Investments in the affordable housing and real estate joint ventures are interests that absorb portions of the VIE's expected losses. These investments also receive portions of expected residual returns of the VIE's net assets exclusive of variable interests. We make an assessment of whether we are the primary beneficiary of a VIE at the time of the initial investment and on an ongoing basis thereafter. We consider many factors when making this determination based upon a review of the underlying investment agreement and other information related to the specific investment. The first factor is whether we have the ability to direct the activities of a VIE that most significantly impact the VIE's economic performance. The power to direct the activities of the VIE is generally vested in the managing general partner or managing member of the VIE, which is not the position held by us in these investments. Other factors include the entity's equity investment at risk, decision-making abilities, obligations to absorb economic risks, the right to receive economic rewards of the entity, and the extent to which we share in the VIE's expected losses and residual returns.

The following table presents the carrying amount and maximum exposure to loss relating to VIEs for which we hold a variable interest, but are not the primary beneficiary, and which had not been consolidated at December 31, 2019 and December 31, 2018. The table includes investments in five real estate joint ventures and 16 affordable housing real estate joint ventures at both December 31, 2019 and December 31, 2018.

	2019		2018	
	Carrying Amount	Maximum Exposure to Loss	Carrying Amount	Maximum Exposure to Loss
Real estate joint ventures	$ 21,224	$ 21,224	$ 21,689	$ 21,689
Affordable housing real estate joint ventures	4,213	29,818	5,643	30,950
Total	$ 25,437	$ 51,042	$ 27,332	$ 52,639

The maximum exposure to loss relating to the real estate joint ventures and affordable housing real estate joint ventures is equal to the carrying amounts plus any unfunded equity commitments, exposure to potential recapture of tax credits, guarantees of debt, or other obligations of the VIE with recourse. Unfunded equity and loan commitments typically require financial or operating performance by other parties and have not yet become due or payable, but which may become due in the future.

At December 31, 2019 and December 31, 2018, we had no equity commitments outstanding to the real estate joint venture VIEs. We have contingent commitments to fund additional equity contributions for operating support to certain real estate joint venture VIEs, which could result in additional exposure to loss. However, we are unable to quantify the amount of these contingent commitments.

In addition, the maximum exposure to loss on affordable housing joint ventures included $21.4 million of losses which could be realized if the tax credits received by the VIEs were recaptured at December 31, 2019, compared to $19.7 million at December 31, 2018. Recapture events would cause us to reverse some or all of the benefit previously recognized by us or third parties to whom the tax credit interests were transferred. A recapture event can occur at any time during a 15-year required compliance period. The principal causes of recapture include financial default and non-compliance with affordable housing program requirements by the properties controlled by the VIE. Guarantees from the managing member or managing partner in the VIE, insurance contracts, or changes in the residual value accruing to our interests in the VIE may mitigate the potential exposure due to recapture.

8. Separate Accounts

Separate account assets and liabilities arise from the sale of variable universal life insurance and variable annuity products. The separate account represents funds segregated for the benefit of certain policyholders who bear the investment risk. The assets are legally segregated and are not subject to claims which may arise from any other business of the Company. The separate account assets and liabilities, which are equal, are recorded at fair value based upon the NAV of the underlying investment holdings as derived from closing prices on a national exchange or as provided by the issuer. Policyholder account deposits and withdrawals, investment income, and realized investment gains and losses are excluded from the amounts reported in the Consolidated Statements of Comprehensive Income. Revenues from separate accounts consist principally of contract charges, which include maintenance charges, administrative fees, and mortality and expense charges.

The total separate account assets were $431.2 million at December 31, 2019 and $373.7 million at December 31, 2018. Variable universal life and variable annuity assets comprised 30% and 70% of total separate account assets in 2019, compared to 28% and 72% of the total in 2018.

The following table provides a reconciliation of activity within separate account liabilities at December 31.

	2019	2018
Balance at beginning of year	$ 373,734	$ 419,812
Deposits on variable policyholder contracts	21,654	25,722
Transfers to general account	(884)	(1,989)
Investment performance	86,897	(24,035)
Policyholder benefits and withdrawals	(37,677)	(32,909)
Contract charges	(12,523)	(12,867)
Balance at end of year	$ 431,201	$ 373,734

We offer a GMWB rider that can be added to new or existing variable annuity contracts. The value of the separate accounts with the GMWB rider was recorded at fair value of $120.2 million at December 31, 2019. The fair value of the separate accounts with the GMWB rider was $115.2 million at December 31, 2018. The GMWB guarantee liability was $(1.0) million at December 31, 2019 and $(3.6) million at December 31, 2018. The change in this value is included in Policyholder Benefits in the Consolidated Statements of Comprehensive Income. The value of variable annuity separate accounts with the GMWB rider is recorded in Separate Account Liabilities, and the value of the rider is included in Other Policyholder Funds in the Consolidated Balance Sheets.

We have two blocks of variable universal life policies and variable annuity contracts from which fees are received. The fees are based upon both specific transactions and the fund value of the blocks of policies. We have a direct block of ongoing business identified in the Consolidated Balance Sheets as separate account assets, totaling $431.2 million at December 31, 2019 and $373.7 million at December 31, 2018, and corresponding separate account liabilities of an equal amount. The fixed-rate funds for these policies are included in our general account as Policyholder Account Balances. The Future Policy Benefits for the direct block approximated $0.5 million at both December 31, 2019 and December 31, 2018.

In addition, we have an assumed closed block of variable universal life and variable annuity business that totaled $327.7 million at December 31, 2019 and $285.6 million at December 31, 2018. As required under modified coinsurance transaction accounting, the assumed separate account fund balances are not recorded as separate accounts on our consolidated financial statements. Rather, the assumed fixed-rate funds for these policies of $31.6 million at December 31, 2019 and $30.6 million at December 31, 2018 are included in our general account as Policyholder Account Balances. The Future Policy Benefits for the assumed block approximated $0.6 million at both December 31, 2019 and December 31, 2018.

Guarantees are offered under variable universal life and variable annuity contracts: a guaranteed minimum death benefit (GMDB) rider is available on certain variable universal life contracts and on all variable annuities. The GMDB rider for variable universal life contracts guarantees the death benefit for specified periods of time, regardless of investment performance, provided cumulative premium requirements are met. The GMDB rider for variable annuity contracts guarantees the death benefit for specified periods of time, regardless of investment performance.

Separate account balances for variable annuity contracts were $303.8 million at December 31, 2019 and $269.9 million at December 31, 2018. The total reserve held for variable annuity GMDB was less than $0.1 million at December 31, 2019 and $0.1 million at December 31, 2018. Additional information related to the GMDB and related separate account balances and net amount at risk (the amount by which the GMDB exceeds the account balance) as of December 31, 2019 and 2018 is provided below:

	2019			2018		
	Separate Account Balance	Net Amount at Risk	Weighted Average Attained Age	Separate Account Balance	Net Amount at Risk	Weighted Average Attained Age
Return of net deposits	$ 234,373	$ 166	62.2	$ 210,889	$ 2,184	61.8
Return of the greater of the highest anniversary contract value or net deposits	9,387	49	71.1	8,151	749	70.2
Return of the greater of every fifth year highest anniversary contract value or net deposits	6,983	23	68.9	6,723	59	68.8
Return of the greater of net deposits accumulated annually at 5% or the highest anniversary contract value	53,024	2,768	64.6	44,168	7,433	64.1
Total	$ 303,767	$ 3,006	63.0	$ 269,931	$ 10,425	62.6

The following table presents the aggregate fair value of assets by major investment asset category supporting the variable annuity separate accounts with guaranteed benefits at December 31.

	2019	2018
Money market	$ 1,692	$ 2,683
Fixed income	16,314	17,134
Balanced	84,734	77,981
International equity	20,146	17,432
Intermediate equity	151,476	131,355
Aggressive equity	29,405	23,346
Total	$ 303,767	$ 269,931

9. Unpaid Claims Liability and Short-Duration Contracts

The liability for unpaid claims is included with Policy and Contract Claims and Future Policy Benefits in the Consolidated Balance Sheets. Claim adjustment expenditures are expensed as incurred and were not material in any year presented.

The following tables present activity in the accident and health portion of the unpaid claims liability by segment for the years ended December 31. Classified as policy and contract claims, but excluded from these tables due to immateriality, are amounts recorded for group life, individual life, and deferred annuities.

	2019			
	Individual Insurance	Group Insurance	Old American	Consolidated
Gross liability at beginning of year	$ 831	$ 31,188	$ 4,434	$ 36,453
Less reinsurance recoverable	(541)	(23,796)	(4,402)	(28,739)
Net liability at beginning of year	290	7,392	32	7,714
Incurred benefits related to:				
Current year	31	28,201	48	28,280
Prior years [1]	(70)	(398)	(5)	(473)
Total incurred benefits	(39)	27,803	43	27,807
Paid benefits related to:				
Current year	15	23,557	17	23,589
Prior years	32	3,452	27	3,511
Total paid benefits	47	27,009	44	27,100
Net liability at end of year	204	8,186	31	8,421
Reinsurance recoverable	455	23,983	3,921	28,359
Gross liability at end of year	$ 659	$ 32,169	$ 3,952	$ 36,780

[1] The incurred benefits related to prior years' unpaid accident and health claims reflect the change in these liabilities.

	2018			
	Individual Insurance	Group Insurance	Old American	Consolidated
Gross liability at beginning of year	$ 657	$ 27,945	$ 5,438	$ 34,040
Less reinsurance recoverable	(372)	(21,231)	(5,346)	(26,949)
Net liability at beginning of year	285	6,714	92	7,091
Incurred benefits related to:				
Current year	32	27,526	48	27,606
Prior years [1]	75	(647)	(68)	(640)
Total incurred benefits	107	26,879	(20)	26,966
Paid benefits related to:				
Current year	11	23,150	18	23,179
Prior years	91	3,051	22	3,164
Total paid benefits	102	26,201	40	26,343
Net liability at end of year	290	7,392	32	7,714
Reinsurance recoverable	541	23,796	4,402	28,739
Gross liability at end of year	$ 831	$ 31,188	$ 4,434	$ 36,453

[1] The incurred benefits related to prior years' unpaid accident and health claims reflect the change in these liabilities.

	2017			
	Individual Insurance	Group Insurance	Old American	Consolidated
Gross liability at beginning of year	$ 785	$ 26,020	$ 5,341	$ 32,146
Less reinsurance recoverable	(445)	(19,850)	(5,260)	(25,555)
Net liability at beginning of year	340	6,170	81	6,591
Incurred benefits related to:				
Current year	27	26,836	87	26,950
Prior years [1]	57	(430)	(53)	(426)
Total incurred benefits	84	26,406	34	26,524
Paid benefits related to:				
Current year	3	22,758	12	22,773
Prior years	136	3,104	11	3,251
Total paid benefits	139	25,862	23	26,024
Net liability at end of year	285	6,714	92	7,091
Reinsurance recoverable	372	21,231	5,346	26,949
Gross liability at end of year	$ 657	$ 27,945	$ 5,438	$ 34,040

[1] The incurred benefits related to prior years' unpaid accident and health claims reflect the change in these liabilities.

The following table presents the reconciliation of amounts in the above tables to Policy and Contract Claims and claim reserves that are included in Future Policy Benefits as presented in the Consolidated Balance Sheets at December 31.

	2019	2018	2017
Individual Insurance Segment:			
Individual accident and health	$ 659	$ 831	$ 657
Group life	—	30	—
Individual life	33,252	27,141	18,506
Deferred annuity	5,286	4,289	3,047
Subtotal	39,197	32,291	22,210
Group Insurance Segment:			
Group accident and health	32,169	31,188	27,945
Group life	3,256	1,994	1,846
Subtotal	35,425	33,182	29,791
Old American Segment:			
Individual accident and health	3,952	4,434	5,438
Individual life	7,273	6,814	6,240
Subtotal	11,225	11,248	11,678
Total	$ 85,847	$ 76,721	$ 63,679

For short-duration contracts, IBNR liabilities for the group long-term disability product that were included in the liability for unpaid claims and claim adjustment expenses, net of reinsurance, totaled $0.6 million at December 31, 2019 and $0.7 million at December 31, 2018. These liabilities were calculated by the reinsurers of the various blocks of group long-term disability business, using percent of premium methodologies with varying factors. Claim frequencies were calculated for the long-term disability product using information that includes paid and pending claims at the claimant level. Thus, frequency is measured by individual claimant. Claims that are counted in a particular year as a liability but do not result in a liability in future years are not included once the claim is settled. There have been no significant changes to the methodologies for calculating claim frequencies, incurred-but-not-reported liabilities, or any other unpaid claims liabilities for the long-term disability product during the years presented.

The liabilities in the following table for group long-term disability claims involve present value of future benefits calculations. The carrying amount of liabilities at December 31, 2019 was $5.2 million, consisting of an undiscounted amount of $6.5 million and an aggregated discount amount deducted of $1.3 million. Discount rates ranged from 3.00% to 8.00% for the various blocks of group long-term disability business included in the totals.

The following table provides incurred claims and allocated claim adjustment expenses, net of reinsurance, for the group long-term disability product at December 31, 2019. The amounts for 2016 through 2019 are audited while the amounts for 2015 and earlier are unaudited.

	For the Years Ended December 31,								Total of IBNR Liabilities Plus Expected Development on Reported Claims	Cumulative Number of Reported Claims
Year Incurred	2012	2013	2014	2015	2016	2017	2018	2019		
2012	$ 1,132	$ 1,087	$ 999	$ 993	$ 1,116	$ 1,104	$ 1,118	$ 1,130	$ —	626
2013		806	836	815	838	838	822	854	—	234
2014			868	955	799	768	770	728	—	182
2015				989	918	701	697	643	—	227
2016					1,694	1,552	1,382	1,412	—	235
2017						2,038	1,727	1,513	—	244
2018							2,473	2,192	—	260
2019								2,056	561	185
							Total	$ 10,528		

The following table provides cumulative paid claims and allocated claim adjustment expenses, net of reinsurance, for the group long-term disability product at December 31, 2019. The amounts for 2016 through 2019 are audited while the amounts for 2015 and earlier are unaudited.

	For the Years Ended December 31,							
Year Incurred	2012	2013	2014	2015	2016	2017	2018	2019
2012	$ 91	$ 373	$ 499	$ 605	$ 675	$ 733	$ 797	$ 856
2013		91	336	449	501	537	564	600
2014			71	276	411	481	499	517
2015				100	390	491	531	545
2016					164	505	626	690
2017						162	549	703
2018							208	681
2019								251
							Total	$ 4,843
All outstanding liabilities before 2012, net of reinsurance								$ 853
Liabilities for claims and claim adjustment expenses, net of reinsurance								$ 6,538

The following table provides a reconciliation of incurred and paid claims development information to the aggregate carrying amount of the liability for unpaid claims and claim adjustment expenses at December 31. Included in other short-duration contracts are group life, group short-term disability, group dental, group vision, and individual accident and health for the Individual and Old American segments, none of which are individually significant.

	2019	2018
Net outstanding liabilities:		
Group long-term disability	$ 6,538	$ 6,172
Other short-duration contracts	5,535	4,282
Liabilities for unpaid claims and claim adjustment expenses, net of reinsurance	12,073	10,454
Reinsurance recoverable on unpaid claims:		
Group long-term disability	28,631	28,750
Other short-duration contracts	5,532	5,571
Total reinsurance recoverable on unpaid claims	34,163	34,321
Insurance lines other than short-duration	45,832	38,338
Unallocated claims adjustment expenses	—	—
Impact of discounting	(6,221)	(6,392)
Other	—	—
	39,611	31,946
Total gross liability for unpaid claims and claim adjustment expenses	$ 85,847	$ 76,721

The following table provides the historical average annual percentage payout of incurred claims by age, net of reinsurance, at December 31, 2019.

	Years				
	1	2	3	4	5
Group long-term disability	11.00%	28.30%	12.90%	7.19%	3.74%

10. Participating Policies

We have insurance contracts where the policyholder is entitled to share in the earnings through dividends, which reflect the difference between the premium charged and the actual experience. These insurance contracts were directly issued by the Company or were acquired through the purchase of participating blocks of business, largely through reinsurance assumption transactions. Participating business approximated 6% of total statutory premiums in both 2019 and 2018. Assumed participating business from the acquisition of closed blocks of business accounted for 99% of total participating statutory premiums in both 2019 and 2018. Participating business equaled 5% of total life insurance in force at both December 31, 2019 and December 31, 2018. Assumed participating business accounted for 97% of total participating life insurance in force at both December 31, 2019 and December 31, 2018.

The amount of dividends to be paid is determined annually by our Board of Directors. Provision has been made in the liability for future policy benefits to allocate amounts to participating policyholders on the basis of dividend scales contemplated at the time the policies were issued, as well as for policyholder dividends having been declared by the Board of Directors in excess of the original scale.

11. Debt

We had no notes payable outstanding at December 31, 2019 or December 31, 2018.

As a member of the Federal Home Loan Bank of Des Moines (FHLB) with a capital investment of $4.8 million at December 31, 2019, we have the ability to borrow on a collateralized basis from the FHLB. We received an insignificant amount of dividends on the capital investment in 2019, 2018, and 2017.

We had unsecured revolving lines of credit with three major commercial banks that totaled $80.0 million at December 31, 2019, with no balances outstanding. We had unsecured revolving lines of credit with two major commercial banks that totaled $70.0 million at December 31, 2018, with no balances outstanding. The lines of credit are at variable interest rates based upon short-term indices and will mature in June of 2020. We anticipate renewing these lines of credit as they come due. One line of credit includes a $10.0 million portion that can be unconditionally canceled by the lending institution at its discretion at any time.

The Company has access to secured borrowings through repurchase agreements with two financial counterparties. The Company had no transactions that occurred under these agreements during 2019 and had no outstanding borrowings as of December 31, 2019. Any borrowings drawn under these agreements require a variable interest rate based upon short-term indices and approval from the counterparty at the time of the transaction. No securities are currently pledged under these agreements.

12. Income Taxes

The following table provides information about income taxes for the years ended December 31.

	2019	2018	2017
Current income tax expense (benefit)	$ 4,597	$ (505)	$ 4,784
Deferred income tax expense	426	1,743	3,531
Adjustment to deferred taxes for enacted changes in tax laws	—	276	(30,487)
Total income tax expense (benefit)	$ 5,023	$ 1,514	$ (22,172)

The following table provides information about taxes paid for the years ended December 31.

	2019	2018	2017
Cash paid (refund) for income taxes	$ (938)	$ (963)	$ 3,569

The following table provides a reconciliation of the federal income tax rate to our effective income tax rate for the years ended December 31.

	2019	2018	2017
Federal income tax rate	21 %	21 %	35 %
Tax credits, net of equity adjustment	(8)%	(10)%	(2)%
Permanent differences and other	4 %	(4)%	(2)%
Remeasurement of deferred taxes for enacted changes in tax laws	— %	2 %	(106)%
Effective income tax rate	17 %	9 %	(75)%

Presented below are tax effects of temporary differences that result in significant deferred tax assets and liabilities at December 31.

	2019	2018
Deferred tax assets:		
Future policy benefits	$ 18,781	$ 15,752
Employee retirement benefits	6,468	6,465
Tax carryovers	1,124	3,791
Other	2,581	2,259
Deferred tax assets	28,954	28,267
Deferred tax liabilities:		
Basis differences between tax and GAAP accounting for investments	3,673	2,712
Unrealized investment gains	36,600	2,146
Capitalization of DAC, net of amortization	33,431	36,410
VOBA	2,631	4,264
Property and equipment	3,338	5,102
Deferred tax liabilities	79,673	50,634
Net deferred tax liability	50,719	22,367
Current tax asset	(145)	(4,259)
Income taxes payable	$ 50,574	$ 18,108

A valuation allowance must be established for any portion of the deferred tax asset which is believed not to be realizable. Management reviews the need for a valuation allowance based on our anticipated future earnings, reversal of future taxable differences, the available carryback and carryforward periods, and tax planning strategies that are prudent and feasible. In management's opinion, it is more likely than not that we will realize the benefit of our deferred taxes.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various state jurisdictions. In general, we are no longer subject to U.S. federal, state, or local income tax examinations by tax authorities for years prior to 2016. We are not currently under examination by the Internal Revenue Service (IRS).

Our policy is to recognize interest and penalties accrued related to unrecognized tax benefits in income tax expense. The Company recognized no tax benefit related to tax penalty and interest expense in 2019, 2018, or 2017.

We had no material uncertain tax positions at December 31, 2019 or December 31, 2018.

Income tax expense (benefit) is recorded in various places in our financial statements, as detailed below, for the years ended December 31.

	2019	2018	2017
Income tax expense (benefit)	$ 5,023	$ 1,514	$ (22,172)
Stockholders' equity:			
Related to:			
Change in net unrealized gains on securities available for sale	34,453	(17,295)	426
Effect on DAC, VOBA, and DRL	(3,086)	2,357	675
Change in policyholder liabilities	(4,249)	3,018	1,081
Change in benefit plan obligations	809	(1,548)	3,467
Total income tax expense (benefit) included in financial statements	$ 32,950	$ (11,954)	$ (16,523)

Beginning January 1, 2018, the TCJA imposes a limitation on life insurance tax reserves based upon the greater of net surrender value or 92.81% of the reserve method prescribed by the National Association of Insurance Commissioners (NAIC) which covers such contracts as of the date the reserve is determined. The Company adopted SEC Staff Accounting Bulletin No. 118 (SAB 118) as permitted by the FASB in 2017. SAB 118 allows companies to use provisional amounts to record the effects of the TCJA and also provides a measurement period (not to exceed one year from the date of enactment) to complete the accounting of the impacts of the TCJA. During 2017, the Company recognized the provisional tax impacts related to the change in the methodology employed to calculate tax reserves by recording a deferred tax asset and offsetting deferred tax liability of $7.4 million in its consolidated financial statements. The Company completed and finalized the tax impact of the life insurance tax reserves limitation in 2018 and recorded a decrease to the deferred tax asset and offsetting deferred tax liability of $0.7 million in the consolidated financial statements at December 31, 2018. This results in a final deferred tax asset and offsetting deferred tax liability of $6.7 million at December 31, 2018. The deferred tax liability was amortized into income in the amount of $3.6 million during 2018 per the 8-year inclusion described in the TCJA. During 2019, the Company made final adjustments to the Grange Life tax reserves as of January 1, 2018 and recorded an additional deferred tax asset and offsetting deferred tax liability of $1.3 million. This changed the consolidated deferred tax asset and offsetting deferred tax liability to $5.4 million. The amortization of this liability is $0.7 million annually over 8 years, including 2019.

13. Pensions and Other Postemployment Benefits

We have pension and other postemployment benefit plans covering substantially all of our employees for which the measurement date is annually on December 31.

The Kansas City Life Cash Balance Pension Plan (pension plan) was amended effective December 31, 2010 to provide that participants' accrued benefits will be frozen, and that no further benefits or accruals will be earned after December 31, 2010. Although participants will no longer accrue additional benefits under the pension plan at December 31, 2010, participants will continue to earn years of service for vesting purposes under the pension plan with respect to their benefits accrued through December 31, 2010. In addition, the cash balance account will continue to earn annual interest. Pension plan benefits are based on a cash balance account consisting of credits to the account based upon an employee's years of service, compensation and interest credits on account balances calculated using the greater of the average 30-year U.S. Treasury bond rate for November of each year or 5.00%.

The benefits expected to be paid in each year from 2020 through 2024 are as follows: $9.2 million in 2020; $8.8 million in 2021; $8.4 million in 2022; $9.4 million in 2023; and $8.6 million in 2024. The aggregate benefits expected to be paid in the five years from 2025 through 2029 are $39.4 million. The expected benefits to be paid are based on the same assumptions used to measure the Company's benefit obligation at December 31, 2019 and are the actuarial present value of the vested benefits to which the employee is currently entitled but based upon the expected date of separation or retirement. The 2020 contribution for the pension plan has not been determined.

The asset allocation of the fair value of pension plan assets compared to the target allocation range at December 31 was:

	2019	Target Allocation	2018	Target Allocation
Equity securities	38%	28% - 48%	38%	28% - 48%
Asset allocation and alternative assets	14%	10% - 20%	16%	10% - 20%
Debt securities	48%	30% - 60%	46%	30% - 60%
Cash and cash equivalents	—%	0% - 10%	—%	0% - 10%

Certain of our pension plan assets consist of investments in pooled separate accounts. The NAV of the separate accounts is calculated in a manner consistent with GAAP for investment companies and is determinative of their fair value. Several of the separate accounts invest in publicly quoted mutual funds or actively managed stocks. The fair value of the underlying mutual funds or stock is used to determine the NAV of the separate account, which is not publicly quoted. Some of the separate accounts also invest in fixed income securities. The fair value of the underlying securities is based on quoted prices of similar assets and used to determine the NAV of the separate account. Sale of plan assets may be at values less than NAV. Certain redemption restrictions may apply to specific stock and bond funds, including written notices prior to the withdrawal of funds and a potential redemption fee on certain withdrawals.

Hedge fund investments are recorded at NAV. The pension plan's hedge funds invest primarily in other investment funds. The valuation policies of the hedge funds provide that the value of investments in other investment funds be stated at fair value based on the NAV of the other investment funds and certain redemption restrictions may apply, including a 45 day prior written notice to withdraw funds.

Plan fiduciaries set investment policies and strategies and oversee its investment allocation, which includes selecting investment managers, commissioning periodic asset-liability studies, and setting long-term strategic targets. Long-term strategic investment objectives include preserving the funded status of the pension plan and balancing risk and return. Target allocation ranges are guidelines, not limitations, and occasionally plan fiduciaries will approve allocations above or below a target range. The pension plan does not expect to return any plan assets to the Company during 2020.

The current assumption for the expected long-term rate of return on plan assets is 7.15%. This assumption is determined by analyzing: 1) historical average returns achieved by asset allocation and active management; 2) historical data on the volatility of returns; 3) current yields available in the marketplace; 4) actual returns on plan assets; and 5) current and anticipated future allocation among asset classes. The asset classes used for this analysis are domestic and international equities, investment grade corporate bonds, alternative assets, and cash. The overall rate is derived as a weighted average of the estimated long-term returns on the asset classes represented in the investment portfolio of the pension plan. Effective January 1, 2020, the assumption for the expected long-term rate of return on plan assets was reduced to 6.29%.

The assumed discount rate used to determine the benefit obligation was 2.88% for pension benefits and was 3.10% for postemployment benefits. The discount rates were determined by reference to the FTSC Pension Discount Curve (formerly the Citigroup Pension Liability Yield Curve) on December 31, 2019. Specifically, the spot rate curve represents the rates on zero coupon securities of the quality and type included in the pension index at various maturities. By discounting benefit cash flows at these rates, a notional amount equal to the fair value of a cash flow defeasing portfolio of bonds was determined. The discount rate for benefits was calculated as a single rate giving the same discounted value as the notional amount.

The postemployment medical plans for eligible employees and their dependents are contributory with contributions adjusted annually. The benefits expected to be paid in each year from 2020 through 2024 are as follows: $0.7 million in 2020; $0.8 million in 2021; $0.8 million in 2022; $0.8 million in 2023; and $0.9 million in 2024. The aggregate benefits expected to be paid in the five years from 2025 through 2029 are $4.5 million. The expected benefits to be paid are based on the same assumptions used to measure the Company's benefit obligation at December 31, 2019. The 2020 contribution for the postemployment medical plans is estimated to be $0.7 million. The Company pays these medical costs as they become due and the postemployment plan incorporates cost-sharing features. The postemployment plan disclosures included herein do not include the potential impact from the Medicare Act (the Act) that became law in December 2003. The Act introduced a new federal subsidy to sponsors of certain retiree health care plans that provide a benefit that is at least actuarially equivalent to Medicare. Since the Company does not provide benefits that are actuarially equivalent to Medicare, the Act did not impact our disclosures.

Non-contributory defined contribution retirement plans for eligible general agents and sales agents provide supplemental payments based upon earned agency first year individual life and annuity commissions. Contributions to these plans were $0.2 million in 2019, 2018, and 2017. Non-contributory deferred compensation plans for eligible agents based upon earned first year commissions are also offered. Contributions to these plans were $0.3 million in 2019, 2018, and 2017.

Savings plans for eligible employees and agents match employee and agent contributions up to 8.00% of salary and 2.50% of agents' prior year paid commissions. Contributions to the savings plans were $2.5 million in 2019, $2.3 million in 2018, and $2.2 million in 2017. We may contribute an additional profit sharing amount up to 4% of salary for eligible employees, depending upon corporate profits. The Company did not make a profit sharing contribution in 2019, 2018, or 2017.

We recognize the funded status of our pension and postemployment plans, measured as the difference between plan assets at fair value and the projected benefit obligation, in the Consolidated Balance Sheets. Changes in the funded status that arise during the period, but are not recognized as components of net periodic benefit cost, are recognized within other comprehensive income (loss), net of taxes.

The following tables provide information regarding pension benefits and other postemployment benefits (OPEB) for the years ended December 31.

	Pension Benefits		OPEB	
	2019	2018	2019	2018
Change in projected benefit obligation:				
Benefit obligation at beginning of year	$ 121,586	$ 134,232	$ 16,389	$ 18,232
Service cost	—	—	169	223
Interest cost	4,615	4,274	663	631
Plan participants' contributions	—	—	462	445
Actuarial (gain) loss	10,803	(7,128)	2,208	(1,970)
Benefits paid	(11,073)	(9,792)	(949)	(1,172)
Benefit obligation at end of year	$ 125,931	$ 121,586	$ 18,942	$ 16,389
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 134,014	$ 147,007	$ —	$ —
Return on plan assets	24,735	(7,229)	—	—
Plan participants' contributions	—	—	462	445
Company contributions	4,028	4,028	487	727
Benefits paid	(11,073)	(9,792)	(949)	(1,172)
Fair value of net plan assets at end of year	$ 151,704	$ 134,014	$ —	$ —
Under/(over) funded status at end of year	$ (25,773)	$ (12,428)	$ 18,942	$ 16,389

	Pension Benefits		OPEB	
	2019	2018	2019	2018
Amounts recognized in accumulated other comprehensive income (loss):				
Net loss (gain)	$ 69,392	$ 76,975	$ (10,670)	$ (14,336)
Prior service credit	(1,340)	(1,406)	—	—
Total accumulated other comprehensive income (loss)	$ 68,052	$ 75,569	$ (10,670)	$ (14,336)

	Pension Benefits		OPEB	
	2019	2018	2019	2018
Other changes in plan assets and benefit obligations recognized in other comprehensive income (loss):				
Unrecognized actuarial net (gain) loss	$ (4,709)	$ 10,278	$ 2,208	$ (1,971)
Amortization of net gain (loss)	(2,874)	(2,394)	1,458	1,292
Amortization of prior service credit	66	66	—	100
Total (gain) loss recognized in other comprehensive income (loss)	$ (7,517)	$ 7,950	$ 3,666	$ (579)

	Pension Benefits		OPEB	
	2019	2018	2019	2018
Weighted average assumptions used to determine benefit obligations at December 31:				
Discount rate	2.88%	3.96%	3.10%	4.13%
Weighted average assumptions used to determine net periodic benefit cost for years ended December 31:				
Discount rate	3.96%	3.30%	4.13%	3.52%
Expected return on plan assets	7.15%	7.15%	—%	—

The following table presents the fair value of each major category of pension plan assets at December 31.

	2019	2018
Fixed maturity securities:		
U.S. Government	$ 248	$ 346
Industrial and public utility	9,698	9,922
Investment funds:		
Mutual funds	29,650	24,535
Hedge fund	—	326
Collective trust	102,147	86,889
Limited partnerships	9,858	9,361
Other invested assets	13	25
Cash and cash equivalents	11	25
Receivables	79	2,585
Fair value of assets at end of year	151,704	134,014
Liabilities:		
Accrued liabilities	—	—
Total liabilities	—	—
Fair value of net plan assets at end of year	$ 151,704	$ 134,014

The following tables provide the fair value hierarchy, as described in Note 5, for pension plan assets at December 31.

	2019			
	Level 1	Level 2	Level 3	Total
Fixed maturity securities:				
U.S. Government	$ —	$ 248	$ —	$ 248
Industrial and public utility	—	9,698	—	9,698
Mutual funds	29,650	—	—	29,650
Other invested assets	—	—	13	13
Total assets in the fair value hierarchy	29,650	9,946	13	39,609
Investments measured at net asset value: [1]				
Hedge fund				—
Collective trust				102,147
Limited partnerships				9,858
Investments at fair value				$ 151,614

	2018			
	Level 1	Level 2	Level 3	Total
Fixed maturity securities:				
U.S. Government	$ —	$ 346	$ —	$ 346
Industrial and public utility	—	9,922	—	9,922
Mutual funds	24,535	—	—	24,535
Other invested assets	—	—	25	25
Total assets in the fair value hierarchy	24,535	10,268	25	34,828
Investments measured at net asset value: [1]				
Hedge fund				326
Collective trust				86,889
Limited partnerships				9,361
Investments at fair value				$ 131,404

[1] These investments are valued based on net asset value per unit. These values are provided by the fund as a practical expedient and have not been classified in the fair value hierarchy.

The following table discloses the changes in Level 3 pension plan assets measured at fair value on a recurring basis for the years ended December 31.

	2019	2018
Beginning balance	$ 25	$ 25
Losses realized and unrealized	(12)	—
Ending balance	$ 13	$ 25

The following table provides the components of net periodic benefit cost (credit) for the years ended December 31.

	Pension Benefits			OPEB		
	2019	2018	2017	2019	2018	2017
Service cost	$ —	$ —	$ —	$ 169	$ 223	$ 307
Interest cost	4,615	4,274	4,725	663	631	910
Expected return on plan assets	(9,223)	(10,177)	(9,638)	—	—	—
Amortization of:						
Unrecognized actuarial net (gain) loss	2,874	2,394	2,638	(1,458)	(1,292)	(833)
Unrecognized prior service credit	(66)	(66)	(66)	—	(100)	(825)
Net periodic benefit credit	(1,800)	(3,575)	(2,341)	(626)	(538)	(441)
Total recognized in other comprehensive income (loss)	(7,517)	7,950	(5,951)	3,666	(579)	(3,955)
Total recognized in net periodic benefit cost (credit) and other comprehensive income (loss)	$ (9,317)	$ 4,375	$ (8,292)	$ 3,040	$ (1,117)	$ (4,396)

The following table provides the estimated net loss (gain) and prior service credit for the pension plan and other postemployment plans that will be amortized from accumulated other comprehensive income (loss) into net periodic benefit cost in 2019.

	Pension Benefits	OPEB
Actuarial net loss (gain)	$ 2,514	$ (1,039)
Prior service credit	(66)	—

The assumed growth rate of health care costs has a significant effect on the benefit amounts reported, as the following table demonstrates.

	One Percentage Point Change in the Growth Rate	
	Increase	Decrease
Service and interest cost components	$ 136	$ (108)
Postemployment benefit obligation	2,848	(2,311)

For measurement purposes, the annual increase in the per capita cost of covered health care benefits was assumed to be 6.75%, decreasing gradually to 5.00% in 2030 and thereafter.

14. Share-Based Payment

The Kansas City Life Insurance Company Omnibus Incentive Plan (long-term incentive plan) includes a long-term incentive benefit for senior management. The long-term incentive plan design includes a cash award to participants that may be paid, in part, based on the increase in the share price of our common stock through units (phantom shares) assigned by the Board of Directors. The cash award is calculated over a three-year interval on a calendar year basis. At the conclusion of each three-year interval, participants will receive a cash award based on the increase in the share price during a defined measurement period, multiplied by the number of units attributable to each participant. The increase in the share price is determined based on the change in the share price from the beginning to the end of the three-year interval. Amounts representing dividends are accrued and paid at the end of each three-year interval to the extent that they exceed negative stock price appreciation. Plan payments are contingent on the continued employment of the participant unless termination is due to a qualifying event such as death, disability, or retirement. In addition, all payments are lump sum with no deferrals allowed. The Company does not make payments in shares, warrants, or options.

The following table provides information about the outstanding three-year intervals at December 31, 2019.

Defined Measurement Period	Number of Units	Grant Price
2017-2019	130,017	$48.01
2018-2020	155,297	$45.62
2019-2021	126,898	$35.12
2020-2022*	129,114	$32.70

* Effective January 1, 2020

The long-term incentive plan did not make a cash payment during 2019 for the three-year interval ended December 31, 2018. The long-term incentive plan made a payment of $0.2 million during 2018 for the three-year interval ended December 31, 2017 and a payment of $0.5 million during 2017 for the three-year interval ended December 31, 2016. The cost of share-based compensation accrued as operating expense during 2019 was less than $0.1 million, net of tax. The change in accrual that reduced operating expense during 2018 was $0.4 million, net of tax. The change in accrual that reduced operating expense during 2017 was $0.1 million, net of tax.

15. Reinsurance

The following table provides information about reinsurance for the years ended December 31.

	2019	2018	2017
Life insurance in force (in millions) :			
Direct	$ 52,752	$ 53,084	$ 28,592
Ceded	(32,889)	(33,265)	(13,357)
Assumed	4,337	4,601	3,217
Net	$ 24,200	$ 24,420	$ 18,452
Premiums:			
Life insurance:			
Direct	$ 266,345	$ 201,823	$ 178,318
Ceded	(96,263)	(59,134)	(47,306)
Assumed	4,717	2,992	2,232
Net	$ 174,799	$ 145,681	$ 133,244
Accident and health:			
Direct	$ 59,681	$ 58,884	$ 57,324
Ceded	(11,253)	(10,972)	(10,632)
Net	$ 48,428	$ 47,912	$ 46,692

Ceded Reinsurance Arrangements

Old American has a coinsurance agreement that reinsures certain whole life policies issued by Old American prior to December 1, 1986. These policies had a face value of $13.4 million at December 31, 2019 and $15.2 million at December 31, 2018. The reserve for future policy benefits ceded under this agreement was $8.1 million at December 31, 2019 and $9.1 million at December 31, 2018.

Sunset Life entered into a yearly renewable term reinsurance agreement January 1, 2002, whereby it ceded 80% of its retained mortality risk on traditional and universal life policies. In June 2012, Sunset Life recaptured approximately 9% of the outstanding bulk reinsurance agreement. The insurance in force ceded approximated $628.4 million at December 31, 2019 and $692.0 million at December 31, 2018. Premiums totaled $5.7 million during 2019, $6.2 million during 2018, and $6.5 million during 2017.

Reinsurance recoverables were $378.8 million at year-end 2019, consisting of reserves ceded of $347.7 million and claims ceded of $31.1 million. Reinsurance recoverables were $366.2 million at year-end 2018, consisting of reserves ceded of $342.3 million and claims ceded of $23.9 million.

In the fourth quarter of 2018, Grange Life completed a 100% recapture of a block of business previously ceded to Colorado Bankers Life Insurance Company. The block of business recaptured approximated $54.5 million of deferred annuity reserves.

The maximum retention on any one life during 2019 and 2018 was $0.5 million for ordinary life plans and $0.1 million for group coverage.

The following table reflects our reinsurance partners whose reinsurance recoverable was 5% or greater of our total reinsurance recoverable at December 31, 2019, along with their A.M. Best credit rating.

	A.M. Best Rating	Reinsurance Recoverable	% of Recoverable
SCOR Global Life USA Reinsurance Company	A+	97,834	26%
RGA Reinsurance Company	A+	90,782	24%
Transamerica Life Insurance Company	A	$ 45,191	12%
Other (30 Companies)		144,965	38%
Total		$ 378,772	100%

A contingent liability exists with respect to reinsurance, which may become a liability of the Company in the unlikely event that the reinsurers should be unable to meet obligations assumed under reinsurance contracts. The solvency of reinsurers is reviewed annually.

We monitor several factors that we consider relevant as to the ongoing ability of a reinsurer to meet the obligations of the reinsurance agreements. These factors include the credit rating of the reinsurer and significant changes or events of the reinsurer. If we believe that any reinsurer would not be able to satisfy its obligations with us, a separate contingency reserve may be established. At year-end 2019 and 2018, no reinsurer met these conditions. In addition, we review the credit rating and financial statements of a reinsurer before entering into any new agreements.

Assumed Reinsurance Arrangements

We acquired a block of traditional life and universal life products in 1997 through a 100% coinsurance and servicing arrangement. Investments equal to the statutory policy reserves are held in a trust to secure payment of the estimated liabilities relating to the policies. This block had $660.8 million of life insurance in force at December 31, 2019 and $725.5 million of life insurance in force at December 31, 2018. This block generated life insurance premiums of $2.0 million in both 2019 and 2018 and $2.1 million in 2017.

We acquired a block of variable universal life insurance policies and variable annuity contracts from American Family Life Insurance Company in 2013. The transfer was comprised of a 100% modified coinsurance transaction on the separate account business and a 100% coinsurance transaction for the corresponding fixed account business. Included in the transaction are ongoing servicing arrangements for this business. This block consisted of $327.7 million of separate account balances at December 31, 2019, which are included in the financial statements of American Family, compared to $285.6 million at December 31, 2018. This block consisted of $0.6 million of future policy benefits and $31.6 million in fixed fund balances that are included in Policyholder Account Balances in the Company's Consolidated Balance Sheets at December 31, 2019. This block consisted of $0.6 million of future policy benefits and $30.6 million in fixed fund balances at December 31, 2018.

16. Comprehensive Income (Loss)

Comprehensive income (loss) is comprised of net income and other comprehensive income (loss). Other comprehensive income (loss) includes the unrealized investment gains or losses on securities available for sale (net of reclassifications for realized investment gains or losses), net of adjustments to DAC, VOBA, DRL, future policy benefits, and policyholder account balances. In addition, other comprehensive income (loss) includes the change in the liability for benefit plan obligations. Other comprehensive income (loss) reflects these items net of tax.

The following tables provide information about comprehensive income (loss).

	Year Ended December 31, 2019		
	Pre-Tax Amount	Tax Expense (Benefit)	Net-of-Tax Amount
Net unrealized gains arising during the year:			
Fixed maturity securities	$ 166,201	$ 34,902	$ 131,299
Less reclassification adjustments:			
Net realized investment gains, excluding impairment losses	2,723	572	2,151
Other-than-temporary impairment losses recognized in earnings	(580)	(122)	(458)
Other-than-temporary impairment losses recognized in other comprehensive income	(4)	(1)	(3)
Net unrealized gains excluding impairment losses	164,062	34,453	129,609
Effect on DAC, VOBA, and DRL	(14,694)	(3,086)	(11,608)
Change in policyholder liabilities	(20,236)	(4,249)	(15,987)
Change in benefit plan obligations	3,851	809	3,042
Other comprehensive income	$ 132,983	$ 27,927	$ 105,056
Net income			24,427
Comprehensive income			$ 129,483

	Year Ended December 31, 2018		
	Pre-Tax Amount	Tax Expense (Benefit)	Net-of-Tax Amount
Net unrealized losses arising during the year:			
Fixed maturity securities	$ (82,724)	$ (17,372)	$ (65,352)
Less reclassification adjustments:			
Net realized investment losses, excluding impairment losses	(367)	(77)	(290)
Other-than-temporary impairment losses recognized in earnings	—	—	—
Other-than-temporary impairment losses recognized in other comprehensive loss	—	—	—
Net unrealized losses excluding impairment losses	(82,357)	(17,295)	(65,062)
Effect on DAC, VOBA, and DRL	11,224	2,357	8,867
Change in policyholder liabilities	14,372	3,018	11,354
Change in benefit plan obligations	(7,371)	(1,548)	(5,823)
Other comprehensive loss	$ (64,132)	$ (13,468)	$ (50,664)
Net income			15,672
Comprehensive loss			$ (34,992)

	Year Ended December 31, 2017		
	Pre-Tax Amount	Tax Expense (Benefit)	Net-of-Tax Amount
Net unrealized gains arising during the year:			
Fixed maturity securities	$ 2,854	$ 1,001	$ 1,853
Equity securities	827	289	538
Less reclassification adjustments:			
Net realized investment gains, excluding impairment losses	2,474	866	1,608
Other-than-temporary impairment losses recognized in earnings	—	—	—
Other-than-temporary impairment losses recognized in other comprehensive income	(7)	(2)	(5)
Net unrealized gains excluding impairment losses	1,214	426	788
Effect on DAC, VOBA, and DRL	1,929	675	1,254
Change in policyholder liabilities	3,089	1,081	2,008
Change in benefit plan obligations	9,906	3,467	6,439
Other comprehensive income	$ 16,138	$ 5,649	$ 10,489
Net income			51,541
Comprehensive income			$ 62,030

The following table provides accumulated balances related to each component of accumulated other comprehensive income (loss) at December 31, 2019, net of tax.

	Unrealized Gain on Non-Impaired Securities	Unrealized Gain on Impaired Securities	Benefit Plan Obligations	DAC/ VOBA/DRL Impact	Policyholder Liabilities	Total
Beginning of year	$ 6,555	$ 1,517	$ (48,372)	$ (1,107)	$ (4,143)	$ (45,550)
Other comprehensive income (loss) before reclassification	131,860	(561)	3,042	(11,608)	(15,987)	106,746
Amounts reclassified from accumulated other comprehensive income (loss)	(2,151)	461	—	—	—	(1,690)
Net current-period other comprehensive income (loss)	129,709	(100)	3,042	(11,608)	(15,987)	105,056
End of year	$ 136,264	$ 1,417	$ (45,330)	$ (12,715)	$ (20,130)	$ 59,506

The following table provides accumulated balances related to each component of accumulated other comprehensive income (loss) at December 31, 2018, net of tax.

	Unrealized Gain on Non-Impaired Securities	Unrealized Gain on Impaired Securities	Benefit Plan Obligations	DAC/ VOBA/DRL Impact	Policyholder Liabilities	Total
Beginning of year	$ 72,172	$ 2,174	$ (42,549)	$ (10,012)	$ (15,497)	$ 6,288
Cumulative effect of adoption of new accounting principle (ASU No. 2016-01)	(1,212)	—	—	38	—	(1,174)
Adjusted beginning of year	70,960	2,174	(42,549)	(9,974)	(15,497)	5,114
Other comprehensive income (loss) before reclassification	(64,695)	(657)	(5,823)	8,867	11,354	(50,954)
Amounts reclassified from accumulated other comprehensive income (loss)	290	—	—	—	—	290
Net current-period other comprehensive income (loss)	(64,405)	(657)	(5,823)	8,867	11,354	(50,664)
End of year	$ 6,555	$ 1,517	$ (48,372)	$ (1,107)	$ (4,143)	$ (45,550)

The following table presents the pre-tax and the related income tax benefit (expense) components of the amounts reclassified from accumulated other comprehensive income (loss) to the Consolidated Statements of Comprehensive Income for the years ended December 31.

	2019	2018	2017
Reclassification adjustments related to unrealized gains (losses) on investment securities:			
Net realized investment gains (losses), excluding impairment losses [1]	$ 2,723	$ (367)	$ 2,474
Income tax benefit (expense) [2]	(572)	77	(866)
Net of taxes	2,151	(290)	1,608
Other-than-temporary impairment losses [1]	(584)	—	(7)
Income tax benefit [2]	123	—	2
Net of taxes	(461)	—	(5)
Total pre-tax reclassifications	2,139	(367)	2,467
Total income tax benefit (expense)	(449)	77	(864)
Total reclassification, net taxes	$ 1,690	$ (290)	$ 1,603

[1] (Increases) decreases net realized investment gains (losses) on the Consolidated Statements of Comprehensive Income.

[2] (Increases) decreases income tax expense on the Consolidated Statements of Comprehensive Income.

17. Earnings per Share

Due to our capital structure and the absence of other potentially dilutive securities, there is no difference between basic and diluted earnings per common share for any of the years reported. The average number of shares outstanding was 9,683,414 shares during 2019, 2018, and 2017. The number of shares outstanding at both December 31, 2019 and December 31, 2018 was 9,683,414.

18. Segment Information

We have three reportable business segments, which are defined based on the nature of the products and services offered: Individual Insurance, Group Insurance, and Old American. The Individual Insurance segment consists of individual insurance products for Kansas City Life, Sunset Life, Grange Life, and the assumed reinsurance transactions. The Group Insurance segment consists of sales of group life, dental, vision, disability, accident, and critical illness products. The Old American segment consists of individual insurance products designed largely as final expense products.

Insurance revenues, as shown in the Consolidated Statements of Comprehensive Income, consist of premiums and contract charges, less reinsurance ceded. Separate investment portfolios are maintained for Kansas City Life, Sunset Life, Old American, and Grange Life for segment reporting purposes. Investment assets and income are allocated to the Group Insurance segment based upon its cash flows and future policy benefit liabilities. Policyholder benefits are specifically identified to the respective segment. Most home office functions are fully integrated for all segments in order to maximize economies of scale. Therefore, operating expenses are allocated to the segments based upon internal cost studies, which are consistent with industry cost methodologies.

Inter-segment revenues are not material. We operate solely in the United States of America and no individual customer accounts for 10% or more of our revenue.

The following tables provide selected financial statement items of each of the operating segments for the years ended December 31. Intercompany transactions have been eliminated to arrive at Consolidated Statements of Comprehensive Income.

	2019			
	Individual Insurance	Group Insurance	Old American	Consolidated
Insurance revenues	$ 190,041	$ 63,091	$ 95,981	$ 349,113
Interest credited to policyholder account balances	78,520	—	—	78,520
Amortization of deferred acquisition costs	15,506	—	20,442	35,948
Income tax expense	4,163	558	302	5,023
Net income	21,191	2,099	1,137	24,427
Assets	4,772,243	12,006	435,616	5,219,865

	2018			
	Individual Insurance	Group Insurance	Old American	Consolidated
Insurance revenues	$ 156,604	$ 61,632	$ 92,273	$ 310,509
Interest credited to policyholder account balances	74,308	—	—	74,308
Amortization of deferred acquisition costs	20,916	—	19,700	40,616
Income tax expense	854	574	86	1,514
Net income	12,198	2,160	1,314	15,672
Assets	4,552,270	10,550	408,666	4,971,486

	2017			
	Individual Insurance	Group Insurance	Old American	Consolidated
Insurance revenues	$ 145,460	$ 59,569	$ 88,935	$ 293,964
Interest credited to policyholder account balances	72,921	—	—	72,921
Amortization of deferred acquisition costs	15,965	—	18,805	34,770
Income tax expense (benefit)	(16,687)	910	(6,395)	(22,172)
Net income	41,005	1,690	8,846	51,541
Assets	4,120,410	9,710	400,550	4,530,670

19. Quarterly Consolidated Financial Data (unaudited)

The unaudited quarterly results of operations for the years ended December 31 are summarized in the following table.

	First	Second	Third	Fourth
2019:				
Total revenues	$ 130,103	$ 129,884	$ 126,441	$ 126,265
Total benefits and expenses	125,154	123,455	120,983	113,651
Net income	4,035	5,281	4,522	10,589
Per common share, basic and diluted	0.42	0.54	0.47	1.09
2018:				
Total revenues	$ 109,511	$ 112,331	$ 115,372	$ 123,818
Total benefits and expenses	107,768	107,386	107,698	120,994
Net income	1,462	4,108	6,275	3,827
Per common share, basic and diluted	0.15	0.43	0.64	0.40

20. Statutory Information and Stockholder Dividends Restriction

The following table provides Kansas City Life's net gain from operations, net income, and capital and surplus (stockholders' equity) on the statutory basis used to report to regulatory authorities for the years ended December 31.

	2019	2018	2017
Net gain from operations	$ 5,965	$ 11,529	$ 14,440
Net income	6,929	15,510	15,977
Capital and surplus	260,804	278,157	307,501

The decrease in capital and surplus in 2019 compared to 2018 was largely attributable to changes in nonadmitted assets of $11.7 million, change in asset valuation reserve of $3.5 million, and change in net unrealized capital gains (losses) of $4.9 million. These changes were partially offset by net income of $6.9 million, a $3.7 million change in the liability for pension and OPEB, and change in net deferred taxes of $3.0 million. The decrease in capital and surplus in 2018 compared to 2017 was largely attributable to changes in nonadmitted assets of $28.0 million, change in net unrealized capital losses of $8.5 million, and a $7.5 million increase in the liability for pension and OPEB. These changes were partially offset by net income of $15.5 million, change in asset valuation reserve of $4.6 million, and change in net deferred taxes of $4.8 million.

Kansas City Life recognizes its 100% ownership in Old American, Sunset Life, and Grange Life under the equity method with subsidiary earnings recorded through surplus on a statutory accounting basis. Capital and surplus at December 31, 2019 in the above table includes capital and surplus of $19.7 million for Old American, $24.9 million for Sunset Life, and $34.2 million for Grange Life.

Stockholder dividends may not exceed statutory unassigned surplus. Additionally, under Missouri law, the Company must have the prior approval of the Missouri Director of Insurance to pay dividends in any consecutive twelve-month period exceeding the greater of statutory net gain from operations for the preceding year or 10% of statutory stockholders' equity at the end of the preceding year. We believe that Kansas City Life, as the parent company, has sufficient cash resources, independent of dividends paid by its affiliates, to satisfy its own stockholder dividend payments. In addition, we believe that individually each of the insurance enterprises has sufficient cash flows to satisfy the anticipated cash dividends that are expected to be declared.

The maximum stockholder dividends payable by Kansas City Life without prior approval in 2020 is $26.1 million, 10% of December 31, 2019 capital and surplus. The maximum stockholder dividends payable by Old American without prior approval in 2020 is $2.0 million, 10% of December 31, 2019 capital and surplus. The maximum stockholder dividends payable by Sunset Life without prior approval in 2020 is $2.5 million, 10% of December 31, 2019 capital and surplus.

Grange Life is subject to the laws in Ohio, its state of domicile. Grange Life did not pay any stockholder dividends during 2019.

We believe that the statutory limitations impose no practical restrictions on the dividend payment plans of our three insurance companies.

Insurance companies are monitored and evaluated by state insurance departments as to the financial adequacy of statutory capital and surplus in relation to each company's risks. One such measure is through the risk-based capital (RBC) guidelines. RBC requirements 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. RBC guidelines consist of target statutory surplus levels based on the relationship of statutory capital and surplus to the sum of weighted risk exposures. The RBC calculation determines both an authorized control level and a total adjusted capital prepared on the RBC basis. Generally, regulatory action is at 150% of the authorized control level. Each of the four insurance companies was within the range of approximately 600% to 900%, well in excess of the control level at December 31, 2019.

We are required to deposit a defined amount of assets with state regulatory authorities. Such assets had a statutory carrying value of $16.3 million at December 31, 2019, $14.7 million at December 31, 2018, and $12.3 million at December 31, 2017.

21. Commitments, Contingent Liabilities, Guarantees, and Indemnifications

Commitments
In the normal course of business, we have open purchase and sale commitments. At December 31, 2019, we had purchase commitments to fund mortgage loans of $20.6 million.

Subsequent to December 31, 2019 we entered into commitments to fund additional mortgage loans of $13.9 million.

Contingent Liabilities
On March 1, 2019, the Delaware Department of Insurance requested Scottish Re (US) be placed in rehabilitation. Kansas City Life has ceded some of its business to Scottish Re (US), a subsidiary of Scottish Re Group. Based on the information currently available, the Company does not have sufficient information to make an assessment of the likelihood of any loss related to this matter. The Company will continue to closely monitor developments related to the rehabilitation proceeding.

Kansas City Life is involved in various pending or threatened legal proceedings, including purported class actions, arising from the conduct of business both in the ordinary course and otherwise. In some of the matters, very large and/or indeterminate amounts, including punitive and treble damages, are sought.

Due to the unpredictable nature of litigation, the outcome of a litigation matter and the amount or range of potential loss can be difficult to ascertain. We establish liabilities for litigation and other loss contingencies when available information indicates both that a loss is probable and the amount of the loss can be reasonably estimated. Some matters could require us to pay damages or make other expenditures or establish accruals in amounts that cannot be estimated as of December 31, 2019. Based on information currently known by management, management does not believe any such expenditures are likely to have a material adverse effect on Kansas City Life's financial condition.

Cost of Insurance Litigation
We are a defendant in three very similar putative class actions that allege that we applied cost of insurance rates in excess of amounts permitted by the terms of certain universal life insurance policies.

The three cases are:

- Meek v. KCL, filed in the U.S. District Court for the Western District of Missouri, in which the plaintiff seeks to represent all similar universal life policyholders residing outside of the State of Missouri and seeks damages on behalf of all such policyholders.
- Karr v. KCL, filed in the 16th District Court for the State of Missouri (Jackson County), in which plaintiff seeks to represent all similar universal life policyholders residing in the State of Missouri and seeks damages on behalf of all such policyholders.
- Sheldon v KCL, filed in the 16th District Court for the State of Missouri (Jackson County), in which plaintiff seeks to represent all similar variable universal life policyholders and seeks damages on behalf of all such policyholders.

We are vigorously defending each of these matters.

We are subject to regular reviews and inspections by state and federal regulatory authorities. State insurance examiners - or independent audit firms engaged by such examiners - may, from time to time, conduct examinations or investigations into industry practices and into customer complaints. A regulatory violation discovered during a review, inspection, or investigation could result in a wide range of remedies that could include the imposition of sanctions against us or our employees, which could have a material adverse effect on our financial statements. The Missouri Department of Insurance most recently completed an examination based upon our statutory financial statements for the year ended December 31, 2014 for Kansas City Life, Sunset Life, and Old American. No recommendations or financial adjustments were required as a result of that examination. The Ohio Department of Insurance most recently completed an examination of Grange Life for the year ended December 31, 2014. A periodic examination by the Missouri Department of Insurance and the Ohio Department of Insurance based upon the year ended December 31, 2019 began during the first quarter of 2020.

The life insurance industry has been the subject of significant regulatory and legal activities regarding the use of the U.S. Social Security Administration's Death Master File ("Death Master File") in the claims process. Certain states have proposed, and many other states are considering, new legislation and regulations related to unclaimed life insurance benefits and the use of the Death Master File in the claims process. Based on our analysis to date, we believe that we have adequately reserved for contingencies

from a change in statute or regulation. Ongoing regulatory developments and other future requirements related to this matter may result in additional payments or costs that could be significant and could have a material adverse effect on our financial statements.

Guarantees and Indemnifications

We are subject to various indemnification obligations issued in conjunction with certain transactions, primarily assumption reinsurance agreements, stock purchase agreements, mortgage servicing agreements, tax credit assignment agreements, construction and lease guarantees, and borrowing agreements whose terms range in duration and often are not explicitly defined. Generally, a maximum obligation is not explicitly stated. Therefore, the overall maximum amount of the obligation under the indemnifications cannot be reasonably estimated. We are unable to estimate with certainty the ultimate legal and financial liability with respect to these indemnifications. We believe that the likelihood is remote that material payments would be required under such indemnifications and, therefore, such indemnifications would not result in a material adverse effect on our financial position or financial statements.

22. Subsequent Events

We evaluated events that occurred subsequent to December 31, 2019 through March 12, 2020, the date the consolidated financial statements were issued and have identified the following subsequent event.

On January 27, 2020, the Kansas City Life Board of Directors declared a quarterly dividend of $0.27 per share, paid on February 12, 2020 to stockholders of record on February 6, 2020.

There have been no other subsequent events that occurred during such period that require disclosure in, or adjustment to, the consolidated financial statements as of and for the year ended December 31, 2019.

Independent Auditor's Report

The Audit Committee and Stockholders
Kansas City Life Insurance Company

We have audited the accompanying consolidated financial statements of Kansas City Life Insurance Company and subsidiaries, which comprise the consolidated balance sheets as of December 31, 2019 and 2018, and the related consolidated statements of comprehensive income, stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Kansas City Life Insurance Company and its subsidiaries as of December 31, 2019 and 2018, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2019, in accordance with accounting principles generally accepted in the United States of America.

/s/ BKD, LLP

Kansas City, Missouri
March 12, 2020

Management's Discussion and Analysis of Financial Condition and Results of Operations

Amounts are stated in thousands, except share data, or as otherwise noted.

Management's Discussion and Analysis of Financial Condition and Results of Operations provides, in narrative form, the perspective of the management of Kansas City Life Insurance Company on its financial condition, results of operations, liquidity, and certain other factors that may affect its future results. The terms "the Company," "we," "us," and "our" are used to refer to Kansas City Life Insurance Company and its subsidiaries. Kansas City Life Insurance Company (Kansas City Life) is the parent company. Sunset Life Insurance Company of America (Sunset Life), Old American Insurance Company (Old American), and Grange Life Insurance Company (Grange Life) are wholly-owned insurance subsidiaries. We also have non-insurance subsidiaries that individually and collectively are not material. This discussion should be read in conjunction with the consolidated financial statements and accompanying notes included in this document.

Overview

Our profitability depends on many factors, which include but are not limited to:

- The sale of traditional and interest sensitive life, annuity, and accident and health products;
- The rate of mortality, lapse, and surrender of future policy benefits and policyholder account balances;
- The rate of morbidity, disability, and incurrence of other policyholder benefits;
- Interest rates credited to policyholders;
- The availability of reinsurance opportunities and the effectiveness of reinsurance programs;
- The amount of investment assets under management;
- The ability to maximize investment returns and manage risks such as interest rate risk, credit risk, and equity risk;
- Timely and cost-effective access to liquidity;
- Management of distribution costs and operating expenses;
- Management of the operations of our affiliates and the management of blocks of business acquired through reinsurance assumption transactions; and
- The ability to integrate acquisitions and to achieve anticipated operating efficiencies.

General economic conditions may affect future results. Financial market volatility can significantly impact our investments, revenues, and policyholder benefits. The sustained low interest rate environment and volatile equity markets have presented significant challenges to the financial markets as a whole and specifically to companies invested in fixed maturity securities and other fixed income investments. These conditions may persist into the future, affecting our financial position and financial statements.

Statement on Forward-Looking Information

This report reviews the consolidated financial condition and results of operations of Kansas City Life Insurance Company. Historical information is presented and discussed. Where appropriate, factors that may affect future financial performance are also identified and discussed. Certain statements made in this report include "forward-looking statements." Forward-looking statements include any statement that may predict, forecast, indicate or imply future results, performance, or achievements rather than historical facts and may contain words like "believe," "expect," "estimate," "project," "forecast," "anticipate," "plan," "will," "shall," and other words, phrases, or expressions with similar meaning.

Forward-looking statements are subject to known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those contemplated by the forward-looking statements. Factors that could cause future results to differ materially from expected results include, but are not limited to:

- Changes in general economic conditions, including the performance of financial markets and interest rates;
- Increasing competition and changes in consumer behavior, which may affect our ability to sell our products and retain business;
- Increasing competition in the recruitment and retention of new general agents and agents;
- Customer and agent response to new products, distribution channels, and marketing initiatives;
- Fluctuations in experience regarding current mortality, morbidity, persistency, and interest rates relative to expected amounts used in pricing our products;
- Changes in assumptions related to DAC, VOBA, and DRL;
- Regulatory, accounting, or tax changes that may affect the cost of, or the demand for, our products or services;
- Unanticipated changes in industry trends and ratings assigned by nationally recognized rating organizations;
- The ability to integrate acquisitions and to achieve anticipated operating efficiencies and the ability to preserve goodwill that results from acquisitions; and
- Results of litigation we may be involved in.

No assurances can be given that such statements will prove to be correct. Given these risks and uncertainties, investors should not place undue reliance on forward-looking statements as a prediction of actual results.

Consolidated Results of Operations

Summary of Results

We earned net income of $24.4 million in 2019 compared to $15.7 million in 2018. Net income per share was $2.52 in 2019 versus $1.62 in 2018. Contributing to the higher income in 2019 were increases in insurance revenues and investment revenues and a decrease in the amortization of deferred acquisition costs. Partially offsetting these items were increases in policyholder benefits, interest credited to policyholder account balances, and operating expenses. Additional information on these items is presented below.

The following table presents condensed consolidated results of operations for the years ended December 31.

	2019	2018	% Change
Revenues:			
Insurance and other revenues	$ 355,211	$ 316,877	12 %
Net investment income	148,349	141,315	5 %
Net investment gains	9,133	2,840	222 %
Benefits and expenses:			
Policyholder benefits and interest credited to policyholder account balances	336,141	301,510	11 %
Amortization of deferred acquisition costs	35,948	40,616	(11)%
Operating expenses	111,154	101,720	9 %
Income tax expense	5,023	1,514	232 %
Net income	$ 24,427	$ 15,672	56 %

The Company acquired Grange Life on October 1, 2018. Grange Life is domiciled in the state of Ohio and is licensed in 15 states to sell traditional life insurance, universal life products, and fixed annuities. The acquisition of Grange Life has increased our existing block of business and has expanded our insurance sales through access to a wider distribution network of independent agents. Grange Life is included in the Individual Insurance segment. The results of Grange Life operations are included in our Consolidated Statements of Comprehensive Income for the year ended December 31, 2019 and for the fourth quarter of 2018.

Insurance Revenues

Insurance revenues consist of premiums, net of reinsurance, from the sale of traditional individual and group life insurance products, immediate annuities, and accident and health products, as well as contract charges from interest sensitive and deposit-type products. Insurance revenues are impacted by the level of new sales, the type of products sold, the persistency of policies, general economic conditions, and competitive forces.

The following table presents gross premiums on new and renewal business, less reinsurance ceded, for the years ended December 31. New premiums are also detailed by product.

	2019	2018	% Change
New premiums:			
Traditional life insurance	$ 26,963	$ 22,584	19 %
Immediate annuities	29,778	27,142	10 %
Group life insurance	2,853	2,865	— %
Group accident and health insurance	10,633	11,545	(8)%
Total new premiums	70,227	64,136	9 %
Renewal premiums	260,517	199,563	31 %
Total premiums	330,744	263,699	25 %
Reinsurance ceded	(107,517)	(70,106)	53 %
Net premiums	$ 223,227	$ 193,593	15 %

Consolidated total premiums increased $67.0 million or 25% in 2019 compared to 2018, as new premiums increased $6.1 million or 9% and renewal premiums increased $60.9 million or 31%. The increase in both new and renewal premiums largely resulted from the addition of Grange Life's portfolio of traditional life insurance which contributed $5.3 million of new premium and $72.4 million of renewal premium during 2019. As Grange Life was purchased on October 1, 2018, its portfolio contributed $2.4 million of new premium and $17.5 million of renewal premium in the fourth quarter 2018. Excluding Grange Life, new premiums increased $3.2 million or 5%, reflecting a $2.6 million or 10% increase in new immediate annuity premiums and a $1.4 million or 7% increase in new traditional life premiums. These were partially offset by a $0.9 million or 8% decrease in new group accident and health premiums, primarily from the dental line. Immediate annuity receipts can have sizeable fluctuations, as receipts from policyholders largely result from one-time premiums. Excluding Grange Life, renewal premiums increased $5.9 million or 3%. The largest factor in this increase was a $3.2 million or 3% increase in renewal traditional life insurance premiums, largely reflecting continued sales growth over the past several years from Old American. In addition, renewal group accident and health premiums increased $1.7 million or 4%, largely due to increases in the disability and dental lines, and renewal group life premiums increased $1.1 million or 8%.

Reinsurance ceded premiums increased $37.4 million or 53% in 2019 compared to one year earlier. This increase was primarily due to the addition of the Grange Life portfolio. Excluding the Grange Life portfolio, reinsurance ceded premiums increased $2.0 million or 3%.

Deposits related to interest sensitive life (universal life, indexed universal life, and variable universal life), fixed annuity contracts, and variable annuities are not recorded as revenue. Revenues from such contracts consist of amounts assessed on policyholder account balances for mortality, policy administration, and surrender charges, and are recognized as contract charges in the Consolidated Statements of Comprehensive Income. The following table provides detail by new and renewal deposits for the years ended December 31. New deposits are also detailed by product.

	2019	2018	% Change
New deposits:			
Interest sensitive life	$ 13,411	$ 16,253	(17)%
Fixed annuities	47,461	47,924	(1)%
Variable annuities	10,078	13,244	(24)%
Total new deposits	70,950	77,421	(8)%
Renewal deposits	152,108	139,923	9 %
Total deposits	$ 223,058	$ 217,344	3 %

General economic conditions and interest rates available in the marketplace can influence new deposits on interest sensitive products. In addition, fluctuations in the equity markets can influence the variable life and annuity products. Generally, low interest rate environments present significant challenges to products such as these, and potential sizeable fluctuations in new sales can result between periods.

Total new deposits decreased $6.5 million or 8% in 2019 compared to 2018. This reflected a $3.2 million or 24% decline in new variable annuity deposits. Also, new interest sensitive deposits decreased $2.8 million or 17%, largely from the indexed universal life product. Total renewal deposits increased $12.2 million or 9% in 2019 versus the prior year. Renewal interest sensitive life deposits increased $13.7 million or 12% while renewal variable annuity deposits decreased $1.7 million or 17%. The results for renewal interest sensitive life deposits included a $9.1 million or 11% increase in renewal universal life deposits and a $5.9 million or 89% increase in renewal indexed universal life deposits that were partially offset by a $1.3 million or 6% decrease in renewal variable universal life deposits. The Grange Life portfolio contributed $16.6 million in renewal universal life deposits during 2019 and $4.5 million in the fourth quarter of 2018. Excluding Grange life, renewal universal life deposits decreased $3.0 million or 4% in 2019 compared to 2018.

Contract charges result from charges and fees on interest-sensitive and deposit-type products. Contract charges consist of cost of insurance, expense loads, the amortization of unearned revenues, and surrender charges assessed on policyholder account balance withdrawals. We maintain both open blocks and closed blocks of business. The closed blocks of business reflect products and entities that have been purchased and for which we are not actively pursuing marketing efforts to generate new sales. We continue to service these policies to support customers and to meet long-term profit objectives as these blocks of business decline over time. Contract charges are also potentially impacted by unlocking adjustments, as discussed below.

Total contract charges increased $9.0 million or 8% in 2019 compared to the prior year. This increase reflected the addition of the Grange Life portfolio. The Grange Life interest sensitive block of business is considered a closed block. Contract charges on open blocks increased $0.6 million or 1% and contract charges on closed blocks increased $8.4 million or 15% in 2019 compared

to one year earlier. The increase in contract charges from open blocks was largely from increased cost of insurance and expense loads. The increase in contract charges from closed blocks primarily resulted from the addition of the Grange Life portfolio. Excluding the Grange Life portfolio, contract charges from closed blocks decreased $2.4 million or 6%, reflecting the runoff of the business. Total contract charges on closed blocks equaled 43% of total consolidated contract charges during 2019, up from 39% in 2018.

Investment Revenues
Gross investment income increased $7.2 million or 5% in 2019 compared to one year earlier. This improvement resulted from higher average invested assets, primarily from the addition of the Grange Life portfolio of investments. Excluding Grange Life, gross investment income decreased $4.5 million or 3% compared to the prior year. This decline reflected lower overall yields earned and available on certain investments.

Fixed maturity securities provide a majority of our investment income. Fixed maturity securities totaled 76% of our investments at December 31, 2019 compared to 73% at December 31, 2018. Income from these investments increased $8.3 million or 8% in 2019 compared to 2018. This improvement was due to higher average investments, primarily from the addition of the Grange Life portfolio.

Investment income from commercial mortgage loans declined $1.0 million or 3% in 2019 compared to 2018. This decline reflected lower average investments compared to the prior year. Partially offsetting this was an increase in prepayment fees compared to one year earlier.

Investment income from real estate decreased $0.8 million or 4% in 2019 versus the prior year. Investment properties sold during 2018 lowered average portfolio balances during 2019, resulting in lower real estate income in 2019 compared to 2018.

We recorded net realized investment gains of $9.1 million in 2019 compared to net investment gains of $2.8 million in 2018, an increase of $6.3 million year-over-year. The largest factor in the increase in 2019 was the change in fair value of derivative instruments, which resulted in a gain of $3.3 million in 2019 compared to a $1.2 million loss in 2018. In addition, the change in fair value of equity securities resulted in a gain of $0.8 million in 2019 compared to a $0.7 million loss in 2018. Also, investment securities sales and calls generated a net gain of $2.7 million in 2019 compared to a net loss of $0.4 million in 2018. Partially offsetting these improvements, sales of real estate generated net gains of $2.6 million in 2019 compared to net gains of $4.8 million in 2018.

Policyholder Benefits
Policyholder benefits, net of reinsurance, consist of death benefits, immediate annuity benefits, accident and health benefits, surrenders, other benefits, and the associated increase or decrease in reserves for future policy benefits and policyholder account balances. The largest component of policyholder benefits was death benefits for the periods presented. Death benefits reflect mortality results, after consideration of the impact of reinsurance.

Policyholder benefits increased $30.4 million or 13% in 2019 compared to 2018. This increase was primarily attributable to the acquisition of Grange Life. Included in the results for Grange Life were refinements of the valuation models used. These refinements decreased benefit and contract reserves in the fourth quarter of 2019. Excluding Grange Life, policyholder benefits increased $6.0 million or 3% compared to the prior year, largely resulting from an increase in benefit and contract reserves. The increase in benefit and contract reserves reflected changes in the fair value of the embedded derivative of the indexed universal life portfolio. In addition, changes in the fair value of the GMWB rider increased benefit and contract reserves in 2019 compared to the prior year, largely due to lower interest rates. Partially offsetting these, death benefits, net of reinsurance, excluding Grange Life decreased compared to the prior year.

Amortization of DAC
The amortization of DAC decreased $4.7 million or 11% in 2019 compared to the prior year. This decline reflected improved investment performance in the separate accounts and decreases in unlocking and refinements in estimates compared to one year earlier. In addition, the DAC for certain blocks of business became fully amortized in 2018 and thus did not contribute to amortization in 2019. The impact of unlocking and refinements in estimates resulted in a $1.2 million reduction in the amortization of DAC in 2019 compared to 2018. DAC unlocking adjustments and refinements in estimates decreased DAC amortization $0.4 million in 2019 compared to unlocking adjustments and refinements in estimates that increased DAC amortization $0.8 million in 2018. The unlocking in 2019 primarily resulted from unlocking surrender rates and reinsurance as well as refinements of expense loads. These were partially offset by interest rate fluctuations. The unlocking in 2018 largely resulted from interest rate fluctuations.

Operating Expenses
Operating expenses consist of incurred commission expense from the sale of insurance products, net of the deferral of certain commissions and certain expenses directly associated with the successful acquisition of new business, expenses from our operations, the amortization of VOBA and intangibles, and other expenses. Operating expenses increased $9.4 million or 9% in 2019 compared to one year earlier. Excluding Grange Life, operating expenses increased $5.2 million or 5% compared to the prior year. This increase was largely from higher compensation costs and agent-related expenses.

Income Taxes
We recorded an income tax expense of $5.0 million or 17% of income before tax in 2019. We recorded an income tax expense of $1.5 million or 9% of income before tax in 2018. The increase in the effective tax rate in 2019 versus 2018 was due to permanent differences and a decline in tax credits from affordable housing investments.

The effective income tax rate was lower than the prevailing corporate federal income tax rate of 21% in 2019 and 2018 due to permanent differences, including the dividends-received deduction, and tax credits from affordable housing investments. For additional information, please see Note 12 - Income Taxes.

Analysis of Investments

This analysis of investments should be read in conjunction with Note 4 included in this document.

The following table provides asset class detail of the investment portfolio at December 31.

	2019	% of Total	2018	% of Total
Fixed maturity securities	$ 2,951,137	76%	$ 2,704,079	73%
Equity securities	11,272	—%	14,424	1%
Mortgage loans	577,699	15%	639,559	17%
Real estate	183,016	5%	186,994	5%
Policy loans	87,499	2%	88,066	2%
Short-term investments	75,426	2%	58,712	2%
Other investments	9,156	—	5,355	—
Total	$ 3,895,205	100%	$ 3,697,189	100%

Fixed maturity securities were the largest component of our total investments at December 31, 2019 and December 31, 2018. The largest categories of fixed maturity securities at December 31, 2019 consisted of 77% in corporate securities, 9% in municipal securities, and 7% in U.S. Treasury securities and obligations of the U.S. Government.

We use actual or equivalent Standard & Poor's ratings to determine the investment grading of fixed maturity securities. Our fixed maturity securities that were rated investment grade were 98% at December 31, 2019 and December 31, 2018.

The fair value of fixed maturity securities with unrealized losses was $147.8 million at December 31, 2019, compared with $1.3 billion one year earlier. This decrease primarily reflected falling interest rates and tighter corporate bond spreads during 2019. At December 31, 2019, 99% of security investments with an unrealized loss were investment grade and accounted for 100% of the total unrealized losses. At December 31, 2018, 99% of securities with an unrealized loss were investment grade and accounted for 95% of the total unrealized losses.

At December 31, 2019, we had $177.2 million in gross unrealized gains on fixed maturity securities that offset $3.0 million in gross unrealized losses. At December 31, 2018, we had $59.0 million in gross unrealized gains on fixed maturity and equity securities that offset $48.8 million in gross unrealized losses. At December 31, 2019, 95% of the fixed maturity securities portfolio had unrealized gains, up from 52% at December 31, 2018. We had a decrease in gross unrealized losses in most categories from year-end 2018 to year-end 2019 due to changes in interest rates and market spreads during 2019. Gross unrealized losses on fixed maturity securities for less than 12 months totaled $0.9 million and accounted for 66% of the security values in a gross unrealized loss position at December 31, 2019. Gross unrealized losses on fixed maturity security investments of 12 months or longer decreased from $39.0 million at December 31, 2018 to $2.0 million at December 31, 2019.

Residential mortgage-backed securities, commercial mortgage-backed securities, and asset-backed securities that were rated below investment grade were 8% at December 31, 2019 and 13% at December 31, 2018 of the total mortgage-backed and asset-backed securities. This decrease was primarily due to acquisitions in the investment grade portion of the portfolio during 2019 which decreased the below investment grade percentage of the total.

We have written down certain investments in previous periods. Fixed maturity securities written down and still owned at December 31, 2019 had a fair value of $20.5 million and net unrealized gains of $1.8 million, compared to the December 31, 2018 fair value of $26.4 million and net unrealized gains of $1.9 million. Additional information identified or further deteriorations could result in impairments in future periods.

We evaluated the current status of all investments previously written down to determine whether we believe that these investments remained credit-impaired to the extent previously recorded. Our evaluation process is similar to our impairment evaluation process. If evidence exists that we will receive the contractual cash flows from securities previously written down, the accretion of income is adjusted. We did not change our evaluation of any investments under this process during 2019 or 2018.

Investments in mortgage loans totaled $577.7 million at December 31, 2019, down from $639.6 million at December 31, 2018. The commercial mortgage loan portfolio decreased $61.9 million during 2019, as regularly scheduled payments and the volume of prepaid loans exceeded new loans. Mortgage loan principal paydowns increased $11.5 million in 2019 compared to 2018, primarily due to a higher dollar volume of prepaid loans. Our mortgage loans are secured by commercial real estate. These loans are stated at the outstanding principal balance, adjusted for amortization of premium and accrual of discount, less an allowance

for loan losses. We believe this allowance is at a level adequate to absorb estimated credit losses and was $2.8 million at December 31, 2019 and $3.1 million at December 31, 2018. For additional information on our mortgage loan portfolio, please see Note 4.

Investments in real estate totaled $183.0 million at December 31, 2019 and $187.0 million at December 31, 2018. The decrease was largely due to the sale of two investment properties that resulted in a realized gain of $2.6 million before applicable income taxes.

Liquidity and Capital Resources

Liquidity

We meet liquidity requirements primarily through positive cash flows from operations. Management believes that the Company has sufficient sources of liquidity and capital resources to satisfy operational requirements and to finance expansion plans and strategic initiatives as they may occur. Primary sources of cash flow are premiums, other insurance considerations and deposits, receipts for policyholder accounts, investment sales and maturities, and investment income. In addition, we have credit facilities that are available for additional working capital needs or investment opportunities. The principal uses of cash are for the insurance operations, including the purchase of investments, payment of insurance benefits, operating expenses, policyholder dividends, withdrawals from policyholder accounts, and costs related to acquiring new business. In addition, we use cash for other purposes, including the payment of stockholder dividends and income taxes. There can be no assurance that we will continue to generate cash flows at or above current levels or that our ability to borrow under the current credit facilities will be maintained.

We perform cash flow testing and add various levels of stress testing to potential surrender and policy loan levels in order to assess current and near-term cash and liquidity needs. In the event of increased surrenders and other cash needs, we have several sources of cash flow available to meet our needs.

Net cash provided by operating activities was $0.1 million for the year ended December 31, 2019. The primary sources of cash from operating activities in 2019 were premium receipts and net investment income. The primary uses of cash from operating activities in 2019 were for the payment of policyholder benefits and operating expenses. Net cash used from investing activities was $23.7 million. The primary sources of cash were sales, maturities, calls, and principal paydowns of investments totaling $371.4 million. Offsetting these, investment purchases, including new mortgage loans and new policy loans, totaled $383.2 million. In addition, net purchases of short-term investments totaled $16.7 million. Net cash provided by financing activities was $6.1 million, primarily including $15.8 million of deposits, net of withdrawals, on policyholder account balances and $3.5 million of net transfers from separate accounts. Partially offsetting these was the payment of $10.5 million in stockholder dividends.

Capital Resources

We believe existing capital resources provide adequate support for the current level of business activities, as identified in the following table at December 31.

	2019	2018
Total assets, excluding separate accounts	$ 4,788,664	$ 4,597,752
Total stockholders' equity	810,731	691,706
Ratio of stockholders' equity to assets, excluding separate accounts	17%	15%

Stockholders' equity increased $119.0 million from year-end 2018. This increase largely reflected fluctuations in the fair value of investments that resulted from falling interest rates and tighter corporate bond spreads. Stockholders' equity per share, or book value, equaled $83.72 at year-end 2019, an increase from $71.43 at year-end 2018.

Net unrealized gains on available for sale securities, which are included as part of accumulated other comprehensive income (loss) and as a component of stockholders' equity (net of unrealized losses on investments, related taxes, policyholder account balances, future policy benefits, DAC, VOBA, and DRL), totaled $104.8 million at December 31, 2019, a $102.0 million increase from December 31, 2018.

Our statutory equity exceeds the minimum capital deemed necessary to support our insurance business, as determined by the risk-based capital calculations and guidelines established by the NAIC. We believe these statutory limitations impose no practical restrictions on future dividend payment plans. See further discussion in Note 20 - Statutory Information and Stockholder Dividends Restriction.

In January 2020, the Board of Directors authorized the purchase of up to one million of our shares on the open market through January 2021. No shares were purchased under this authorization during 2019 or 2018.

On January 27, 2020, the Board of Directors declared a quarterly dividend of $0.27 per share that was paid February 12, 2020 to stockholders of record at February 6, 2020.

Minimum Rate Guarantees

Our rate guarantees for those products with minimum crediting rate provisions are identified in the following table. The guaranteed minimum crediting rate has been reduced over time on new products being sold, consistent with the low interest rate environment. The actual interest rate credited to these products may be greater than the guaranteed rates, particularly for products having been sold more recently and within the lower guaranteed rate categories. Approximately 75% of total policyholder account balances were at the minimum guaranteed rate as of December 31, 2019 compared to 77% at December 31, 2018.

	December 31, 2019				
	Fixed Annuities	Universal Life	Variable Life and Annuities	Supplemental Contracts and Annuities Without Life Contingencies	Total
0% to 1%	$ 334,953	$ 52,925	$ 3,140	$ 2,802	$ 393,820
Greater than 1% to 3%	243,222	305,064	93,866	28,006	670,158
Greater than 3% to 4%	389,397	313,768	7,261	17,438	727,864
Greater than 4%	55,565	385,411	—	4,882	445,858
Total	$ 1,023,137	$ 1,057,168	$ 104,267	$ 53,128	$ 2,237,700

	December 31, 2018				
	Fixed Annuities	Universal Life	Variable Life and Annuities	Supplemental Contracts and Annuities Without Life Contingencies	Total
0% to 1%	$ 316,625	$ 40,061	$ 3,834	$ 4,919	$ 365,439
Greater than 1% to 3%	270,305	296,087	94,761	28,335	689,488
Greater than 3% to 4%	402,129	323,388	7,424	14,399	747,340
Greater than 4%	58,721	395,727	—	5,145	459,593
Total	$ 1,047,780	$ 1,055,263	$ 106,019	$ 52,798	$ 2,261,860

Fixed Annuity Contracts

Fixed annuities typically involve single-payment deposits that accumulate over time through interest credited, and these contracts also typically provide the right to make additional renewal deposits. The timing and magnitude of outgoing cash flows from these contracts is dependent upon many factors, primarily due to contract owner rights to surrender or annuitize the policy value during the term of the contract and benefit options that are provided upon death. We make estimates and projections of future cash flows on fixed annuities based upon the economic environment, ranges of future economic changes, and historical contract holder behavior.

The term of the contract is dependent upon the individual needs and decisions of contract owners up to and including the time of contractual maturity. The maturity of the contract is typically determined by a combination of the duration of ownership of the contract and the annuity owner's age. Deferred annuity contract owners with upcoming annuity maturities receive communication from us regarding the various maturity settlement options that are available in the contract. The communication can result in extension of the contract maturity date, surrender of the contract prior to maturity, or conversion of the contract to other contract or policy types. Conversions typically involve payment of the contract value over time and often with life contingencies.

The following table provides fixed annuity contract values within maturity date ranges. The values and date ranges provided below do not necessarily represent our expected outflow of funds from these contracts, as these cash flows may be significantly impacted by the needs and decisions of the contract owners.

	2019	% of Total	2018	% of Total
One year or less	$ 202,396	20%	$ 133,614	13%
Two years	52,551	5%	72,892	7%
Three years	63,005	6%	53,593	5%
Four years	45,622	4%	53,607	5%
Five years	48,327	5%	67,780	6%
Six years or more	611,236	60%	666,294	64%
Total	$ 1,023,137	100%	$ 1,047,780	100%

Fixed annuity contracts typically also contain provisions for charges to be paid by contract holders if the contract is surrendered within a fixed period of time after purchase. The surrender charge typically declines on an annual basis during an initial term of ten or fewer years. The magnitude of any surrender charge applicable to a contract is believed to impact policyholder behavior and the timing of future cash flows. The following table provides the policy values for fixed annuities by summary ranges of applicable surrender charges as of December 31, 2019 and 2018.

	2019	% of Total	2018	% of Total
None	$ 616,394	60%	$ 637,038	61%
Less than 5%	200,299	20%	211,080	20%
5% and greater	206,444	20%	199,662	19%
Total	$ 1,023,137	100%	$ 1,047,780	100%

Asset/Liability Management

Our asset/liability management programs and procedures involve the monitoring of asset and liability durations for various product lines, cash flow testing under various interest rate scenarios to evaluate the potential sensitivity of assets and liabilities to interest rate movements, and the continuous rebalancing of assets and liabilities with respect to yield, risk, and cash flow characteristics.

We believe our asset/liability management programs and procedures, along with certain product features, provide protection for us against the effects of changes in interest rates under various scenarios.

Cash flows and effective durations of the asset and liability portfolios are measured at points in time and are affected by changes in the level and term structure of interest rates, as well as changes in policyholder behavior. Further, durations are managed on an individual product level, and an aggregate portfolio basis. As a result, differences typically exist between the duration, cash flows, and yields of assets versus liabilities on an individual portfolio and aggregate basis. Our asset/liability management programs and procedures enable management to monitor the changes, which have varying correlations among certain portfolios, and to make adjustments to asset mix, liability crediting rates, and product terms so as to manage risk and profitability over time.

We aggregate similar policyholder liabilities into portfolios and then match specific investments with these liability portfolios. In 2019 and 2018, all of our portfolios had investment yields near or in excess of crediting rates on matched liabilities. We monitor the risk to portfolio investment margins on an ongoing basis.

We perform cash flow scenario testing through models of our in force business. These models reflect specific product characteristics and include assumptions based on current and anticipated experience regarding the relationships between short-term and long-term interest rates (i.e., the slope of the yield curve), credit spreads, market liquidity, and other factors, including policyholder behavior in certain market conditions. In addition, these models include asset cash flow projections, reflecting interest payments, sinking fund payments, scheduled principal payments, and optional bond calls and prepayments.

The risk exists that our asset or liability portfolio performance may differ from forecasted results as a result of unforeseen economic circumstances, estimates or assumptions that prove incorrect, unanticipated policyholder behavior, or other factors. The result of such deviation of actual versus expected performance could include excess or insufficient liquidity in future periods. Excess liquidity, in turn, could result in reduced profitability on one or more product lines. Insufficient liquidity could result in the need

to generate liquidity through borrowing, asset sales, or other means. We believe that our asset/liability management programs will provide sufficient liquidity to enable us to fulfill our obligation to pay benefits under our various insurance and deposit contracts. On a historical basis, we have not needed to liquidate assets to ensure sufficient cash flows. We maintain borrowing lines on a secured and unsecured basis to provide additional liquidity, if needed.

Risk Factors

The operating results of life insurance companies have historically been subject to significant fluctuations. The factors which could affect our future results include, but are not limited to, general economic conditions and the known trends and uncertainties which are discussed more fully below.

Strategic and Operational Risks:

We operate in a mature and highly competitive industry, which could limit our ability to grow sales or maintain our position in the industry and negatively affect profitability.

Life insurance is a mature and highly competitive industry. We encounter significant competition in all lines of business from other insurance companies, many of which may have greater financial resources, a greater market share, a broader range of products, lower product prices, better name recognition, greater actual or perceived financial strength, higher claims-paying ratings, the ability to assume a greater level of risk, lower operating or financing costs, or lower profitability expectations.

In recent years, there has been substantial consolidation and convergence among companies in the financial services industry, resulting in increased competition from large, well-capitalized financial services firms. Furthermore, many of these larger competitors may have lower operating costs and an ability to absorb greater risk while maintaining their financial strength ratings, thereby allowing them to price their products more competitively.

Changes in demographics, particularly the aging of the population, and the decline in the number of agents in the industry, may affect the sales of life insurance products. Also, as technology evolves, customers and agents may be able to compare products of any particular company with any other, which could lead to increased competition as well as changes in agent or customer behavior, including persistency, that differs from past behavior.

We may be unable to attract and retain agencies and agents.

We sell insurance and annuity products through independent agents and agencies. These agencies and agents are not captive and may sell products of our competitors. Sales and our financial results could be adversely affected if we are unsuccessful in attracting agencies and agents. Our ability to retain agents and agencies is dependent upon a number of factors, including: our ability to maintain a competitive compensation system while also offering products with competitive features and benefits for policyholders; our ability to maintain a level of service and assistance that effectively supports the needs of agents and agencies; and our ability to approve and monitor sales and business practices of agents and agencies that are consistent with regulatory requirements and our expectations.

Our results may be negatively affected should actual experience differ from management's assumptions and estimates.

We make certain assumptions regarding mortality, persistency, expenses, interest rates, tax liability, business mix, policyholder behavior, and other factors appropriate for the type of business results we expect to experience in future periods. These assumptions are also used to estimate the amounts of DAC, VOBA, DRL, policy reserves and accruals, future earnings, and various components of our financial statements. These assumptions are used in the operations of our business in making decisions that are crucial to our success, including the pricing of products and expense structures relating to products. Our actual experience and changes in estimates are reflected in our financial statements. Our actual experience may vary from period to period and from established assumptions, potentially resulting in variability in the financial statements.

We establish and carry a reserve liability based on current estimates of how much will be needed to pay for future benefits and claims. The assumptions and estimates used in connection with establishing and carrying reserves are inherently uncertain and in some cases are mandated by regulators, irrespective of a company's actual experience. If actual experience is significantly different from assumptions or estimates or if regulators decide to increase or change regulations, current reserves may prove to be inadequate in relation to estimated future benefits and claims. As a result, a charge to earnings would be incurred in the quarter in which we increase reserves.

The calculations we use to estimate various components of our financial statements are complex and involve analyzing and interpreting large quantities of data. We employ various techniques for such calculations and from time to time will develop and implement more sophisticated systems and procedures to facilitate calculations and improve estimates. Accordingly, our financial results may be affected, positively or negatively, by actual results differing from assumptions, by changes in estimates, and by changes resulting from implementing new administrative systems and procedures.

Risk management policies and procedures may not be fully effective and could leave us exposed to unidentified or unanticipated risk, which could negatively affect business or result in losses.

We have devoted significant resources to develop risk management policies and procedures and will continue to do so in the future. However, the policies and procedures that we use to identify, monitor, and manage risks may not be fully effective. Many of the methods of managing risk and exposure are based upon the use of observed historical policyholder and market behavior or statistics based on historical models. As a result, these methods may not effectively or fully identify or evaluate the magnitude of existing or future exposure, which could be significantly greater than the historical measures or our evaluation indicate. Other risk management methods depend upon the evaluation of information regarding markets, agents, clients, catastrophe occurrence, or other matters that are publicly available or otherwise accessible. This information may not always be accurate, complete, up-to-date, or properly evaluated. Management of operational, legal, and regulatory risks requires policies and procedures to record properly and verify a large number of transactions and events, and these policies and procedures may not be fully effective. Additional risks and uncertainties not currently known or that we currently deem to be immaterial may adversely affect our business and/or our financial statements.

A rating downgrade could adversely affect our ability to compete and increase the number or value of policies surrendered.

Our financial strength rating, which is intended to measure our ability to meet policyholder obligations, may be an important consideration affecting public confidence in some of our products and, as a result, our competitiveness. A downgrade in our rating could adversely affect our ability to sell products, retain existing business, and compete for attractive acquisition opportunities. Rating organizations assign ratings based upon several factors. While most of the factors relate to the rated company, some of the factors relate to the views of the rating organization, general economic conditions, and circumstances outside the rated company's control. We cannot predict what actions rating organizations may take or what actions we may be required to take in response to the actions of the rating organizations.

Projected operating results for acquisitions may not be achieved and the ability to integrate acquisitions and achieve anticipated operating efficiencies may not be successful.

Actual operating results may vary significantly from projected results of acquired companies and blocks of business. Projected operating results are estimates of future results based on assumptions made by management at the time of the acquisition. General economic, political, and market conditions may have a material impact on the reliability of these projections. We may not be able to realize the projected value of acquired assets or we may underestimate the value of the liabilities assumed. Our financial position and results of operations could be negatively impacted if the projections are materially inaccurate. This could result in the write-down of acquired assets, impairment to goodwill, impairment to intangible assets, increases to assumed liabilities, and other negative impacts to our financial statements.

We may not achieve efficient operational integration of acquisitions or may not achieve operating efficiencies that were projected at the time of acquisition. Failure to achieve either or both of these could result in increased expenses and negatively impact our financial position and results of operations.

Reinsurance Risks:

Our reinsurers could fail to meet assumed obligations or be subject to adverse developments that could impact us.

We follow the insurance practice of reinsuring a portion of the risks under the policies we issue, known as ceding. We cede significant amounts of insurance to other insurance companies through reinsurance. This reinsurance makes the assuming reinsurer liable to us for the reinsured portion of the risk. However, reinsurance does not discharge us from our primary obligation to pay policyholders for losses insured under the policies that are issued. Therefore, we are subject to the credit risk of our reinsurers. The failure of one or more of our reinsurers could negatively impact our financial position or financial statements.

Our ability to compete is dependent on the availability of reinsurance, cost of reinsurance, or other substitute capital market solutions.

The premium rates we charge are based, in part, on the assumption that reinsurance will be available at a certain cost. Under certain reinsurance agreements, the reinsurer may increase the rate it charges us for the reinsurance. Therefore, if the cost of reinsurance were to increase for existing business, if reinsurance were to become unavailable for new business, or if alternatives to reinsurance were not available, we may be exposed to reduced profitability and cash flow strain, or may not be able to sell or price new business at competitive rates.

In recent years, the number of life reinsurers has decreased as the reinsurance industry has consolidated. The decreased number of participants in the life reinsurance market results in increased concentration risk for insurers. If the reinsurance market further contracts, our ability to continue to offer our products on terms favorable to us could be adversely impacted.

Investment Risks:

Our investments are subject to market and credit risks.

We hold a diversified portfolio of investments that primarily includes fixed maturity securities, mortgage loans, and real estate. Each of these investments is subject, in varying degree, to market risks that can affect their return and their fair value.

Our invested assets, primarily including fixed maturity securities, are subject to customary risks of credit defaults and changes in fair value. The value of our mortgage loan and real estate portfolios also depend on the financial condition of the borrowers and tenants occupying the properties which we have financed. Factors that may affect the overall default rate on and fair value of our invested assets include interest rate levels and changes, availability and cost of liquidity, financial market performance, and general economic conditions, as well as particular circumstances affecting the businesses of individual borrowers and tenants.

Our investments are exposed to varying degrees of credit risk. Credit risk is the risk that the value of the investment may decline due to deterioration in the financial strength of the issuer and that the timely or ultimate payment of principal or interest might not occur. A default by an issuer usually involves some loss of principal to the investor. Losses can be mitigated by timely sales of affected securities or by active involvement in a restructuring process. However, there can be no assurance that the efforts of an investor will lead to favorable outcomes in a bankruptcy or restructuring.

We attempt to mitigate credit risk by diversifying the investment portfolio across a broad range of issuers, investment sectors and security types, and by limiting the amount invested in any particular entity. We also invest in securities collateralized or supported by physical assets, guarantees by insurers or other providers of financial strength, and other sources of secondary or contingent payment. These securities can improve the likelihood of payment according to contractual terms and increase recovery amounts in the case of issuer default, bankruptcy, or restructuring.

Interest rate fluctuations could negatively affect our spread income or otherwise impact our business.

Interest rate fluctuations or sustained low interest rate environments could negatively affect earnings because the profitability of certain products depends in part on interest rate spreads. These products include fixed annuities, single premium immediate annuities, interest-sensitive whole life, universal life, and the fixed portion of variable universal life insurance and variable annuity business. In addition, we offer riders, including guaranteed minimum withdrawal benefits and guaranteed minimum death benefits. Changes in interest rates or sustained low interest rate environments may reduce both the profitability and the return on invested capital.

Some of our products, principally fixed annuities, interest-sensitive whole life, universal life, and the fixed portion of variable universal life insurance and variable annuity business, have interest rate guarantees that expose us to the risk that changes in interest rates will reduce the spread, or the difference between the amounts we are required to credit to policyholder contracts and the amounts earned on general account investments. Because many of our policies have guaranteed minimum interest or crediting rates, spreads could decrease and potentially become negative. Declines in spread or instances where the returns on the general account investments are not sufficient to support the interest rate guarantees on these products could have a material adverse effect on our financial statements. In addition, in periods of increasing interest rates, we may not be able to replace the assets in the general account with higher yielding assets needed to fund the higher crediting rates that may be necessary to keep interest sensitive products competitive. Therefore, we may have to accept a lower spread and profitability or face a decline in sales, loss of existing contracts from non-renewed maturities, early withdrawals, or surrenders. In periods of declining interest rates, we may have to reinvest the cash received from interest or return of principal on investments in lower yielding instruments then available. Moreover, issuers of fixed income investment securities and borrowers related to our commercial mortgage investments may prepay these obligations in order to borrow at lower market rates, which may increase our risk to have to reinvest at lower rates. Increases in interest rates may cause increased surrenders of insurance products. In periods of increasing interest rates, policy loans and surrenders and withdrawals of life insurance policies and annuity contracts may increase, as policyholders seek to buy products with higher returns. These outflows may require investment assets to be sold at a time when the prices of those assets are lower because of the increase in market interest rates, which may result in realized investment losses. Further, higher interest rates may result in significant unrealized losses on investments. These net unrealized losses could have a negative effect on stockholders' equity. This could negatively impact the ability to pay policyholder and stockholder dividends. In addition, higher interest rates may reduce the fair value of policyholders' separate account investments, which may reduce our revenues from asset-based management fees.

While we develop and maintain asset/liability management programs and procedures designed to identify and mitigate the effect on spread income in rising or falling interest rate environments, no assurance can be given that changes in interest rates will not affect such spreads or that our evaluation of fluctuations will be correct or allow for timely modifications. Additionally, our asset/liability management programs incorporate assumptions about the relationship between short-term and long-term interest rates (i.e., the slope of the yield curve) and relationships between risk-adjusted and risk-free interest rates, market liquidity, and

policyholder behavior in periods of changing interest rates and other factors. The effectiveness of our asset/liability management programs and procedures may be negatively affected whenever actual results differ from these assumptions.

Prolonged periods of low interest rates can affect policyholder behavior and negatively impact earnings.

As interest rates decline, policyholders may become more likely to extend the retention or duration of fixed-rate products previously purchased and may seek alternatives to fixed-rate products for new purchases. Policyholders may add premiums or deposits to existing policies or contracts with terms upon which we are no longer offering on new products. Many of the products sold in earlier periods may have minimum guaranteed interest crediting rates or other features that are greater than those being offered in the current low interest rate environment. Additionally, cash flows from existing investments, including interest and principal payments, may be reinvested at lower interest rates relative to prior periods. As a result, a prolonged low interest rate environment can result in significant changes to cash flows, lower investment income, compressed product spreads, reduced earnings, and statutory surplus strain. In addition, we may change our risk profiles in regards to selecting investment opportunities to reduce the impact on earnings.

The change from a low interest rate environment to an environment of increasing interest rates can affect policyholder behavior and negatively impact earnings.

The change from a period of low interest rates to a period of significantly higher and increasing interest rates may cause policyholders to surrender policies or to make early withdrawals in order to maximize their returns. Accordingly, we may become more susceptible to increased surrenders and withdrawals on policies, as surrender charges and other features that help protect us from increased or unexpected policyholder withdrawals or lapses are ineffective. Increases in policyholder surrenders, withdrawals, or lapses could negatively affect our operating results and liquidity.

Our valuation of fixed maturity and equity securities include estimations and assumptions and could result in changes to investment valuations that may have a material adverse effect on our financial statements.

Fixed maturity securities, equity securities, and short-term investments are reported at fair value in the Consolidated Balance Sheets and represent the majority of total cash and invested assets. During periods of market disruption, including periods of significantly rising or high interest rates, rapidly widening credit spreads or illiquidity, it may be difficult to value certain securities if trading becomes less frequent and/or market data becomes less observable. There may be certain asset classes that were previously acquired and valued in active markets with significant observable data that will be valued in illiquid markets with little observable data. As such, valuations may include inputs and assumptions that are less observable or require greater estimation as well as valuation methods which are more complex or require increased estimation, thereby resulting in values which may have greater variance from the value at which the investments may or could be ultimately sold. Further, rapidly changing credit and equity market conditions could materially impact the valuation of securities as reported in the consolidated financial statements, and the period to period changes in value could vary significantly. Decreases in value could have a material adverse effect on our financial statements.

Equity market volatility could negatively impact our profitability.

We are exposed to equity market volatility in the following ways:

- We have exposure to equity price risk through investments. However, this exposure is limited due to the relatively small equity portfolio held during the periods presented.
- We earn investment management fees and mortality and expense fee income based upon the value of assets held in our separate accounts from both direct and reinsurance arrangements. Revenues from these sources fluctuate with changes in the fair value of the separate accounts.
- Volatility in equity markets may discourage customers from purchasing variable universal life and annuity products that have returns linked to the performance of the equity markets. This volatility may also result in existing customers withdrawing cash values or reducing investments in those products.
- We have equity price risk to the extent that it may affect the liability recognized under guaranteed minimum death benefits and guaranteed minimum withdrawal benefit provisions of the variable contracts. Periods of significant and sustained downturns in equity markets, increased equity volatility, or reduced interest rates could result in an increase in the valuation of the future policy benefit or policyholder account balance liabilities associated with such products, which ultimately could result in a reduction to net income.
- The amortization of DAC relating to variable products can fluctuate with changes in the performance of the underlying separate accounts due to the impact on estimated gross profits.
- The Company has a defined benefit pension plan that is frozen. Declining financial markets could have several impacts on this plan including but not limited to: a decrease in the plan's investment values; additional pension expense; a reduction in comprehensive income; and an increase in contributions. In addition, the funding requirements of our pension plan

are sensitive to interest rate changes. Should interest rates decrease, plan liabilities may increase. Should interest rates increase, plan assets may decrease.

The determination of the amount of realized and unrealized impairments and allowances established on our investments is highly subjective and could materially impact our financial position or financial statements.

The determination of the amount of impairments and allowances varies by investment type and is based upon our evaluation and assessment of known and inherent risks associated with the respective asset class. Such evaluations and assessments are revised as conditions change and new information becomes available. There can be no assurance that the assumptions, methodologies, and judgments employed in these evaluations and assessments will be accurate or sufficient in later periods. As a result, additional impairments may need to be realized or allowances provided in future periods. Further, historical trends may not be indicative of future impairments or allowances.

Additionally, we consider a wide range of factors about security issuers and we use our best judgment in evaluating the cause of the decline in the fair value of the security and in assessing the prospects for recovery. Inherent in management's evaluation of the security are assumptions and estimates about the operations of the issuer, its future earnings potential, and the ability and timeliness of the security's recovery in fair value.

We could be forced to sell investments at a loss to meet policyholder withdrawals.

Many of our products allow policy and contract holders to withdraw their funds under defined circumstances. We manage liabilities and attempt to align the investment portfolio so as to provide and maintain sufficient liquidity to support anticipated withdrawal demands, contract benefits, and maturities. While we own a significant amount of liquid assets, a certain portion of our investment assets are relatively illiquid. If we experience unanticipated withdrawal or surrender activity, we could exhaust other sources of liquidity and be forced to liquidate assets, possibly on unfavorable terms. If we are forced to dispose of assets on unfavorable terms, it could have an adverse effect on our financial statements and financial condition.

Regulatory Risks:

Insurance companies are highly regulated and are subject to numerous legal restrictions and regulations.

We are subject to government regulation in each of the states in which we conduct business. Such regulation is vested in state agencies having broad administrative and, in some instances, discretionary power dealing with many aspects of our business. This may include, among other things, premium rates and increases thereto, reserve requirements, marketing practices, advertising, privacy, policy forms, reinsurance reserve requirements, acquisitions, mergers, and capital adequacy. Government regulation of insurers is concerned primarily with the protection of policyholders and other customers rather than shareholders. Interpretations of regulations by regulators may change, and statutes, regulations, and interpretations may be applied with retroactive impact, particularly in areas such as accounting or reserve requirements.

We cannot predict whether or in what manner regulatory reforms will be enacted and, if so, whether the enacted reforms will positively or negatively affect the Company, or whether any effects will be material. The NAIC generally formulates and promulgates statutory-based insurance regulations. However, each state is independent and must separately enact these financial regulations and guidelines. As such, insurers follow the interpretations and legal approvals of their respective states of domicile.

Other types of regulation that could affect us include insurance company investment laws and regulations, state statutory accounting practices, state escheatment practices, anti-trust laws, minimum solvency requirements, state securities laws, federal privacy laws, insurable interest laws, federal money laundering laws, anti-terrorism laws, and federal income tax regulations. Further, because we own and operate real property, state, federal, and local environmental laws could affect us. We cannot predict what form any future changes in these or other areas of regulation affecting the insurance industry might take or what effect, if any, such proposals might have on us if enacted into law.

We are also subject to various government regulations at the federal level. As a result of economic and market conditions in recent years, the federal government has become increasingly more active in issuing and enforcing regulations. The implementation of these legislative or regulatory requirements may make it more expensive for us to conduct business, may have a material adverse effect on the overall business climate, and could materially affect the profitability of the results of operations and financial condition of financial institutions. We are uncertain as to all of the impacts that new legislation will have and cannot provide assurance that it will not adversely affect our financial statements.

New accounting rules or changes to existing accounting rules could negatively impact our financial results.

We are required to comply with GAAP, as promulgated by the FASB. GAAP is subject to constant review and change in an effort to address emerging accounting issues and develop interpretative accounting guidance on a continual basis. The implementation

of new accounting guidance could result in substantial costs and or changes in assumptions or estimates, which could negatively impact our financial statements. Accordingly, we can give no assurance that future changes to GAAP will not have a negative impact on us.

In addition, we are required to comply with statutory accounting principles (SAP). SAP and various components of SAP, such as statutory actuarial reserving methodology, are subject to constant review by the NAIC, NAIC task forces and committees, as well as state insurance departments to address emerging issues and otherwise improve or modify financial reporting. Various proposals are typically pending before committees and task forces of the NAIC. If enacted, some of these may negatively affect us. The NAIC also typically works to reform state regulation in various areas, including reforms relating to life insurance reserves and the accounting for such reserves. We cannot predict whether or in what manner reforms will be enacted and, if so, whether the enacted reforms will positively or negatively affect us. Although states generally defer to the interpretation of the insurance department of the state of domicile with regards to regulations and guidelines, neither the action of the domiciliary state nor action of the NAIC is binding on any other state. Accordingly, a state could choose to follow a different interpretation. We can give no assurance that future changes to SAP or components of SAP will not have a negative impact on us.

Catastrophic Event Risk:

We are exposed to the risks of climate change, natural disasters, pandemics, terrorism, or other acts that could adversely affect our operations.

While we have implemented risk management and contingency plans and taken preventive measures and other precautions, no predictions of specific scenarios can be made nor can assurance be given that there are not scenarios that could have an adverse effect on us. Climate change, a natural disaster, a pandemic, or an outbreak of an easily communicable disease could adversely affect the mortality or morbidity experience of us or our reinsurers. A pandemic could also have an adverse effect on lapses and surrenders of existing policies, as well as sales of new policies. In addition, a pandemic could result in large areas being subject to quarantine, with the result that economic activity slows or ceases. This could adversely affect the marketing or administration of our business. The possible macroeconomic effects of climate change, natural disasters, pandemics, or terrorism could also adversely affect our financial statements.

Information Technology Risk:

The failure of our cybersecurity controls, other information system security controls, or the controls of our third-party providers may result in the unauthorized disclosure of sensitive or confidential corporate or customer information. Such failures could damage our reputation and hinder our ability to conduct business. Further, our contingency planning and disaster recovery programs may be insufficient to address unanticipated events. In addition, our reputation could be damaged by inaccurate presentations made in social media.

As part of the normal course of business, we use computer systems to collect, process, and retain sensitive and confidential corporate and customer information. In addition, we use third-party vendors and cloud technology for storage, processing, and data support of certain activities. We rely on commercial technologies and third parties to maintain the security of that information. Our information systems are subject to computer viruses, malicious software code, and other unauthorized computer-related actions. Preventive actions taken by the Company to reduce the risk of cyber incidents and to protect our information may be insufficient to prevent cyber attacks or other security breaches. Any security breach involving the misappropriation, loss, or other unauthorized disclosure of confidential information could severely damage our reputation, expose us to an increase in the risk of litigation, disrupt our operations, cause incurrence of significant technical, legal, and operating expenses, or otherwise harm our business.

We are highly dependent on our ability to access our computer systems to perform the necessary business functions, such as processing premium payments, processing claim payments, administration of policy data, providing customer support, managing our investment portfolio, and conducting financial reporting and analysis. Events such as natural disasters, pandemics, blackouts, computer viruses, terrorist attacks, or cyber attacks could result in system failures or outages that may cause our computer systems to become inaccessible to our employees and customers for an extended period of time. Our disaster recovery program may be insufficient to deal with such an unanticipated event. This could result in an adverse impact to our ability to conduct business functions in a timely manner and could result in a failure to maintain the security and confidentiality of sensitive data, including personal information of customers. This could also result in damage to our ability to conduct business, damage to our reputation, result in substantial remediation costs, and potentially subject us to regulatory sanctions, legal claims, or other unidentified consequences.

While we have limited social media content, we recognize that social media outlets are independent of us and our security measures. Inaccurate presentations based upon incorrect information or assumptions could be distributed via social media outlets and could harm us and our reputation.