UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2018

OR

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

For the transition period from to

Commission file number 333-1173

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
(Exact name of registrant as specified in its charter)

COLORADO	**84-0467907**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

8515 EAST ORCHARD ROAD, GREENWOOD VILLAGE, CO 80111
(Address of principal executive offices)

(303) 737-3000
(Registrant's telephone number, including area code)

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

Yes ☒ No ☐

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

Yes ☒ No ☐

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

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

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

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

Yes ☐ No ☒

As of November 14, 2018, 7,320,176 shares of the registrant's common stock were outstanding, all of which were owned by the registrant's parent company.

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Part I Financial Information
Item1. Interim Financial Statements

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Condensed Consolidated Balance Sheets
September 30, 2018 (Unaudited) and December 31, 2017
(In Thousands, Except Share Amounts)

	September 30, 2018	December 31, 2017
Assets		
Investments:		
Fixed maturities, available-for-sale, at fair value (amortized cost $22,696,473 and $22,762,962)	$ 22,550,302	$ 23,593,139
Fixed maturities, held-for-trading, at fair value (amortized cost $142,981 and $20,512)	141,943	21,059
Mortgage loans on real estate (net of allowances of $773 and $773)	4,365,189	4,005,187
Policy loans	4,103,408	4,104,094
Short-term investments (amortized cost $415,189 and $350,266)	415,189	350,266
Limited partnership interests	71,895	45,540
Other investments	54,614	17,997
Total investments	31,702,540	32,137,282
Other assets:		
Cash and cash equivalents	11,782	17,211
Reinsurance recoverable	581,026	589,080
Deferred acquisition costs (“DAC”) and value of business acquired (“VOBA”)	712,453	518,510
Investment income due and accrued	324,698	299,362
Deferred income tax assets, net	2,715	—
Collateral under securities lending agreements	66,784	—
Due from parent and affiliates	108,501	114,133
Goodwill	137,683	137,683
Other intangible assets	15,068	17,085
Other assets	1,033,650	954,250
Assets of discontinued operations	14,286	16,095
Separate account assets	26,142,156	27,660,571
Total assets	$ 60,853,342	$ 62,461,262

See notes to condensed consolidated financial statements. (Continued)

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Condensed Consolidated Balance Sheets
September 30, 2018 (Unaudited) and December 31, 2017
(In Thousands, Except Share Amounts)

	September 30, 2018	December 31, 2017
Liabilities and stockholder's equity		
Policy benefit liabilities:		
Future policy benefits	$ 30,393,726	$ 30,048,927
Policy and contract claims	380,903	389,029
Policyholders' funds	239,576	280,578
Provision for policyholders' dividends	40,061	41,972
Undistributed earnings on participating business	9,586	14,636
Total policy benefit liabilities	31,063,852	30,775,142
General liabilities:		
Due to parent and affiliates	569,370	553,901
Commercial paper	99,692	99,886
Payable under securities lending agreements	66,784	—
Deferred income tax liabilities, net	—	93,203
Other liabilities	906,039	812,875
Liabilities of discontinued operations	14,286	16,095
Separate account liabilities	26,142,156	27,660,571
Total liabilities	58,862,179	60,011,673
Commitments and contingencies (See Note 14)		
Stockholder's equity:		
Preferred stock, $1 par value, 50,000,000 shares authorized; none issued and outstanding	—	—
Common stock, $1 par value, 50,000,000 shares authorized; 7,320,176 shares issued and outstanding	7,320	7,320
Additional paid-in capital	952,682	949,520
Accumulated other comprehensive (loss) income	(142,356)	440,957
Retained earnings	1,173,517	1,051,792
Total stockholder's equity	1,991,163	2,449,589
Total liabilities and stockholder's equity	$ 60,853,342	$ 62,461,262

See notes to condensed consolidated financial statements. (Concluded)

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Condensed Consolidated Statements of Income
Three and Nine Months Ended September 30, 2018 and 2017
(In Thousands)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
Revenues:				
Premium income	$ 130,953	$ 145,504	$ 353,790	$ 365,408
Fee income	290,790	264,304	853,450	786,758
Other revenue	3,078	3,322	9,140	9,367
Net investment income	322,425	300,582	988,037	911,274
Investment gains (losses), net	4,409	13,861	922	24,171
Total revenues	751,655	727,573	2,205,339	2,096,978
Benefits and expenses:				
Life and other policy benefits	180,698	161,017	534,856	498,300
(Decrease) increase in future policy benefits	(13,058)	12,704	(112,448)	(51,148)
Interest credited or paid to contractholders	166,903	160,040	492,583	471,531
Provision for policyholders' share of losses on participating business	(539)	(1,033)	(1,396)	(1,097)
Dividends to policyholders	8,990	11,513	28,669	35,627
Total benefits	342,994	344,241	942,264	953,213
General insurance expenses	298,669	293,176	905,347	884,670
Amortization of DAC and VOBA	14,241	14,076	56,490	39,798
Interest expense	7,082	7,811	24,479	23,087
Total benefits and expenses	662,986	659,304	1,928,580	1,900,768
Income before income taxes	88,669	68,269	276,759	196,210
Income tax expense	17,287	21,688	58,091	64,973
Net income	$ 71,382	$ 46,581	$ 218,668	$ 131,237

See notes to condensed consolidated financial statements.

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY

Condensed Consolidated Statements of Comprehensive (Loss) Income

Three and Nine Months Ended September 30, 2018 and 2017

(In Thousands)

(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
Net income	$ 71,382	$ 46,581	$ 218,668	$ 131,237
Components of other comprehensive (loss) income				
Unrealized holding (losses) gains, net, arising on available-for-sale fixed maturity investments	(148,340)	39,983	(961,854)	407,208
Unrealized holding gains (losses), net, arising on cash flow hedges	4,063	(23,111)	56,506	(48,311)
Reclassification adjustment for (gains) losses, net, realized in net income	(6,937)	(2,885)	(24,244)	(3,242)
Net unrealized (losses) gains related to investments	(151,214)	13,987	(929,592)	355,655
Future policy benefits, DAC and VOBA adjustments	35,053	(1,977)	189,415	(85,992)
Employee benefit plan adjustment	646	10,744	1,805	15,036
Other comprehensive (loss) income before income taxes	(115,515)	22,754	(738,372)	284,699
Income tax (benefit) expense related to items of other comprehensive income	(24,259)	7,963	(155,059)	99,644
Other comprehensive (loss) income[1]	(91,256)	14,791	(583,313)	185,055
Total comprehensive (loss) income	$ (19,874)	$ 61,372	$ (364,645)	$ 316,292

[1] Other comprehensive (loss) income includes the non-credit component of impaired (losses) gains, net, on fixed maturities available-for-sale in the amounts of $635 and $(2,258) for the three months ended September 30, 2018 and 2017, respectively and $(12,611) and $(3,867) for the nine months ended September 30, 2018 and 2017, respectively.

See notes to condensed consolidated financial statements.

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Condensed Consolidated Statements of Stockholder's Equity
Nine Months Ended September 30, 2018 and 2017
(In Thousands)
(Unaudited)

	Nine Months Ended September 30, 2018				
	Common stock	**Additional paid-in capital**	**Accumulated other comprehensive income (loss)**	**Retained earnings**	**Total**
Balances, January 1, 2018	$ 7,320	$ 949,520	$ 440,957	$ 1,051,792	$ 2,449,589
Cumulative impact of adopting ASC 606, net of tax	—	—	—	32,952	32,952
Adjusted balances, January 1, 2018	7,320	949,520	440,957	1,084,744	2,482,541
Net income	—	—	—	218,668	218,668
Other comprehensive loss, net of income taxes	—	—	(583,313)	—	(583,313)
Dividends	—	—	—	(129,895)	(129,895)
Capital contribution[1]	—	2,514	—	—	2,514
Capital contribution - stock-based compensation	—	648	—	—	648
Balances, September 30, 2018	$ 7,320	$ 952,682	$ (142,356)	$ 1,173,517	$ 1,991,163

[1] In February 2018, the Company received a capital contribution from its parent, GWL&A Financial Inc., in the amount of $848. In May 2018, an additional capital contribution was received in the amount of $840. In August 2018, an additional capital contribution was received in the amount of $826. No additional shares of the Company were issued in relation to these contributions.

	Nine Months Ended September 30, 2017				
	Common stock	**Additional paid-in capital**	**Accumulated other comprehensive income**	**Retained earnings**	**Total**
Balances, January 1, 2017	$ 7,293	$ 863,031	$ 235,875	$ 906,122	$ 2,012,321
Net income	—	—	—	131,237	131,237
Other comprehensive income, net of income taxes	—	—	185,055	—	185,055
Dividends	—	—	—	(145,301)	(145,301)
Capital Contribution[1]	—	76,429	—	—	76,429
Capital contribution - stock-based compensation	—	1,156	—	—	1,156
Balances, September 30, 2017	$ 7,293	$ 940,616	$ 420,930	$ 892,058	$ 2,260,897

[1] In May 2017, the Company received a capital contribution from its parent, GWL&A Financial Inc., in the amount of $76,429. No additional shares of the Company were issued in relation to this contribution.

See notes to condensed consolidated financial statements.

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Condensed Consolidated Statements of Cash Flows
Nine Months Ended September 30, 2018 and 2017
(In Thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2018	**2017**
Net cash provided by operating activities	$ 316,452	$ 699,942
Cash flows from investing activities:		
Proceeds from sales, maturities and redemptions of investments:		
Fixed maturities, available-for-sale	2,892,673	3,920,591
Mortgage loans on real estate	288,150	322,326
Limited partnership interests and other investments	5,827	8,439
Purchases of investments:		
Fixed maturities, available-for-sale	(2,786,257)	(4,313,849)
Mortgage loans on real estate	(650,495)	(689,122)
Limited partnership interests and other investments	(27,656)	(17,697)
Net change in short-term investments	(39,274)	(517,840)
Net change in policy loans	(1,057)	(9,677)
Purchases of furniture, equipment, and software	(39,541)	(30,867)
Net cash used in investing activities	(357,630)	(1,327,696)
Cash flows from financing activities:		
Contract deposits	2,064,895	2,251,508
Contract withdrawals	(1,888,977)	(1,565,225)
Proceeds from surplus note issued to parent	346,218	—
Redemption of surplus note issued to parent	(333,400)	—
Dividends paid	(129,895)	(145,301)
Capital contribution	2,514	76,429
Payments for and interest paid on financing element derivatives, net	(724)	(3,290)
Net change in commercial paper borrowings	(194)	819
Net change in book overdrafts	(24,647)	15,659
Employee taxes paid for withheld shares	(41)	(671)
Net cash provided by financing activities	35,749	629,928
Net (decrease) increase in cash and cash equivalents	(5,429)	2,174
Cash and cash equivalents, beginning of year	17,211	18,321
Cash and cash equivalents, end of period	$ 11,782	$ 20,495

See notes to condensed consolidated financial statements. (Continued)

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Condensed Consolidated Statements of Cash Flows
Nine Months Ended September 30, 2018 and 2017
(In Thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2018	**2017**
Supplemental disclosures of cash flow information:		
Net cash paid during the year for:		
Income taxes	$ (17,070)	$ (17,449)
Interest	(16,728)	(16,447)
Non-cash investing and financing transactions during the years:		
Share-based compensation expense	$ 648	$ 1,156
Fair value of assets acquired in settlement of fixed maturity investments	28,315	9,323

See notes to condensed consolidated financial statements. (Concluded)

1. Organization and Basis of Presentation

Organization

Great-West Life & Annuity Insurance Company ("GWLA") and its subsidiaries (collectively, the "Company") is a direct wholly-owned subsidiary of GWL&A Financial Inc. ("GWL&A Financial"), a holding company. GWL&A Financial is a direct wholly-owned subsidiary of Great-West Lifeco U.S. LLC ("Lifeco U.S.") and an indirect wholly-owned subsidiary of Great-West Lifeco Inc. ("Lifeco"), a Canadian holding company. The Company offers a wide range of life insurance, retirement, and investment products to individuals, businesses, and other private and public organizations throughout the United States. The Company is an insurance company domiciled in the State of Colorado and is subject to regulation by the Colorado Division of Insurance.

Basis of Presentation

The condensed consolidated financial statements include the accounts of the Company and the accounts of its subsidiaries over which it exercises control and are prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). Intercompany transactions and balances have been eliminated in consolidation.

The condensed consolidated balance sheet as of December 31, 2017, which was derived from the Company's audited consolidated financial statements, and the unaudited interim condensed consolidated financial statements as of and for the three and nine months ended September 30, 2018, have been prepared in accordance with the instructions for Form 10-Q. In compliance with those instructions, certain information and footnote disclosures normally included in consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted. As such, these condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

In the opinion of management, these statements include all normal recurring adjustments necessary to fairly present the Company's condensed consolidated results of operations, financial position, and cash flows as of September 30, 2018, and for all periods presented. The condensed consolidated results of operations and condensed consolidated statement of cash flows for the nine months ended September 30, 2018, are not necessarily indicative of the results or cash flows expected for the full year.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

2. Application of Recent Accounting Pronouncements

Recently adopted accounting pronouncements

In May, 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers,* and all the related amendments to customer contracts (collectively "ASC 606"), effective for interim and annual periods beginning after December 15, 2017. ASC 606 supersedes nearly all existing revenue recognition guidance under U.S. GAAP; however, it did not impact the accounting for insurance and investment contracts within the scope of financial services insurance, leases, financial instruments and guarantees. The core principle of the model requires that an entity recognizes revenue for the transfer of goods or services equal to the amount that it expects to be entitled to receive for those goods or services. The update also requires increased disclosure about the nature, amount, timing, and uncertainty of revenue and cash flows arising from customer contracts. See Note 10 for additional information.

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective method. Results for reporting periods beginning after January 1, 2018 are presented under ASC 606, while prior period amounts are not adjusted and continue to be reported in accordance with our historic accounting under ASC 605, Revenue Recognition ("ASC 605").

The primary impact of ASC 606 to the Company relates to the accounting for certain contract costs and contract fulfillment costs, which were expensed as incurred under ASC 605. Under ASC 606, these costs are deferred and amortized over the expected life of the customer contract, which the Company determined to be 10 years. The Company presents these contract costs and contract fulfillment costs on the condensed consolidated balance sheet as a part of the DAC and VOBA balance.

The Company recorded a net increase to opening retained earnings of $32,952, net of tax, as of January 1, 2018 due to the cumulative impact of adopting ASC 606.

In January, 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*, effective for interim and annual periods beginning after December 15, 2017. The amendments in this update address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments including requiring equity investments (except those accounted for under the equity method of accounting) to be measured at fair value with changes in fair value recognized in net income, eliminating certain disclosure requirements related to financial instruments measured at amortized cost, and adding disclosures related to the measurement categories of financial assets and financial liabilities. The primary impact to the Company's condensed consolidated financial statements was that the Company's limited partnership interests, that were accounted for under the cost method, are now measured at fair value with changes in the fair value recognized in net income. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments (a consensus of the Emerging Issues Task Force)*, effective for fiscal years and interim periods within those beginning after December 15, 2017. This ASU addresses diversity in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The primary impacts to the Company's condensed consolidated financial statement include reclassification of proceeds received from the settlement of corporate-owned life insurance policies ("COLI") from cash flow from operations to cash flow from investing and reclassification of certain change in due to / from parent and affiliate from investing to operating. As the Company has retroactively applied this guidance as required by the ASU, the following updates were made to the condensed consolidated cash flow statement for the nine months ended September 30, 2017 to conform to current year presentation:

- Reclassification of proceeds received from the settlement of COLIs of $1,680 from cash flow from operations to cash flows from investing; and
- Reclassification of change in due to / from parent and affiliate of $9,760 from cash flow from financing to cash flows from operations.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows: Restricted Cash (a consensus of the Emerging Issues Task Force)*, effective for fiscal years and interim periods within those beginning after December 15, 2017. This update requires organizations to show the changes in the total of cash, cash equivalents, restricted cash and restricted cash equivalents in the statement of cash flows. The adoption of this standard did not have a material impact on the condensed consolidated financial statements.

In March 2017, the FASB issued ASU 2017-07, *Compensation-Retirement Benefits: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, effective for annual reporting periods beginning on or after December 15, 2017, and interim periods within those annual periods. This update requires organizations to disaggregate the service cost component from the other components of net benefit costs in the income statement and present it with other current compensation costs for the related employees while providing guidance for capitalization eligibility for service costs. The adoption of this standard did not have a material impact on the condensed consolidated financial statements.

Future adoption of new accounting pronouncements

In February 2016, the FASB issued ASU 2016-02, *Leases*, and all the related amendments to leases (collectively "ASU 2016-02") effective for annual reporting periods beginning on or after December 15, 2018, and interim periods within those annual periods. Earlier application is permitted as of the beginning of an interim or annual period. This update requires organizations to recognize lease assets and lease liabilities on the balance sheet with lease terms of more than 12 months and also disclose certain qualitative and quantitative information about leasing arrangements. The Company's implementation efforts are primarily focused on incorporating a new lease accounting system and estimating the impact to the condensed consolidated financial statements upon adoption. The adoption of this standard is not anticipated to have a material impact on the condensed consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments: Credit Losses: Measurement of Credit Losses on Financial Instruments*, effective for fiscal years and interim periods within those beginning after December 15, 2019. Early adoption is permitted for fiscal years beginning after December 15, 2018. This update amends guidance on the impairment of financial instruments by adding an impairment model that is based on expected losses rather than incurred losses and is intended to result in more timely recognition of losses. The standard also simplifies the accounting by decreasing the number of credit impairment models that an entity can use to account for debt instruments. The Company continues to evaluate the impact of this update on its condensed consolidated financial statements.

In January 2017, the FASB issued ASU 2017-04, *Intangibles - Goodwill and Other*, effective for annual or any interim goodwill impairment tests after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. The update eliminates Step 2 from the goodwill impairment test and will require management to perform its goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount. Any amount by which the carrying amount exceeds the reporting unit's fair value (not to exceed the goodwill allocated to that reporting unit) is recognized as an impairment charge. The Company performs its goodwill impairment annually in the 4th quarter or more frequently if events or circumstances indicate that there may be justification for performing an interim test. The adoption of this standard is not anticipated to have a material impact on the condensed consolidated financial statements.

In August 2018, the FASB issued ASU 2018-12, *Targeted Improvements to the Accounting for Long-Duration Targets*, effective for certain long-duration insurance contracts for fiscal years and interim periods beginning after December 15, 2020. Early adoption is permitted. The amendments update the measurement of the liability for future policy benefits related to non-participating traditional and limited payment contracts, the measurement of market risk benefits, the amortization of deferred acquisition costs and require new, disaggregated disclosures. The Company is evaluating the impact of this update on its condensed consolidated financial statements.

In August 2018, the FASB issued ASU 2018-15, *Intangibles - Internal-Use Software*, effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. The standard requires companies to capitalize certain implementation costs on cloud computing arrangements that are service contacts. The Company is evaluating the impact of this update on its condensed consolidated financial statements.

3. Related Party Transactions

A note payable to GWL&A Financial was issued as a surplus note on May 17, 2018, with a face and carrying amount of $346,218. The surplus note bears a fixed interest rate of 4.881%. The note matures on May 17, 2048.

On June 15, 2018, the surplus note with a principal amount of $333,400 was redeemed in full. The surplus note to GWL&A Financial was issued on May 19, 2006. The surplus note bore an interest rate of 2.588% plus the then-current three-month London Interbank Offering Rate ("LIBOR"). The surplus note became redeemable by the Company at the principal amount plus any accrued and unpaid interest after May 16, 2016.

From time to time, the Company makes direct investments in mutual funds of Great-West Funds, Inc., an open-end management investment company, which is a related party of GWLA, to seed new investment products. As of September 30, 2018, the Company held $35,957 in seed investments.

(Dollars in Thousands)

4. Dividends

The maximum amount of dividends, which can be paid to stockholders by insurance companies domiciled in the State of Colorado, is subject to restrictions relating to statutory surplus and statutory net gain from operations. Prior to the payment of any dividends, the Company seeks approval from the Colorado Insurance Commissioner. During the nine months ended September 30, 2018 and 2017, the Company paid dividends of $129,895 and $145,301, respectively, to its parent, GWL&A Financial.

5. Summary of Investments

The following tables summarize fixed maturity investments classified as available-for-sale and the non-credit-related component of other-than-temporary impairments ("OTTI") in accumulated other comprehensive income (loss) ("AOCI"):

	September 30, 2018				
Fixed maturities:	**Amortized cost**	**Gross unrealized gains**	**Gross unrealized losses**	**Estimated fair value and carrying value**	**OTTI (gain) loss included in AOCI** [(1)]
U.S. government direct obligations and U.S. agencies	$ 1,446,233	$ 22,552	$ 42,690	$ 1,426,095	$ —
Obligations of U.S. states and their subdivisions	1,828,711	137,944	7,530	1,959,125	—
Corporate debt securities [(2)]	15,593,111	222,689	475,892	15,339,908	(684)
Asset-backed securities	1,530,147	63,096	24,504	1,568,739	(37,382)
Residential mortgage-backed securities	74,403	1,813	969	75,247	(50)
Commercial mortgage-backed securities	1,287,600	3,725	45,827	1,245,498	—
Collateralized debt obligations	936,268	870	1,448	935,690	—
Total fixed maturities	$ 22,696,473	$ 452,689	$ 598,860	$ 22,550,302	$ (38,116)

(1) Indicates the amount of any OTTI (gain) loss included in AOCI that is included in gross unrealized gains and losses. OTTI (gain) loss included in AOCI, as presented above, includes both the initial recognition of non-credit losses and the effects of subsequent increases and decreases in estimated fair value for those fixed maturity securities with previous non-credit impairment. The non-credit loss component of OTTI (gain) loss was in an unrealized gain position due to increases in estimated fair value subsequent to initial recognition of non-credit losses on such securities.
(2) Includes perpetual debt investments with amortized cost of $89,267 and estimated fair value of $80,673.

(Dollars in Thousands)

	December 31, 2017				
Fixed maturities:	**Amortized cost**	**Gross unrealized gains**	**Gross unrealized losses**	**Estimated fair value and carrying value**	**OTTI (gain) loss included in AOCI [(1)]**
U.S. government direct obligations and U.S. agencies	$ 1,837,748	$ 41,777	$ 7,883	$ 1,871,642	$ —
Obligations of U.S. states and their subdivisions	1,872,120	220,507	1,655	2,090,972	—
Corporate debt securities [(2)]	15,234,473	581,991	110,377	15,706,087	(1,018)
Asset-backed securities	1,622,806	105,301	10,131	1,717,976	(56,735)
Residential mortgage-backed securities	63,187	2,446	649	64,984	(140)
Commercial mortgage-backed securities	1,352,906	17,692	12,989	1,357,609	—
Collateralized debt obligations	779,722	4,227	80	783,869	—
Total fixed maturities	$ 22,762,962	$ 973,941	$ 143,764	$ 23,593,139	$ (57,893)

(1) Indicates the amount of any OTTI (gain) loss included in AOCI that is included in gross unrealized gains and losses. OTTI (gain) loss included in AOCI, as presented above, includes both the initial recognition of non-credit losses and the effects of subsequent increases and decreases in estimated fair value for those fixed maturity securities with previous non-credit impairment. The non-credit loss component of OTTI (gain) loss was in an unrealized gain position due to increases in estimated fair value subsequent to initial recognition of non-credit losses on such securities.
(2) Includes perpetual debt investments with amortized cost of $89,267 and estimated fair value of $87,348.

See Note 8 for additional discussion regarding fair value measurements.

The amortized cost and estimated fair value of fixed maturity investments classified as available-for-sale, by contractual maturity date, are shown in the table below. Actual maturities will likely differ from these projections because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

	September 30, 2018	
	Amortized cost	**Estimated fair value**
Maturing in one year or less	$ 624,398	$ 623,752
Maturing after one year through five years	3,470,116	3,451,165
Maturing after five years through ten years	8,251,124	8,071,691
Maturing after ten years	5,419,415	5,501,579
Mortgage-backed and asset-backed securities	4,931,420	4,902,115
Total fixed maturities	$ 22,696,473	$ 22,550,302

Mortgage-backed (commercial and residential) and asset-backed securities include those issued by the U.S. government and U.S. agencies.

The following table summarizes information regarding the sales of securities classified as available-for-sale:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	**2017**	**2018**	**2017**
Proceeds from sales	$ 433,643	$ 339,051	$ 1,911,262	$ 2,810,599
Gross realized gains from sales	5,887	8,512	30,613	29,433
Gross realized losses from sales	3,650	2,993	19,722	24,330

(Dollars in Thousands)

Mortgage loans on real estate — The recorded investment of the mortgage loan portfolio categorized as performing was $4,365,962 and $4,005,960 as of September 30, 2018 and December 31, 2017, respectively.

The following table summarizes activity in the mortgage provision allowance:

	Nine Months Ended September 30, 2018	Year Ended December 31, 2017
	Commercial mortgages	Commercial mortgages
Beginning balance	$ 773	$ 2,882
Provision increases	—	157
Charge-off	—	(663)
Recovery	—	(30)
Provision decreases	—	(1,573)
Ending balance	$ 773	$ 773
Allowance ending balance by basis of impairment method:		
Collectively evaluated for impairment	773	773
Recorded investment balance in the mortgage loan portfolio, gross of allowance, by basis of impairment method:	$ 4,365,962	$ 4,005,960
Individually evaluated for impairment	2,725	2,942
Collectively evaluated for impairment	4,363,237	4,003,018

Limited partnership interests — Limited partnership interests represent the Company's minority ownership interests in pooled investment funds that primarily make private equity investments across diverse industries and geographical focuses. The Company has determined its interest in each limited partnership to be considered a variable interest entity ("VIE"). Consolidation is not required as the Company is not deemed to be the primary beneficiary of the VIEs. The carrying value and maximum exposure to loss in relation to the activities of the VIEs was $71,895 and $45,540 at September 30, 2018 and December 31, 2017, respectively.

Securities lending — Securities with a cost or amortized cost of $89,641 and estimated fair values of $84,511 were on loan under the program at September 30, 2018. There were no securities on loan at December 31, 2017. The Company received cash of $66,784 and securities with a fair value of $21,026 as collateral at September 30, 2018. The Company bears the risk of any deficiency in the amount of collateral available for return to a borrower due to a loss in an approved investment.

Under the securities lending program the collateral pledged is, by definition, the securities loaned against the cash borrowed. The following table summarizes the cash collateral liability under the securities lending program, by class of securities loaned:

	September 30, 2018	December 31, 2017
Cash collateral liability by class of loaned security		
U.S. government direct obligations and U.S. agencies	$ 7,700	$ —
Corporate debt securities	59,084	—
Total	$ 66,784	$ —

The Company's securities lending agreements are open agreements meaning the borrower can return and the Company can recall the loaned securities at any time. The assets and liabilities associated with securities lending program are not subject to master netting arrangements and are not offset in the condensed consolidated balance sheets.

(Dollars in Thousands)

Unrealized losses on fixed maturity investments classified as available-for-sale — The following tables summarize unrealized investment losses, including the non-credit-related portion of OTTI losses reported in AOCI, by class of investment:

	September 30, 2018					
	Less than twelve months		Twelve months or longer		Total	
Fixed maturities:	Estimated fair value	Unrealized loss and OTTI	Estimated fair value	Unrealized loss and OTTI	Estimated fair value	Unrealized loss and OTTI
U.S. government direct obligations and U.S. agencies	$ 821,260	$ 29,409	$ 251,365	$ 13,281	$ 1,072,625	$ 42,690
Obligations of U.S. states and their subdivisions	230,553	4,602	37,812	2,928	268,365	7,530
Corporate debt securities	8,692,153	291,447	2,291,736	184,445	10,983,889	475,892
Asset-backed securities	649,403	13,531	299,315	10,973	948,718	24,504
Residential mortgage-backed securities	3,395	70	9,621	899	13,016	969
Commercial mortgage-backed securities	745,307	22,217	366,889	23,610	1,112,196	45,827
Collateralized debt obligations	346,122	1,448	—	—	346,122	1,448
Total fixed maturities	$ 11,488,193	$ 362,724	$ 3,256,738	$ 236,136	$ 14,744,931	$ 598,860
Total number of securities in an unrealized loss position		1,061		385		1,446

	December 31, 2017					
	Less than twelve months		Twelve months or longer		Total	
Fixed maturities:	Estimated fair value	Unrealized loss and OTTI	Estimated fair value	Unrealized loss and OTTI	Estimated fair value	Unrealized loss and OTTI
U.S. government direct obligations and U.S. agencies	$ 755,861	$ 4,159	$ 230,447	$ 3,724	$ 986,308	$ 7,883
Obligations of U.S. states and their subdivisions	24,908	180	37,012	1,475	61,920	1,655
Corporate debt securities	2,229,585	19,568	2,036,323	90,809	4,265,908	110,377
Asset-backed securities	544,778	3,011	245,341	7,120	790,119	10,131
Residential mortgage-backed securities	4,405	23	11,416	626	15,821	649
Commercial mortgage-backed securities	342,820	2,451	295,164	10,538	637,984	12,989
Collateralized debt obligations	7,277	80	—	—	7,277	80
Total fixed maturities	$ 3,909,634	$ 29,472	$ 2,855,703	$ 114,292	$ 6,765,337	$ 143,764
Total number of securities in an unrealized loss position		368		293		661

Fixed maturity investments — Total unrealized losses and OTTI increased by $455,096, or 317%, from December 31, 2017 to September 30, 2018. The majority, or $333,252, of the increase was in the less than twelve months category. The overall increase in unrealized losses was across most asset classes and reflects higher interest rates at September 30, 2018, compared to December 31, 2017, resulting in generally lower valuations of these fixed maturity securities.

Total unrealized losses greater than twelve months increased by $121,844 from December 31, 2017 to September 30, 2018. Corporate debt securities account for 78%, or $184,445, of the unrealized losses and OTTI greater than twelve months at September 30, 2018. Non-investment grade corporate debt securities account for $6,640 of the unrealized losses and OTTI greater than twelve months. Management does not have the intent to sell these assets; therefore, an OTTI was not recognized in earnings.

(Dollars in Thousands)

Asset-backed and commercial mortgage-backed securities account for 15% of the unrealized losses and OTTI greater than twelve months at September 30, 2018. The present value of the cash flows expected to be collected is not less than amortized cost and management does not have the intent to sell these assets; therefore, an OTTI was not recognized in earnings.

Other-than-temporary impairment recognition — The OTTI on fixed maturity securities where the loss portion is bifurcated and the credit related component is recognized in investment (losses) gains is summarized as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Beginning balance	$ 49,683	$ 77,411	$ 62,231	$ 83,665
Reductions:				
Due to sales, maturities or payoffs during the period	—	—	(1,510)	—
Due to increases in cash flows expected to be collected that are recognized over the remaining life of the security	(2,399)	(5,273)	(13,437)	(11,527)
Ending balance	$ 47,284	$ 72,138	$ 47,284	$ 72,138

6. Derivative Financial Instruments

Derivative transactions are generally entered into pursuant to International Swaps and Derivatives Association (“ISDA”) Master Agreements or Master Securities Forward Transaction Agreements (“MSFTA”) with approved counterparties that provide for a single net payment to be made by one party to the other on a daily basis, periodic payment dates, or at the due date, expiration, or termination of the agreement.

The ISDA Master Agreements contain provisions that would allow the counterparties to require immediate settlement of all derivative instruments in a net liability position if the Company were to default on any debt obligations over a certain threshold. The MSFTA contain provisions which do not stipulate a threshold for default and only apply to debt obligations between the Company and the specific counterparty. The aggregate fair value, inclusive of accrued income and expense, of derivative instruments with credit-risk-related contingent features that were in a net liability position was $71,684 and $93,761 as of September 30, 2018, and December 31, 2017, respectively. The Company had pledged collateral related to these derivatives of $26,839 and $42,750 as of September 30, 2018, and December 31, 2017, respectively, in the normal course of business. If the credit-risk-related contingent features were triggered on September 30, 2018, the fair value of assets that could be required to settle the derivatives in a net liability position was $44,845.

At September 30, 2018, and December 31, 2017, the Company had pledged $39,130 and $52,330 of unrestricted cash collateral to counterparties in the normal course of business, while other counterparties had pledged $11,960 and $5,490 of unrestricted cash collateral to the Company to satisfy collateral netting agreements, respectively.

At September 30, 2018, the Company estimated $15,814 of net derivative gains related to cash flow hedges included in AOCI will be reclassified into net income within the next twelve months. Gains and losses included in AOCI are reclassified into net income when the hedged item affects earnings.

Types of derivative instruments and derivative strategies

Interest rate contracts

Cash flow hedges

Interest rate swap agreements are used to convert the interest rate on certain debt security investments and debt obligations from a floating rate to a fixed rate.

Not designated as hedging instruments

The Company enters into certain transactions in which derivatives are hedging an economic risk but hedge accounting is either not elected or the transactions are not eligible for hedge accounting. These derivative instruments include: exchange-traded interest rate swap futures, over-the-counter ("OTC") interest rate swaptions, OTC interest rate swaps, exchange-traded Eurodollar interest rate futures, and treasury interest rate futures. Certain of the Company's OTC derivatives are cleared and settled through the Chicago Mercantile Exchange ("CME") while others are bilateral contracts between the Company and a counterparty.

In 2017, the CME amended its rulebook to classify variation margin transfers as settlement payments instead of collateral. The Company adjusts the fair value by the variation margin payments on derivatives cleared through the CME.

The derivative instruments mentioned above are economic hedges and used to manage risk. These transactions are used to offset changes in liabilities including those in variable annuity products, hedge the economic effect of a large increase in interest rates, manage the potential variability in future interest payments due to a change in credited interest rates and the related change in cash flows due to increased surrenders, and manage interest rate risks of forecasted acquisitions of fixed rate maturity investments and forecasted liability pricing.

Foreign currency contracts

Cross-currency swaps and foreign currency forwards are used to manage the foreign currency exchange rate risk associated with investments denominated in other than U.S. dollars. The Company uses cross-currency swaps to convert interest and principal payments on foreign denominated debt instruments into U.S. dollars. Cross-currency swaps may be designated as cash flow hedges; however, some are not eligible for hedge accounting. The Company uses foreign currency forwards to reduce the risk of foreign currency exchange rate changes on proceeds received on sales of foreign denominated debt instruments; however, hedge accounting is not elected.

Equity contracts

The Company uses futures on equity indices to offset changes in guaranteed lifetime withdrawal benefit liabilities; however, they are not eligible for hedge accounting.

Other forward contracts

The Company uses forward settling to be announced ("TBA") securities to gain exposure to the investment risk and return of agency mortgage-backed securities (pass-throughs). These transactions enhance the return on the Company's investment portfolio and provide a more liquid and cost effective method of achieving these goals than purchasing or selling individual agency mortgage-backed pools. As the Company does not regularly accept delivery of such securities, they are accounted for as derivatives but are not eligible for hedge accounting.

(Dollars in Thousands)

The following tables summarize the notional amount and fair value of derivative financial instruments, excluding embedded derivatives:

	September 30, 2018			
		Net derivatives	Asset derivatives	Liability derivatives
	Notional amount	Fair value	Fair value [(1)]	Fair value [(1)]
Hedge designation/derivative type:				
Derivatives designated as hedges:				
Cash flow hedges:				
Interest rate swaps	$ 22,300	$ 5,037	$ 5,037	$ —
Cross-currency swaps	886,018	(6,517)	31,025	37,542
Total cash flow hedges	908,318	(1,480)	36,062	37,542
Total derivatives designated as hedges	908,318	(1,480)	36,062	37,542
Derivatives not designated as hedges:				
Interest rate swaps	560,500	(262)	681	943
Futures on equity indices	58,344	—	—	—
Interest rate futures	33,300	—	—	—
Interest rate swaptions	192,670	164	164	—
Other forward contracts	2,054,000	(5,084)	976	6,060
Cross-currency swaps	573,703	(6,404)	22,435	28,839
Total derivatives not designated as hedges	3,472,517	(11,586)	24,256	35,842
Total derivative financial instruments	$ 4,380,835	$ (13,066)	$ 60,318	$ 73,384

[(1)] The estimated fair value includes accrued income and expense. The estimated fair value of all derivatives in an asset position is reported within other assets and the estimated fair value of all derivatives in a liability position is reported within other liabilities in the condensed consolidated balance sheets.

(Dollars in Thousands)

	December 31, 2017			
	Notional amount	Net derivatives Fair value	Asset derivatives Fair value [1]	Liability derivatives Fair value [1]
Hedge designation/derivative type:				
Derivatives designated as hedges:				
Cash flow hedges:				
Interest rate swaps	$ 388,800	$ 7,476	$ 7,476	$ —
Cross-currency swaps	800,060	(31,358)	19,958	51,316
Total cash flow hedges	1,188,860	(23,882)	27,434	51,316
Total derivatives designated as hedges	1,188,860	(23,882)	27,434	51,316
Derivatives not designated as hedges:				
Interest rate swaps	519,100	1,902	3,530	1,628
Futures on equity indices	22,074	—	—	—
Interest rate futures	60,700	—	—	—
Interest rate swaptions	164,522	75	75	—
Cross-currency swaps	612,733	(21,279)	20,320	41,599
Total derivatives not designated as hedges	1,379,129	(19,302)	23,925	43,227
Total derivative financial instruments	$ 2,567,989	$ (43,184)	$ 51,359	$ 94,543

[1] The estimated fair value excludes accrued income and expense. The estimated fair value of all derivatives in an asset position is reported within other assets and the estimated fair value of all derivatives in a liability position is reported within other liabilities in the condensed consolidated balance sheets.

Notional amounts are used to express the extent of the Company's involvement in derivative transactions and represent a standard measurement of the volume of its derivative activity. Notional amounts represent those amounts used to calculate contractual flows to be exchanged and are not paid or received. The average notional outstanding during the nine months ended September 30, 2018, was $646,060, $1,453,024, $89,039, $183,639, and $1,735,100 for interest rate swaps, cross-currency swaps, futures, swaptions, and other forward contracts, respectively. The average notional outstanding during the year ended December 31, 2017, was $905,977, $1,323,398, $108,438, $162,896, and $2,231,196 for interest rate swaps, cross-currency swaps, futures, swaptions, and other forward contracts, respectively.

The following tables present the effect of derivative instruments in the condensed consolidated statements of income and comprehensive income reported by cash flow hedges and derivatives not designated as hedges, excluding embedded derivatives:

	Gain (loss) recognized in OCI on derivatives (Effective portion)		Gain (loss) reclassified from OCI into net income (Effective portion)		
	Three Months Ended September 30,		Three Months Ended September 30,		
	2018	2017	2018	2017	
Cash flow hedges:					
Interest rate swaps	$ (596)	$ 115	$ 579	$ 1,175	(A)
Interest rate swaps	—	(653)	443	(690)	(B)
Cross-currency swaps	4,659	(22,573)	3,696	(108)	(A)
Total cash flow hedges	$ 4,063	$ (23,111)	$ 4,718	$ 377	

(A) Net investment income.
(B) Interest expense.

(Dollars in Thousands)

	Gain (loss) recognized in OCI on derivatives (Effective portion)		Gain (loss) reclassified from OCI into net income (Effective portion)		
	Nine Months Ended September 30,		Nine Months Ended September 30,		
	2018	2017	2018	2017	
Cash flow hedges:					
Interest rate swaps	$ (1,927)	$ 611	$ 2,212	$ 3,581	(A)
Interest rate swaps	29,030	(5,003)	1,075	(2,357)	(B)
Cross-currency swaps	29,403	(43,919)	10,637	21	(A)
Total cash flow hedges	$ 56,506	$ (48,311)	$ 13,924	$ 1,245	

(A) Net investment income.
(B) Interest expense.

	Gain (loss) on derivatives recognized in net income			
	Three Months Ended September 30,			
	2018		2017	
Derivatives not designated as hedging instruments:				
Futures on equity indices	$ —	(A)	$ (583)	(A)
Futures on equity indices	(2,511)	(B)	(1,070)	(B)
Interest rate swaps	—	(A)	492	(A)
Interest rate swaps	(6,651)	(B)	—	(B)
Interest rate futures	—	(A)	(40)	(A)
Interest rate futures	(146)	(B)	18	(B)
Interest rate swaptions	—	(A)	(6)	(A)
Interest rate swaptions	1,003	(B)	(73)	(B)
Other forward contracts	—	(A)	(571)	(A)
Other forward contracts	(5,457)	(B)	7,264	(B)
Cross-currency swaps	—	(A)	(16,046)	(A)
Cross-currency swaps	5,570	(B)	—	(B)
Total derivatives not designated as hedging instruments	$ (8,192)		$ (10,615)	

(A) Net investment income.
(B) Represents investment (losses) gains, net.

(Dollars in Thousands)

	Gain (loss) on derivatives recognized in net income			
	Nine Months Ended September 30,			
	2018		2017	
Derivatives not designated as hedging instruments:				
Futures on equity indices	$ —	(A)	$ (917)	(A)
Futures on equity indices	(4,656)	(B)	(3,890)	(B)
Interest rate swaps	—	(A)	3,919	(A)
Interest rate swaps	(20,953)	(B)	—	(B)
Interest rate futures	—	(A)	62	(A)
Interest rate futures	(31)	(B)	(183)	(B)
Interest rate swaptions	—	(A)	(37)	(A)
Interest rate swaptions	852	(B)	(224)	(B)
Other forward contracts	—	(A)	(3,151)	(A)
Other forward contracts	(27,400)	(B)	20,383	(B)
Cross-currency swaps	—	(A)	(38,297)	(A)
Cross-currency swaps	18,165	(B)	—	(B)
Total derivatives not designated as hedging instruments	$ (34,023)		$ (22,335)	

(A) Net investment income.
(B) Represents investment (losses) gains, net.

Embedded derivative - Guaranteed Lifetime Withdrawal Benefit

The Company offers a guaranteed lifetime withdrawal benefit (“GLWB”) through a variable annuity or a contingent deferred annuity. The GLWB is deemed to be an embedded derivative. The GLWB is recorded at fair value within future policy benefits on the condensed consolidated balance sheets. Changes in fair value of the GLWB are recorded in investment gains (losses), net in the condensed consolidated statements of income.

The estimated fair value of the GLWB was an asset of $6,849 and a liability of $11,095 at September 30, 2018, and December 31, 2017, respectively. The changes in fair value of the GLWB were a gain of $7,362 and a loss of $626 for the three months ended September 30, 2018 and 2017, respectively, and a gain of $17,944 and a loss of $4,509 for the nine months ended September 30, 2018 and 2017, respectively.

(Dollars in Thousands)

7. Summary of Offsetting Assets and Liabilities

The Company enters into derivative transactions and short-term reverse repurchase agreements with several approved counterparties. The Company's derivative transactions are generally governed by MSFTA or ISDA Master Agreements which provide for legally enforceable set-off and close-out netting in the event of default or bankruptcy of the Company's counterparties. The Company's MSFTA and ISDA Master Agreements generally include provisions which require both the pledging and accepting of collateral in connection with its derivative transactions. These provisions have the effect of securing each party's position to the extent of collateral held. Short-term reverse repurchase agreements also include collateral provisions with the counterparty. The following tables summarize the effect of master netting arrangements on the Company's financial position in the normal course of business and in the event of default or bankruptcy of the Company's counterparties:

	September 30, 2018			
		Gross fair value not offset in balance sheets		
Financial instruments:	**Gross fair value of recognized assets/liabilities [1]**	**Financial instruments**	**Cash collateral**	**Net fair value**
Derivative instruments (assets) [2]	$ 60,318	$ (49,741)	$ (8,939)	$ 1,638
Derivative instruments (liabilities) [3]	$ 73,363	$ (49,741)	$ (20,588)	$ 3,034

[1] The gross fair value of derivative instrument assets is not netted against offsetting liabilities for presentation on the condensed consolidated balance sheets.
[2] The estimated fair value of derivative instrument assets is reported in other assets in the condensed consolidated balance sheets. Derivative transactions entered into under ISDA master agreements include income and expense accruals.
[3] The estimated fair value of derivative instrument liabilities is reported in other liabilities in the condensed consolidated balance sheets. Derivative transactions entered into under ISDA master agreements include income and expense accruals.

	December 31, 2017			
		Gross fair value not offset in balance sheets		
Financial instruments (assets):	**Gross fair value of recognized assets [1]**	**Financial instruments**	**Cash collateral**	**Net fair value**
Derivative instruments [2]	$ 52,738	$ (47,827)	$ (4,911)	$ —
Short-term reverse repurchase agreements [3]	23,200	(23,200)	—	—
Total financial instruments (assets)	$ 75,938	$ (71,027)	$ (4,911)	$ —

	December 31, 2017			
		Gross fair value not offset in balance sheets		
Financial instruments (liabilities):	**Gross fair value of recognized liabilities [1]**	**Financial instruments**	**Cash collateral**	**Net fair value**
Derivative instruments [4]	$ 93,761	$ (47,827)	$ (42,750)	$ 3,184

[1] The gross fair value of derivative instrument and short-term reverse repurchase agreement assets is not netted against offsetting liabilities for presentation on the condensed consolidated balance sheets.
[2] The estimated fair value of derivative instrument assets is reported in other assets in the condensed consolidated balance sheets. Derivative transactions entered into under ISDA master agreements include income and expense accruals.
[3] The estimated fair value of short-term reverse repurchase agreement assets is reported in short-term investments in the condensed consolidated balance sheets. The collateral is held by an independent third-party custodian under a tri-party agreement.
[4] The estimated fair value of derivative instrument liabilities is reported in other liabilities in the condensed consolidated balance sheets. Derivative transactions entered into under ISDA master agreements include income and expense accruals.

(Dollars in Thousands)

8. Fair Value Measurements

Recurring fair value measurements

The following tables present the Company's financial assets and liabilities carried at fair value on a recurring basis by fair value hierarchy category:

	Assets and liabilities measured at fair value on a recurring basis			
	September 30, 2018			
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets				
Fixed maturities available-for-sale:				
U.S. government direct obligations and U.S. agencies	$ —	$ 1,426,095	$ —	$ 1,426,095
Obligations of U.S. states and their subdivisions	—	1,959,125	—	1,959,125
Corporate debt securities	—	15,331,285	8,623	15,339,908
Asset-backed securities	—	1,568,739	—	1,568,739
Residential mortgage-backed securities	—	75,247	—	75,247
Commercial mortgage-backed securities	—	1,245,498	—	1,245,498
Collateralized debt obligations	—	935,690	—	935,690
Total fixed maturities available-for-sale	—	22,541,679	8,623	22,550,302
Fixed maturities held-for-trading:				
U.S. government direct obligations and U.S. agencies	—	137,866	—	137,866
Corporate debt securities	—	3,044	—	3,044
Commercial mortgage-backed securities	—	1,033	—	1,033
Total fixed maturities held-for-trading	—	141,943	—	141,943
Short-term investments	369,539	45,650	—	415,189
Limited partnership interests [1]	—	—	—	71,895
Equity investments	38,374	5,400	—	43,774
Collateral under securities lending agreements	—	66,784	—	66,784
Collateral under derivative counterparty collateral agreements	51,090	—	—	51,090
Derivative instruments designated as hedges:				
Interest rate swaps	—	5,037	—	5,037
Cross-currency swaps	—	31,025	—	31,025
Derivative instruments not designated as hedges:				
Interest rate swaps	—	681	—	681
Interest rate swaptions	—	164	—	164
Other forward contracts	—	976	—	976
Cross-currency swaps	—	22,435	—	22,435
Total derivative instruments	—	60,318	—	60,318
Embedded derivatives - GLWB	—	—	6,849	6,849
Separate account assets [1]	15,781,604	9,915,781	—	26,142,156
Total assets	$ 16,240,607	$ 32,777,555	$ 15,472	$ 49,550,300
Liabilities				
Payable under securities lending agreements	$ —	$ 66,784	$ —	$ 66,784
Collateral under derivative counterparty collateral agreements	11,960	—	—	11,960
Derivative instruments designated as hedges:				
Cross-currency swaps	—	37,542	—	37,542
Derivative instruments not designated as hedges:				
Interest rate swaps	—	943	—	943
Other forward contracts	—	6,060	—	6,060
Cross-currency swaps	—	28,839	—	28,839
Total derivative instruments	—	73,384	—	73,384
Separate account liabilities [2]	—	217,062	—	217,062
Total liabilities	$ 11,960	$ 357,230	$ —	$ 369,190

[1] Included in the total fair value amount are $445 million of separate account assets and $72 million of limited partnership interests as of September 30, 2018 for which the fair value is estimated using net asset value per unit as a practical expedient.
[2] Includes only separate account instruments which are carried at the fair value of the underlying liabilities owned by the separate accounts.

(Dollars in Thousands)

	Assets and liabilities measured at fair value on a recurring basis			
	December 31, 2017			
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets				
Fixed maturities available-for-sale:				
U.S. government direct obligations and U.S. agencies	$ —	$ 1,871,642	$ —	$ 1,871,642
Obligations of U.S. states and their subdivisions	—	2,090,972	—	2,090,972
Corporate debt securities	—	15,696,349	9,738	15,706,087
Asset-backed securities	—	1,717,976	—	1,717,976
Residential mortgage-backed securities	—	64,984	—	64,984
Commercial mortgage-backed securities	—	1,357,609	—	1,357,609
Collateralized debt obligations	—	783,869	—	783,869
Total fixed maturities available-for-sale	—	23,583,401	9,738	23,593,139
Fixed maturities held-for-trading:				
U.S. government direct obligations and U.S. agencies	—	16,836	—	16,836
Corporate debt securities	—	3,156	—	3,156
Commercial mortgage-backed securities	—	1,067	—	1,067
Total fixed maturities held-for-trading	—	21,059	—	21,059
Short-term investments	288,302	61,964	—	350,266
Collateral under derivative counterparty collateral agreements	57,820	—	—	57,820
Derivative instruments designated as hedges:				
Interest rate swaps	—	7,476	—	7,476
Cross-currency swaps	—	19,958	—	19,958
Derivative instruments not designated as hedges:				
Interest rate swaps	—	3,530	—	3,530
Interest rate swaptions	—	75	—	75
Cross-currency swaps	—	20,320	—	20,320
Total derivative instruments	—	51,359	—	51,359
Separate account assets [1]	16,523,630	10,736,532	—	27,660,571
Total assets	$ 16,869,752	$ 34,454,315	$ 9,738	$ 51,734,214
Liabilities				
Collateral under derivative counterparty collateral agreements	$ 5,490	$ —	$ —	$ 5,490
Derivative instruments designated as hedges:				
Cross-currency swaps	—	51,316	—	51,316
Derivative instruments not designated as hedges:				
Interest rate swaps	—	1,628	—	1,628
Cross-currency swaps	—	41,599	—	41,599
Total derivative instruments	—	94,543	—	94,543
Embedded derivatives - GLWB	—	—	11,095	11,095
Separate account liabilities [2]	8	409,266	—	409,274
Total liabilities	$ 5,498	$ 503,809	$ 11,095	$ 520,402

[1] Included in the total fair value amounts are $400 million of investments as of December 31, 2017 for which the fair value is estimated using net asset value per unit as a practical expedient.
[2] Includes only separate account instruments which are carried at the fair value of the underlying liabilities owned by the separate accounts.

The methods and assumptions used to estimate the fair value of the Company's financial assets and liabilities carried at fair value on a recurring basis are as follows:

Fixed maturity investments

The fair values for fixed maturity investments are generally based upon evaluated prices from independent pricing services. In cases where these prices are not readily available, fair values are estimated by the Company. To determine estimated fair value for these instruments, the Company generally utilizes discounted cash flow models with market observable pricing inputs such as spreads, average life, and credit quality. Fair value estimates are made at a specific point in time, based on available market information and judgments about financial instruments, including estimates of the timing and amounts of expected future cash flows and the credit standing of the issuer or counterparty.

Equity investments

The fair value for equity securities is generally based upon quoted market prices in active markets for identical assets that the Company has the ability to access.

Short-term investments and securities lending agreements

The amortized cost of short-term investments, collateral under securities lending agreements, and payable under securities lending agreements is a reasonable estimate of fair value due to their short-term nature and high credit quality of the issuers. Short-term investments also include money market funds that are valued using unadjusted quoted prices in active markets.

Derivative counterparty collateral agreements

Included in other assets is cash collateral received from or pledged to derivative counterparties and included in other liabilities is the obligation to return the cash collateral to the counterparties. The carrying value of the collateral is a reasonable estimate of fair value.

Derivative instruments

Included in other assets and other liabilities are derivative financial instruments. The estimated fair values of OTC derivatives, primarily consisting of cross-currency swaps, interest rate swaps, interest rate swaptions, and other forward contracts, are the estimated amounts the Company would receive or pay to terminate the agreements at the end of each reporting period, taking into consideration current interest rates and other relevant factors.

Embedded derivative - GLWB

Significant unobservable inputs used in the fair value measurements of GLWB include long-term equity and interest rate implied volatility, mortality, and policyholder behavior assumptions, such as benefit utilization, lapses, and partial withdrawals.

Limited partnership interests

Limited partnership interests represent the Company's minority ownership interests in pooled investment funds. These funds employ varying investment strategies that primarily make private equity investments across diverse industries and geographical focuses. The net asset value, determined using the partnership financial statement reported capital account adjusted for other relevant information which may impact the exit value of the investments, is used as a practical expedient to estimate fair value. Distributions by these investments are generated from investment gains, from operating income generated by the underlying investments of the funds, and from liquidation of the underlying assets of the funds which are estimated to be liquidated over the next one to 10 years. In the absence of permitted sales of its ownership interest, the Company will be redeemed out of the partnership interests through distributions.

(Dollars in Thousands)

Separate account assets and liabilities

Separate account assets and liabilities primarily include investments in mutual funds, unregistered funds, most of which are not subject to redemption restrictions, fixed maturity, and short-term securities. Mutual funds and unregistered funds are recorded at net asset value, which approximates fair value, on a daily basis. The fixed maturity and short-term investments are valued in the same manner, and using the same pricing sources and inputs as the fixed maturity and short-term investments of the Company.

The following tables present additional information about assets and liabilities measured at fair value on a recurring basis and for which the Company has utilized Level 3 inputs to determine fair value:

	Recurring Level 3 financial assets and liabilities Three Months Ended September 30, 2018	
	Assets	Assets/(Liabilities)
	Fixed maturities available-for-sale Corporate debt securities	Embedded derivatives - GLWB
Balances, July 1, 2018	$ 8,970	$ (513)
Realized and unrealized gains (losses) included in:		
Net income (loss)	—	7,362
Other comprehensive income (loss)	105	—
Settlements	(452)	—
Balances, September 30, 2018	$ 8,623	$ 6,849
Total gains (losses) for the period included in net income attributable to the change in unrealized gains and losses relating to assets and liabilities held at September 30, 2018	$ —	$ 7,362

	Recurring Level 3 financial assets and liabilities Three Months Ended September 30, 2017	
	Assets	Assets/(Liabilities)
	Fixed maturities available-for-sale Corporate debt securities	Embedded derivatives - GLWB
Balances, July 1, 2017	$ 10,703	$ (9,595)
Realized and unrealized gains (losses) included in:		
Net income (loss)	—	(626)
Other comprehensive income (loss)	166	—
Settlements	(432)	—
Transfers out of Level 3 [1]	(357)	—
Balances, September 30, 2017	$ 10,080	$ (10,221)
Total gains (losses) for the period included in net income attributable to the change in unrealized gains and losses relating to assets and liabilities held at September 30, 2017	$ —	$ (626)

(1) Transfers out of Level 3 are due primarily to increased observability of inputs in valuation methodologies as evidenced by corroboration of market prices with multiple pricing vendors.

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(Dollars in Thousands)
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	Recurring Level 3 financial assets and liabilities Nine Months Ended September 30, 2018	
	Assets	Assets/(Liabilities)
	Fixed maturities available-for-sale Corporate debt securities	Embedded derivatives - GLWB
Balances, January 1, 2018	$ 9,738	$ (11,095)
Realized and unrealized gains (losses) included in:		
Net income (loss)	—	17,944
Other comprehensive income (loss)	221	—
Settlements	(1,336)	—
Balances, September 30, 2018	$ 8,623	$ 6,849
Total gains (losses) for the period included in net income attributable to the change in unrealized gains and losses relating to assets and liabilities held at September 30, 2018	$ —	$ 17,944

	Recurring Level 3 financial assets and liabilities Nine Months Ended September 30, 2017	
	Assets	Assets/(Liabilities)
	Fixed maturities available-for-sale Corporate debt securities	Embedded derivatives - GLWB
Balances, January 1, 2017	$ 11,639	$ (5,712)
Realized and unrealized gains (losses) included in:		
Net income (loss)	—	(4,509)
Other comprehensive income (loss)	83	—
Settlements	(1,275)	—
Transfers out of Level 3 (1)	(367)	—
Balances, September 30, 2017	$ 10,080	$ (10,221)
Total gains (losses) for the period included in net income attributable to the change in unrealized gains and losses relating to assets and liabilities held at September 30, 2017	$ —	$ (4,509)

(1) Transfers out of Level 3 are due primarily to increased observability of inputs in valuation methodologies as evidenced by corroboration of market prices with multiple pricing vendors.

The following table presents significant unobservable inputs used during the valuation of certain liabilities categorized within Level 3 of the recurring fair value measurements table:

			Range	
	Valuation Technique	Unobservable Input	September 30, 2018	December 31, 2017
Embedded derivatives - GLWB	Risk neutral stochastic valuation methodology	Equity volatility	15% - 30%	15% - 30%
		Swap curve	2.40% - 3.16%	1.69% - 2.54%
		Mortality rate	Based on the Annuity 2000 Mortality Table	Based on the Annuity 2000 Mortality Table
		Base Lapse rate	1% - 15%	1% - 15%

(Dollars in Thousands)

Fair value of financial instruments

The following tables summarize the carrying amounts and estimated fair values of the Company's financial instruments and investments not carried at fair value on a recurring basis:

	September 30, 2018			December 31, 2017		
	Carrying amount	Estimated fair value	Fair value hierarchy level	Carrying amount	Estimated fair value	Fair value hierarchy level
Assets						
Mortgage loans on real estate	$ 4,365,189	$ 4,254,101	2	$ 4,005,187	$ 4,066,800	2
Policy loans	4,103,408	4,103,408	2	4,104,094	4,104,094	2
Limited partnership interests [1]	—	—		43,281	45,009	
Other investments	10,840	40,387	3	11,507	41,588	3
Liabilities						
Annuity contract benefits without life contingencies	$ 12,882,915	$ 12,503,021	2	$ 12,704,401	$ 12,647,309	2
Policyholders' funds	239,576	239,576	2	280,578	280,578	2
Commercial paper	99,692	99,692	2	99,886	99,886	2
Notes payable	564,119	612,828	2	543,338	581,097	2

[1] The fair value of limited partnership interests as of December 31, 2017 is estimated using net asset value per unit as a practical expedient.

9. Other Comprehensive Income

The following table presents the accumulated balances for each classification of other comprehensive income (loss):

	Three Months Ended September 30, 2018				
	Unrealized holding gains (losses) arising on fixed maturities, available-for-sale [1]	Unrealized holding gains (losses) arising on cash flow hedges [2]	Future policy benefits, DAC and VOBA adjustments	Employee benefit plan adjustment [3]	Total
Balances, July 1, 2018	**$ 4,657**	**$ 53,880**	**$ (19,361)**	**$ (90,276)**	**$ (51,100)**
OCI before reclassifications	(148,340)	4,063	35,053	—	(109,224)
Deferred income tax benefit (expense)	31,151	(853)	(7,361)	—	22,937
AOCI before reclassification, net of tax	(117,189)	3,210	27,692	—	(86,287)
Amounts reclassified from AOCI	(2,219)	(4,718)	—	646	(6,291)
Deferred income tax benefit (expense)	467	991	—	(136)	1,322
Amounts reclassified from AOCI, net of tax	(1,752)	(3,727)	—	510	(4,969)
Balances, September 30, 2018	**$ (114,284)**	**$ 53,363**	**$ 8,331**	**$ (89,766)**	**$ (142,356)**

[1] Reclassifications affect investment gains (losses), net on the condensed consolidated statements of income.
[2] Reclassifications affect net investment income on the condensed consolidated statements of income, except for $(443) (before tax) which affected interest expense for the three months ended September 30, 2018.
[3] The adjustments for defined benefit plans are included in the computation of net periodic (benefit) cost of employee benefit plans (see note 11 for additional details).

(Dollars in Thousands)

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	Three Months Ended September 30, 2017				
	Unrealized holding gains (losses) arising on fixed maturities, available-for-sale [1]	Unrealized holding gains (losses) arising on cash flow hedges [2]	Future policy benefits, DAC and VOBA adjustments	Employee benefit plan adjustment [3]	Total
Balances, July 1, 2017	**$ 550,776**	**$ 50,132**	**$ (113,256)**	**$ (81,513)**	**$ 406,139**
OCI before reclassifications	39,983	(23,111)	(1,977)	8,553	23,448
Deferred income tax (expense) benefit	(13,994)	8,089	692	(2,994)	(8,207)
AOCI before reclassification, net of tax	25,989	(15,022)	(1,285)	5,559	15,241
Amounts reclassified from AOCI	(2,508)	(377)	—	2,193	(692)
Deferred income tax benefit (expense)	878	132	—	(768)	242
Amounts reclassified from AOCI, net of tax	(1,630)	(245)	—	1,425	(450)
Balances, September 30, 2017	**$ 575,135**	**$ 34,865**	**$ (114,541)**	**$ (74,529)**	**$ 420,930**

[1] Reclassifications affect investment gains (losses), net on the condensed consolidated statements of income.
[2] Reclassifications affect net investment income on the condensed consolidated statements of income, except for $690 (before tax) which affected interest expense for the three months ended September 30, 2017.
[3] The adjustments for defined benefit plans are included in the computation of net periodic (benefit) cost of employee benefit plans (see note 11 for additional details).

	Nine Months Ended September 30, 2018				
	Unrealized holding gains (losses) arising on fixed maturities, available-for-sale [1]	Unrealized holding gains (losses) arising on cash flow hedges [2]	Future policy benefits, DAC and VOBA adjustments	Employee benefit plan adjustment [3]	Total
Balances, January 1, 2018	**$ 544,887**	**$ 103,529**	**$ (116,267)**	**$ (91,192)**	**$ 440,957**
Change in estimate of tax reform impact	108,846	(83,806)	(25,040)	—	—
OCI before reclassifications	(961,854)	56,506	189,415	—	(715,933)
Deferred income tax benefit (expense)	201,989	(11,866)	(39,777)	—	150,346
AOCI before reclassification, net of tax	(759,865)	44,640	149,638	—	(565,587)
Amounts reclassified from AOCI	(10,320)	(13,924)	—	1,805	(22,439)
Deferred income tax benefit (expense)	2,168	2,924	—	(379)	4,713
Amounts reclassified from AOCI, net of tax	(8,152)	(11,000)	—	1,426	(17,726)
Balances, September 30, 2018	**$ (114,284)**	**$ 53,363**	**$ 8,331**	**$ (89,766)**	**$ (142,356)**

[1] Reclassifications affect investment gains (losses), net on the condensed consolidated statements of income.
[2] Reclassifications affect net investment income on the condensed consolidated statements of income, except for $(1,075) (before tax) which affected interest expense for the nine months ended September 30, 2018.
[3] The adjustments for defined benefit plans are included in the computation of net periodic (benefit) cost of employee benefit plans (see note 11 for additional details).

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	Nine Months Ended September 30, 2017				
	Unrealized holding gains (losses) arising on fixed maturities, available-for-sale [1]	Unrealized holding gains (losses) arising on cash flow hedges [2]	Future policy benefits, DAC and VOBA adjustments	Employee benefit plan adjustment [3]	Total
Balances, January 1, 2017	**$ 311,748**	**$ 67,076**	**$ (58,646)**	**$ (84,303)**	**$ 235,875**
OCI before reclassifications	407,208	(48,311)	(85,992)	8,553	281,458
Deferred income tax (expense) benefit	(142,523)	16,909	30,097	(2,994)	(98,511)
AOCI before reclassification, net of tax	264,685	(31,402)	(55,895)	5,559	182,947
Amounts reclassified from AOCI	(1,997)	(1,245)	—	6,485	3,243
Deferred income tax benefit (expense)	699	436	—	(2,270)	(1,135)
Amounts reclassified from AOCI, net of tax	(1,298)	(809)	—	4,215	2,108
Balances, September 30, 2017	**$ 575,135**	**$ 34,865**	**$ (114,541)**	**$ (74,529)**	**$ 420,930**

[1] Reclassifications affect investment gains (losses), net on the condensed consolidated statements of income.
[2] Reclassifications affect net investment income on the condensed consolidated statements of income, except for $2,357 (before tax) which affected interest expense for the nine months ended September 30, 2017.
[3] The adjustments for defined benefit plans are included in the computation of net periodic (benefit) cost of employee benefit plans (see note 11 for additional details).

10. Revenues

Fee Income Revenue Recognition

Fee income is recognized upon transfer of control of promised services when provided to customers in an amount that reflects the consideration expected to be received in exchange for those services. Fee income can be based on a rate per plan or per participant, percentage of assets under management or administration, or rate based on the services provided.

Certain recordkeeping and administrative contracts include non-performance penalties if certain customer satisfaction metrics are not met. The Company estimates a reduction in fee income for non-performance penalties based on an analysis of historical loss.

The sources of fee income from contracts with customers include:

Administration, Recordkeeping, Servicing, and Distribution Fees

Fees earned for providing recordkeeping, shareholder servicing and distribution of funds, administrative, trustee, and custodial services for retirement plan sponsors, plan participants, insurance policy holders and IRA account holders. Recordkeeping contracts with customers contain multiple performance obligations. For these contracts, the Company accounts for the individual performance obligations separately if they are distinct. The transaction price is allocated to the separate performance obligations on a relative standalone selling price basis. These fees are primarily earned over time (i.e. services are rendered daily) and are calculated as a percentage of assets under administration or as a rate per plan or per participants in a plan. These fees also include service revenues that are recognized as services are rendered and are based upon established billing rates. Such services include loan processing and postage fees. Fees are generally invoiced quarterly and are either deducted directly from plan or participant assets or due within 30 days.

(Dollars in Thousands)

Investment Advisory and Asset Management Fees

Fees earned for investment advisory and asset management and administrative services to retirement plan sponsors, plan participants, insurance policyholders and IRA accountholders, and affiliates of the Company. These fees are primarily earned over time (i.e. services are rendered daily) and are calculated as a percentage of average daily net assets under management or are based upon established billing rates. Fees are generally invoiced quarterly and due within 30 days or are deducted directly from plan, participant, or other investment accounts.

Other Fees

Other fees includes insurance product related fees earned under the guidance of Topic 944, *Financial Services - Insurance* such as fees for certain variable annuity guaranteed death benefits and insurance risk charges.

The following table presents fee income disaggregated by type of services and segment:

	Three Months Ended September 30, 2018			
	Individual Markets	Empower Retirement	Other	Total
Administration, recordkeeping and servicing fees	$ 1,263	$ 172,239	$ —	$ 173,502
Investment advisory and asset management fees	3,758	69,165	1,768	74,691
Other fee income	26,963	15,634	—	42,597
Total Fee Income	$ 31,984	$ 257,038	$ 1,768	$ 290,790

	Nine Months Ended September 30, 2018			
	Individual Markets	Empower Retirement	Other	Total
Administration, recordkeeping and servicing fees	$ 3,565	$ 497,438	$ —	$ 501,003
Investment advisory and asset management fees	10,456	206,135	5,331	221,922
Other fee income	82,757	47,768	—	130,525
Total Fee Income	$ 96,778	$ 751,341	$ 5,331	$ 853,450

At September 30, 2018 and December 31, 2017, included in other assets are customer contract receivables of $247,428 and $234,256, respectively. The Company did not have material bad debt expense during the three and nine months ended September 30, 2018.

Assets Recognized from the Costs to Obtain and Fulfill a Contract

The Company recognizes an asset for the incremental costs of obtaining a contract with a customer if it is expected that the costs are recoverable and the benefit of those costs will be longer than one year. The Company also recognizes an asset for costs that relate directly to fulfilling a contract and are expected to be recovered. At September 30, 2018, the Company included deferred contract costs related to ASC 606 of $45,842 in the DAC and VOBA balance in the condensed consolidated balance sheet.

(Dollars in Thousands)

11. Employee Benefit Plans

Net periodic cost (benefit) of the Defined Benefit Pension, Post-Retirement Medical, and Supplemental Executive Retirement plans included in general insurance expenses in the accompanying condensed consolidated statements of income includes the following components:

	Three Months Ended September 30,							
	Defined Benefit Pension Plan		Post-Retirement Medical Plan		Supplemental Executive Retirement Plan		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
Components of net periodic cost (benefit):								
Service cost	$ —	$ 2,170	$ 317	$ 378	$ —	$ (4)	$ 317	$ 2,544
Interest cost	5,736	6,114	183	192	339	405	6,258	6,711
Expected return on plan assets	(5,361)	(4,980)	—	—	—	—	(5,361)	(4,980)
Amortization of unrecognized prior service costs (benefits)	—	—	(5)	(235)	81	126	76	(109)
Amortization of losses (gains) from earlier periods	625	2,241	(44)	75	(11)	(14)	570	2,302
Net periodic cost (benefit)	$ 1,000	$ 5,545	$ 451	$ 410	$ 409	$ 513	$ 1,860	$ 6,468

	Nine Months Ended September 30,							
	Defined Benefit Pension Plan		Post-Retirement Medical Plan		Supplemental Executive Retirement Plan		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
Components of net periodic cost (benefit):								
Service cost	$ —	$ 1,436	$ 1,069	$ 1,092	$ —	$ (12)	$ 1,069	$ 2,516
Interest cost	17,155	18,356	527	568	1,018	1,215	18,700	20,139
Expected return on plan assets	(16,022)	(15,216)	—	—	—	—	(16,022)	(15,216)
Amortization of unrecognized prior service costs (benefits)	—	—	(15)	(339)	243	376	228	37
Amortization of losses (gains) from earlier periods	1,793	6,639	(182)	(151)	(34)	(40)	1,577	6,448
Net periodic cost (benefit)	$ 2,926	$ 11,215	$ 1,399	$ 1,170	$ 1,227	$ 1,539	$ 5,552	$ 13,924

The Company expects to make payments of approximately $281 with respect to its Post-Retirement Medical Plan and $2,385 with respect to its Supplemental Executive Retirement Plan during the year ended December 31, 2018. The Company expects to make a contribution of $3,057 to its Defined Benefit Pension Plan during 2019. A December 31 measurement date is used for the employee benefit plans.

The following table summarizes payments made to the Post-Retirement Medical Plan and the Supplemental Executive Retirement Plan:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Payments to the Post-Retirement Medical Plan	$ 94	$ 155	$ 211	$ 531
Payments to the Supplemental Executive Retirement Plan	590	834	1,789	2,502

(Dollars in Thousands)

12. Income Taxes

The provision for income taxes is comprised of the following:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Current expense	$ 1,387	$ 27,585	$ 7,943	$ 58,845
Deferred expense	15,900	(5,897)	50,148	6,128
Total income tax provision	$ 17,287	$ 21,688	$ 58,091	$ 64,973

The following table presents a reconciliation between the statutory federal income tax rate and the Company's effective income tax rate:

	Nine Months Ended September 30,	
	2018	2017
Statutory federal income tax rate	21.0 %	35.0 %
Income tax effect of:		
Investment income not subject to federal tax	(2.3)%	(3.9)%
Tax credits	(0.6)%	(0.3)%
State income taxes, net of federal benefit	2.7 %	2.8 %
Other, net	0.2 %	(0.5)%
Effective income tax rate	21.0 %	33.1 %

The effective income tax rate from continuing operations was 21.0% for the nine months ended September 30, 2018, compared with 33.1% for the same period in 2017. The decrease in effective income tax rate for the nine months ended September 30, 2018, compared with the same period in 2017, was primarily the result of the passage of the Tax Reconciliation Act, which reduced the U.S. federal corporate income tax rate from 35% to 21% effective January 1, 2018.

The Company recorded a decrease of $11,434 and an increase of $4,694 in unrecognized tax benefits during the nine months ended September 30, 2018, and 2017, respectively. The Company anticipates additional decreases to its unrecognized tax benefits of $1,000 to $3,000 in the next twelve months. The Company expects that the majority of the decrease in its unrecognized tax benefits will not impact the effective tax rate.

The Company files income tax returns in the U.S. federal jurisdiction and various states. With few exceptions, the Company is no longer subject to U.S. federal income tax examinations by tax authorities for years 2014 and prior. Tax years 2015 through 2017 are open to federal examination by the Internal Revenue Service ("IRS"). The Company does not expect significant increases or decreases to unrecognized tax benefits relating to federal, state, or local audits.

13. Segment Information

The Chief Operating Decision Maker ("CODM") of the Company is also the Chief Executive Officer ("CEO") of the Company and Lifeco U.S. The CODM reviews the financial information for the purposes of assessing performance and allocating resources based upon the results of Lifeco U.S. and other U.S. affiliates prepared in accordance with International Financial Reporting Standards. The CODM, in his capacity as CEO of the Company, reviews the Company's financial information only in connection with the quarterly and annual reports that are filed with the Securities and Exchange Commission ("SEC"). Consequently, the Company does not provide its discrete financial information to the CODM to be regularly reviewed to make decisions about resources to be allocated or to assess performance. For purposes of SEC reporting requirements, the Company has chosen to present its financial information in three segments, notwithstanding the above. The three segments are: Individual Markets, Empower Retirement, and Other.

(Dollars in Thousands)

Individual Markets

The Individual Markets reporting and operating segment distributes life insurance and individual annuity products to both individuals and businesses through various distribution channels. Life insurance products in-force include participating and non-participating term life, whole life, universal life, and variable universal life.

Empower Retirement

The Empower Retirement reporting and operating segment provides various retirement plan products and investment options as well as comprehensive administrative and record-keeping services for financial institutions and employers, which include educational, advisory, enrollment, and communication services for employer-sponsored defined contribution plans and associated defined benefit plans.

Other

The Company's Other reporting segment is substantially comprised of activity under the assumption of reinsurance between Great-West Life & Annuity Insurance Company of South Carolina ("GWSC"), a wholly owned subsidiary, and The Canada Life Assurance Company ("CLAC") ("the GWSC operating segment"), corporate items not directly allocated to the other operating segments, and interest expense on long-term debt.

The accounting principles used to determine segment results are the same as those used in the consolidated financial statements. The Company evaluates performance of its reportable segments based on their profitability from operations after income taxes. Inter-segment transactions and balances have been eliminated in consolidation. The Company's operations are not materially dependent on one or a few customers, brokers, or agents. The following tables summarize segment financial information:

	Three Months Ended September 30, 2018			
	Individual Markets	Empower Retirement	Other	Total
Revenue:				
Premium income	$ 123,915	$ 914	$ 6,124	$ 130,953
Fee income	31,984	257,038	1,768	290,790
Other revenue	—	3,078	—	3,078
Net investment income	191,167	118,960	12,298	322,425
Investment gains (losses), net	6,020	(1,612)	1	4,409
Total revenues	353,086	378,378	20,191	751,655
Benefits and expenses:				
Policyholder benefits	284,538	54,652	3,804	342,994
Operating expenses	43,222	269,131	7,639	319,992
Total benefits and expenses	327,760	323,783	11,443	662,986
Income before income taxes	25,326	54,595	8,748	88,669
Income tax expense	3,640	11,761	1,886	17,287
Net income	$ 21,686	$ 42,834	$ 6,862	$ 71,382

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Notes to Condensed Consolidated Financial Statements
(Dollars in Thousands)
(Unaudited)

	Three Months Ended September 30, 2017			
	Individual Markets	Empower Retirement	Other	Total
Revenue:				
Premium income	$ 125,757	$ 764	$ 18,983	$ 145,504
Fee income	27,780	234,957	1,567	264,304
Other revenue	—	3,322	—	3,322
Net investment income	185,447	103,334	11,801	300,582
Realized investment gains (losses), net	2,389	11,472	—	13,861
Total revenues	341,373	353,849	32,351	727,573
Benefits and expenses:				
Policyholder benefits	272,396	53,736	18,109	344,241
Operating expenses	41,332	255,623	18,108	315,063
Total benefits and expenses	313,728	309,359	36,217	659,304
Income (loss) before income taxes	27,645	44,490	(3,866)	68,269
Income tax expense (benefit)	9,398	13,641	(1,351)	21,688
Net income (loss)	$ 18,247	$ 30,849	$ (2,515)	$ 46,581

	Nine Months Ended September 30, 2018			
	Individual Markets	Empower Retirement	Other	Total
Revenue:				
Premium income	$ 297,456	$ 2,589	$ 53,745	$ 353,790
Fee income	96,778	751,341	5,331	853,450
Other revenue	—	9,140	—	9,140
Net investment income	585,900	365,257	36,880	988,037
Investment gains (losses), net	21,467	(20,596)	51	922
Total revenues	1,001,601	1,107,731	96,007	2,205,339
Benefits and expenses:				
Policyholder benefits	758,101	159,899	24,264	942,264
Operating expenses	144,247	787,883	54,186	986,316
Total benefits and expenses	902,348	947,782	78,450	1,928,580
Income before income taxes	99,253	159,949	17,557	276,759
Income tax expense	17,672	36,538	3,881	58,091
Net income	$ 81,581	$ 123,411	$ 13,676	$ 218,668

GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY
Notes to Condensed Consolidated Financial Statements
(Dollars in Thousands)
(Unaudited)

	Nine Months Ended September 30, 2017			
	Individual Markets	Empower Retirement	Other	Total
Revenue:				
Premium income	$ 302,017	$ 1,908	$ 61,483	$ 365,408
Fee income	82,960	698,850	4,948	786,758
Other revenue	—	9,367	—	9,367
Net investment income	562,440	313,710	35,124	911,274
Realized investment gains (losses), net	7,010	17,168	(7)	24,171
Total revenues	954,427	1,041,003	101,548	2,096,978
Benefits and expenses:				
Policyholder benefits	740,655	152,067	60,491	953,213
Operating expenses	127,137	760,564	59,854	947,555
Total benefits and expenses	867,792	912,631	120,345	1,900,768
Income (loss) before income taxes	86,635	128,372	(18,797)	196,210
Income tax expense (benefit)	29,579	42,063	(6,669)	64,973
Net income (loss)	$ 57,056	$ 86,309	$ (12,128)	$ 131,237

14. Commitments and Contingencies

Commitments

The Company has a revolving credit facility agreement in the amount of $50,000 for general corporate purposes. The credit facility expires on March 1, 2023. Interest accrues at a rate dependent on various conditions and terms of borrowings. The agreement requires, among other things, the Company to maintain a minimum adjusted net worth of $1,022,680, as defined in the credit facility agreement (compiled on the statutory accounting basis prescribed by the National Association of Insurance Commissioners), at any time. The Company was in compliance with all covenants at September 30, 2018 and December 31, 2017. At September 30, 2018 and December 31, 2017, there were no outstanding amounts related to the credit facility.

GWL&A Financial has a letter of credit for the benefit of GWSC for capital support in the amount of $70,000 and which renews annually until the Company terminates it under the provisions specified in the agreement. At September 30, 2018 and December 31, 2017, there were no outstanding amounts related to the letter of credit.

In addition, the Company has other letters of credit with a total amount of $9,095, renewable annually for an indefinite period of time. At September 30, 2018 and December 31, 2017, there were no outstanding amounts related to those letters of credit.

The Company makes commitments to fund partnership interests, mortgage loans on real estate, and other investments in the normal course of its business. The amounts of these unfunded commitments at September 30, 2018 and December 31, 2017, were as follows:

	September 30, 2018	December 31, 2017
Due in less than one year	$ 293,382	$ 312,152
Due within one to three years	—	1,090
Total	$ 293,382	$ 313,242

Included in the total unfunded commitments at September 30, 2018 and December 31, 2017, is $112,412 and $114,726, respectively, related to limited partnership interests, all of which may be required to be paid within one year from the dates indicated.

Contingencies

From time to time, the Company may be threatened with, or named as a defendant in, lawsuits, arbitrations, and administrative claims. Any such claims that are decided against the Company could harm the Company’s business. The Company is also subject to periodic regulatory audits and inspections which could result in fines or other disciplinary actions. Unfavorable outcomes in such matters may result in a material impact on the Company's financial position, results of operations, or cash flows.

The Company is defending lawsuits relating to the costs and features of certain retirement or fund products. Management believes the claims are without merit and will defend these actions. Based on the information known, these actions will not have a material adverse effect on the consolidated financial position of the Company.

The Company is involved in other various legal proceedings that arise in the ordinary course of its business. In the opinion of management, after consultation with counsel, the likelihood of loss from the resolution of these proceedings is remote and/or the estimated loss is not expected to have a material effect on the Company’s consolidated financial position, results of its operations, or cash flows.

15. Subsequent Events

On October 24, 2018, the Company’s Board of Directors declared dividends of up to $33,000, to be paid on December 14, 2018 to its sole shareholder, GWL&A Financial.

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

General

As used in this Form 10-Q, the “Company” refers to Great-West Life & Annuity Insurance Company, a stock life insurance company originally organized on March 28, 1907 and domiciled in the state of Colorado, and its subsidiaries.

This Form 10-Q contains forward-looking statements. Forward-looking statements are statements not based on historical information and that relate to future operations, strategies, financial results, or other developments. In particular, statements using words such as “may,” “would,” “could,” “should,” “estimates,” “expected,” “anticipate,” “believe,” or words of similar import generally involve forward-looking statements. Without limiting the foregoing, forward-looking statements include statements that represent the Company’s beliefs concerning future or projected levels of sales of its products, investment spreads or yields, or the earnings or profitability of the Company’s activities.

Forward-looking statements are necessarily based upon estimates and assumptions that are inherently subject to significant business, economic, and competitive uncertainties and contingencies, many of which are beyond the Company’s control and many of which, with respect to future business decisions, are subject to change. Some of these risks are described in “Risk Factors” in Item 1A of the Company’s Annual Report on Form 10-K for the year ended December 31, 2017. These uncertainties and contingencies can affect actual results and could cause actual results to differ materially from those expressed in any forward-looking statements made by, or on behalf of, the Company. Whether or not actual results differ materially from forward-looking statements may depend on numerous foreseeable and unforeseeable events or developments, some of which may be global or national in scope, such as general economic conditions and interest rates, some of which may be related to the insurance industry generally, such as pricing competition, regulatory developments and industry consolidation, and others of which may relate to the Company specifically, such as credit, volatility, and other risks associated with its investment portfolio and other factors.

Readers should also consider other matters, including any risks and uncertainties, discussed in documents filed by the Company and certain of its subsidiaries with the Securities and Exchange Commission (“SEC”). The following discussion addresses the Company’s results of operations for the three and nine months ended September 30, 2018, compared with the same period in 2017. This discussion should be read in conjunction with the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” to which the reader is directed for additional information.

Recent Events

On April 18, 2018, the SEC released its proposal on the best interest standards applicable to brokers and advisors. The Company has provided comments to the SEC in August 2018. The Company will monitor any developments or proposed revisions and will comply with the new standards.

The Tax Reconciliation Act, which was signed in December 2017, among other changes, lowered the federal income tax rate from 35% to 21% effective on January 1, 2018. As a result, net earnings in 2018 reflect net income, tax effected at the lower 21% rate. Other provisions of the tax bill did not have a material effect on year-to-date taxable income in 2018.

Current Market Conditions

The S&P 500 index at September 30, 2018 was up by 7% compared to June 30, 2018 and up by 9% compared to January 1, 2018. The S&P 500 index at September 30, 2017 was up by 4% compared to June 30, 2017 and up by 12.5% compared to January 1, 2017. The average of the S&P 500 index was up by 16% and 15% during the three and nine months ended September 30, 2018, when compared to the same period in 2017.

	2018			2017		
S&P 500 Index	**Close**	**Average in Quarter**	**Average for Year to Date**	**Close**	**Average in Quarter**	**Average for Year to Date**
September 30	2,914	2,849	2,762	2,519	2,465	2,396
June 30	2,718	2,704	2,718	2,423	2,396	2,360
March 31	2,641	2,733	2,733	2,363	2,324	2,324
January 1	2,674			2,239		

Variable asset-based fees earned by the Company fluctuate with changes in participant account balances. Participant account balances change due to cash flow and unrealized market gains and losses, which are primarily associated with changes in the U.S. equities market. Fee income increased for the three and nine months ended September 30, 2018, when compared to the same period in 2017. For the three and nine months ended September 30, 2018, the increase was primarily due to higher asset-based fees, driven by growth in the assets, due to increases in the U.S. equities market and business growth.

The 10-year U.S. Treasury rate at September 30, 2018, was up by 20 basis points as compared to June 30, 2018 and was up by 65 basis points as compared to January 1, 2018. The rate at September 30, 2017 was up by 2 basis points as compared to June 30, 2017 and was down by 12 basis points as compared to January 1, 2017. The average of the 10-year U.S. Treasury rate during the three months ended September 30, 2018, was up by 68 basis points when compared to 2017 and the rate during the nine months ended September 30, 2018 was up by 55 basis points when compared to 2017.

	2018			2017		
10-Year Treasury Rate	**Close**	**Average in Quarter**	**Average for Year to Date**	**Close**	**Average in Quarter**	**Average for Year to Date**
September 30	3.05%	2.92%	2.87%	2.33%	2.24%	2.32%
June 30	2.85%	2.92%	2.84%	2.31%	2.26%	2.35%
March 31	2.74%	2.76%	2.76%	2.35%	2.45%	2.45%
January 1	2.40%			2.45%		

Unrealized gains on fixed maturity investments fluctuate with changes in the prevailing interest rates. When interest rates decrease, market values of fixed maturity investments generally increase, and vice-versa. The Company has recorded in other comprehensive income net unrealized losses on fixed maturity investments of $151 million and $976 million for the three and nine months ended September 30, 2018, compared to net unrealized gains of $37 million and $406 million for the three and nine months ended September 30, 2017. This resulted in a net accumulated other comprehensive loss position at September 30, 2018, net of policy holder related amounts, and deferred taxes.

The Company employs hedging strategies for the purpose of managing the interest rate, foreign currency exchange rate, and equity market risks impacting the Company's business. For some derivative instruments, hedge accounting is either not elected or the transactions are not eligible for hedge accounting; therefore all gains or losses from these transactions are recorded in the condensed consolidated statement of income. As a result, fluctuations in interest rates, foreign currencies, or equity markets may cause the Company to experience volatility in net income. For the three and nine months ended September 30, 2018, the Company recorded losses on interest rate swaps in the condensed consolidated statement of income of $7 million and $21 million, compared to gains of zero and $4 million, respectively in 2017. For the three and nine months ended September 30, 2018, the Company recorded gains on cross-currency swaps in the condensed consolidated statement of income of $6 million and $18 million, compared to losses of $16 million and $38 million, respectively in 2017. For the three and nine months ended September 30, 2018, the Company recorded losses on forward settling to be announced ("TBA") securities of $5 million and $27 million, respectively, compared to gains of $7 million and $20 million, respectively in 2017.

Reconciliation of Net Income to Adjusted Operating Income

The Company uses the same accounting policies and procedures to measure adjusted operating income as it uses to measure consolidated net income. The Company employs hedging strategies for the purpose of managing the interest rate, foreign currency exchange rate, and equity market risks impacting the Company's business. For some derivative instruments, hedge accounting is either not elected or the transactions are not eligible for hedge accounting; therefore, all gains or losses from these transactions are recorded in the consolidated statement of income. As a result, fluctuations in interest rates, foreign currencies, or equity markets may cause the Company to experience volatility in net income. As such, the Company has defined adjusted operating income as net income, excluding realized and unrealized gains and losses on investments and derivatives and their related tax effect. Adjusted operating income should not be viewed as a substitute for net income prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"). In addition, the Company's adjusted operating income measures may not be comparable to similarly titled measures reported by other companies.

Three months ended September 30, 2018 compared with the three months ended September 30, 2017

The Company believes that the presentation of adjusted operating income enhances the understanding of the Company's performance by highlighting the results of operations and the underlying profitability drivers of the business. The following is a summary of the contributions of each segment to net income and a reconciliation of net income to adjusted operating income:

	Three Months Ended September 30,		Increase	Percentage
Income statement data (In millions)	**2018**	**2017**	**(decrease)**	**change**
Net income (loss)				
Individual Markets segment	$ 21	$ 18	$ 3	17 %
Empower Retirement segment	43	31	12	39 %
Other segment	7	(3)	10	333 %
Total net income	71	46	25	54 %
Adjustments to net income				
Investment gains (losses), net	4	(6)	10	167 %
Pro-rata tax (expense) benefit[1]	(1)	2	(3)	(150)%
Adjusted operating income	$ 68	$ 50	$ 18	36 %

[1] Current year calculated utilizing estimated tax rate of 21%. Prior year estimated tax rate of 35%.

Investment gains (losses), net, had a favorable change of $10 million, or 167%, from a loss of $6 million in 2017 to a gain of $4 million in 2018. The change was primarily due to favorable cross currency swaps in 2018.

The pro-rata tax expense changed by $3 million, or 150%, from a benefit of $2 million in 2017 to an expense of $1 million in 2018, resulting from the favorable change in investment gains (losses), net in 2018, offset by the U.S. corporate tax rate change from 35% to 21%.

Nine months ended September 30, 2018 compared with the nine months ended September 30, 2017

The following is a summary of the contributions of each segment to the net income and a reconciliation of net income to operating income:

Income statement data (In millions)	Nine Months Ended September 30, 2018	2017	Increase (decrease)	Percentage change
Net income (loss)				
Individual Markets segment	$ 82	$ 57	$ 25	44 %
Empower Retirement segment	123	86	37	43 %
Other segment	14	(12)	26	217 %
Total net income	219	131	88	67 %
Adjustments to net income				
Investment gains (losses), net	1	(15)	16	107 %
Pro-rata tax (expense) benefit [1]	—	6	(6)	(100)%
Adjusted operating income	$ 218	$ 140	$ 78	56 %

[1] Current year calculated utilizing estimated tax rate of 21%. Prior year estimated tax rate of 35%.

Investment (losses) gains, net, had a favorable change of $16 million, or 107%, from a loss of $15 million in 2017 to a gain of $1 million in 2018. The change was primarily due to favorable cross currency swaps in 2018.

The pro-rata tax benefit changed by $6 million, or 100%, from $6 million in 2017 to zero in 2018, resulting from the favorable change in investment gains (losses), net in 2018, offset by the U.S. corporate tax rate change from 35% to 21%.

Company Results of Operations

Three months ended September 30, 2018 compared with the three months ended September 30, 2017

The following is a summary of certain financial data of the Company:

Income statement data (In millions)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Increase (decrease)	Percentage change
Premium income	$ 131	$ 146	$ (15)	(10)%
Fee income	291	264	27	10 %
Other revenue	3	3	—	— %
Adjusted net investment income	322	320	2	1 %
Total adjusted operating revenues	747	733	14	2 %
Policyholder benefits	343	344	(1)	— %
Operating expenses	320	315	5	2 %
Total benefits and expenses	663	659	4	1 %
Adjusted operating income before income taxes	84	74	10	14 %
Adjusted income tax expense	16	24	(8)	(33)%
Adjusted operating income	$ 68	$ 50	$ 18	36 %

The Company's consolidated adjusted operating income had a favorable change of $18 million, or 36%, to $68 million for the three months ended September 30, 2018, when compared to the same period in 2017. The change was primarily due to higher fee income, higher adjusted net investment income, and lower adjusted income tax expense, partially offset by lower premium income and higher operating expenses.

Premium income had an unfavorable change of $15 million, or 10%, to $131 million for the three months ended September 30, 2018, when compared to the same period in 2017 primarily due to lower premiums on a closed block of business.

Fee income had a favorable change of $27 million, or 10%, to $291 million for the three months ended September 30, 2018, when compared to the same period in 2017. This change was primarily related to higher asset-based variable fee income driven by growth in assets and an increase in participants.

Adjusted net investment income had a favorable change of $2 million, or 1%, to $322 million. The change was primarily related to higher investment income earned on bonds, mortgages, and policy loans principally as a result of higher invested asset balances.

Operating expenses had an unfavorable change of $5 million, or 2%, to $320 million for the three months ended September 30, 2018, when compared to the same period in 2017. The primary driver of this change was higher general expenses due to growth in the business and lower DAC deferral**.**

Adjusted income tax expense had a favorable change of $8 million, or 33%, to $16 million for the three months ended September 30, 2018, when compared to the same period in 2017 primarily due to the impact of the U.S. corporate tax rate change.

Nine months ended September 30, 2018 compared with the nine months ended September 30, 2017

The following is a summary of certain financial data of the Company:

Income statement data (In millions)	Nine Months Ended September 30, 2018	2017	Increase (decrease)	Percentage change
Premium income	$ 354	$ 365	$ (11)	(3)%
Fee income	853	787	66	8 %
Other revenue	9	9	—	— %
Adjusted net investment income	988	951	37	4 %
Total adjusted operating revenues	2,204	2,112	92	4 %
Policyholder benefits	942	953	(11)	(1)%
Operating expenses	986	948	38	4 %
Total benefits and expenses	1,928	1,901	27	1 %
Adjusted operating income before income taxes	276	211	65	31 %
Adjusted income tax expense	58	71	(13)	(18)%
Adjusted operating income	$ 218	$ 140	$ 78	56 %

The Company's consolidated adjusted operating income had a favorable change of $78 million, or 56%, to $218 million for the nine months ended September 30, 2018, when compared to the same period in 2017. The change was primarily due to higher fee income, higher adjusted net investment income, lower policyholder benefits and lower adjusted income tax expense, partially offset by lower premium income and higher operating expenses.

Premium income had an unfavorable change of $11 million, or 3%, to $354 million for the nine months ended September 30, 2018, when compared to the same period in 2017 primarily due to lower premiums on a closed block of business.

Fee income had a favorable change of $66 million, or 8%, to $853 million for the nine months ended September 30, 2018, when compared to the same period in 2017. This change was primarily related to higher asset-based variable fee income driven by growth in assets and an increase in participants.

Adjusted net investment income had a favorable change of $37 million, or 4%, to $988 million. The change was primarily related to higher investment income earned on bonds, mortgages, and policy loans principally as a result of higher invested asset balances.

Policyholder benefits had a favorable change of $11 million, or 1%, to $942 million for the nine months ended September 30, 2018, when compared to the same period in 2017. This was primarily related to a decrease in policy reserves, partially offset by an increase in death benefits and interest paid to policyholders.

Operating expenses had an unfavorable change of $38 million, or 4%, to $986 million for the nine months ended September 30, 2018, when compared to the same period in 2017. The primary driver of this change was higher litigation expenses, higher DAC and VOBA amortization and higher general expenses due to growth in the business.

Adjusted income tax expense had a favorable change of $13 million, or 18%, to $58 million for the nine months ended September 30, 2018, when compared to the same period in 2017 primarily due to the impact of the U.S. corporate tax rate change.

Individual Markets Segment Results of Operations

Three months ended September 30, 2018 compared with the three months ended September 30, 2017

The following is a summary of certain financial data of the Individual Markets segment:

Income statement data (In millions)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Increase (decrease)	Percentage change
Premium income	$ 124	$ 126	$ (2)	(2)%
Fee income	32	28	4	14 %
Adjusted net investment income	191	197	(6)	(3)%
Total adjusted operating revenues	347	351	(4)	(1)%
Policyholder benefits	285	272	13	5 %
Operating expenses	43	41	2	5 %
Total benefits and expenses	328	313	15	5 %
Adjusted operating income before income taxes	19	38	(19)	(50)%
Adjusted income tax expense	3	12	(9)	(75)%
Adjusted operating income	$ 16	$ 26	$ (10)	(38)%

Adjusted operating income for the Individual Markets segment had an unfavorable change of $10 million, or 38%, to $16 million during the three months ended September 30, 2018, when compared to the same period in 2017. The change was primarily due to higher policyholder benefits, lower adjusted net investment income, partially offset by lower adjusted income tax expense.

Adjusted net investment income had an unfavorable change of $6 million, or 3%, to $191 million. The change was primarily related to lower net interest income earned on bonds.

Policyholder benefits had an unfavorable change of $13 million, or 5%, to $285 million primarily due to an increase in surrender benefits and interest paid to policyholders, partially offset by a decrease in policy reserves.

Adjusted income tax expense had a favorable change of $9 million, or 75%, to $3 million in 2018 primarily due to a decrease in the adjusted operating income before income taxes and the impact of the U.S. corporate tax rate changes.

Nine months ended September 30, 2018 compared with the nine months ended September 30, 2017

The following is a summary of certain financial data of the Individual Markets segment:

Income statement data (In millions)	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017	Increase (decrease)	Percentage change
Premium income	$ 297	$ 302	$ (5)	(2)%
Fee income	97	83	14	17 %
Adjusted net investment income	586	581	5	1 %
Total revenues	980	966	14	1 %
Policyholder benefits	758	741	17	2 %
Operating expenses	144	127	17	13 %
Total benefits and expenses	902	868	34	4 %
Adjusted operating income before income taxes	78	98	(20)	(20)%
Adjusted income tax expense	13	34	(21)	(62)%
Adjusted operating income	$ 65	$ 64	$ 1	2 %

Adjusted operating income for the Individual Markets segment had a favorable change of $1 million, or 2%, to $65 million during the nine months ended September 30, 2018, when compared to the same period in 2017. The change was primarily due to higher fee income and lower adjusted income tax expense, partially offset by higher policyholder benefits and higher operating expenses.

Fee income had a favorable change of $14 million, or 17%, to $97 million for the nine months ended September 30, 2018, when compared to the same period in 2017. This was primarily related to an increase in asset-based variable fee income resulting from increased average asset levels driven by the individual annuity line of business.

Policyholder benefits had an unfavorable change of $17 million, or 2%, to $758 million. This was primarily due to an increase in death benefits, surrenders and interest paid to policy holders, partially offset by a decrease in policy reserves and group health and disability benefits.

Operating expenses had an unfavorable change of $17 million, or 13%, to $144 million for the nine months ended September 30, 2018, when compared to the same period in 2017. The primary driver of this change is higher DAC amortization and lower DAC deferrals.

Adjusted income tax expense had a favorable change of $21 million, or 62% to $13 million in 2018 primarily due to a decrease in adjusted operating income before income taxes and the impact of the U.S. corporate tax rate changes.

Empower Retirement Segment Results of Operations

Three months ended September 30, 2018 compared with the three months ended September 30, 2017

The following is a summary of certain financial data of the Empower Retirement segment:

	Three Months Ended September 30,		Increase	Percentage
Income statement data (In millions)	**2018**	**2017**	**(decrease)**	**change**
Premium income	$ 1	$ 1	$ —	— %
Fee income	257	235	22	9 %
Other revenue	3	3	—	— %
Adjusted net investment income	119	111	8	7 %
Total adjusted operating revenues	380	350	30	9 %
Policyholder benefits	55	54	1	2 %
Operating expenses	269	256	13	5 %
Total benefits and expenses	324	310	14	5 %
Adjusted operating income before income taxes	56	40	16	40 %
Adjusted income tax expense	11	13	(2)	(15)%
Adjusted operating income	$ 45	$ 27	$ 18	67 %

Adjusted operating income for the Empower Retirement segment had a favorable change of $18 million, or 67%, to $45 million for the three months ended September 30, 2018, when compared to the same period in 2017. The change was primarily due to higher fee income and higher adjusted net investment income, partially offset by higher operating expenses.

Fee income had a favorable change of $22 million, or 9%, to $257 million for the three months ended September 30, 2018, when compared to the same period in 2017. This change was primarily related to higher asset-based variable fee income driven by growth in assets and an increase in participants.

Adjusted net investment income had a favorable change of $8 million, or 7%, to $119 million for the three months ended September 30, 2018, when compared to the same period in 2017. The change was primarily related to higher investment income earned on bonds and mortgages as a result of higher invested asset balances.

Operating expenses had an unfavorable change of $13 million, or 5%, to $269 million for the three months ended September 30, 2018, when compared to the same period in 2017. The primary driver of this change is higher DAC and contract cost amortization and higher general expenses due to growth in the business.

Adjusted income tax expense had an favorable change of $2 million or 15%, to $11 million for the three months ended September 30, 2018, when compared to the same period in 2017 primarily due to the impact of the U.S. corporate tax rate changes.

Nine months ended September 30, 2018 compared with the nine months ended September 30, 2017

The following is a summary of certain financial data of the Empower Retirement segment:

Income statement data (In millions)	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017	Increase (decrease)	Percentage change
Premium income	$ 3	$ 2	$ 1	50 %
Fee income	751	699	52	7 %
Other revenue	9	9	—	— %
Adjusted net investment income	365	335	30	9 %
Total adjusted operating revenues	1,128	1,045	83	8 %
Policyholder benefits	160	152	8	5 %
Operating expenses	788	761	27	4 %
Total benefits and expenses	948	913	35	4 %
Adjusted operating income before income taxes	180	132	48	36 %
Adjusted income tax expense	41	44	(3)	(7)%
Adjusted operating income	$ 139	$ 88	$ 51	58 %

Adjusted operating income for the Empower Retirement segment had a favorable change of $51 million, or 58%, to $139 million for the nine months ended September 30, 2018, when compared to the same period in 2017. The change was primarily due to higher fee income, higher adjusted net investment income and lower adjusted income tax expense, partially offset by higher operating expenses and higher policyholder benefits.

Fee income had a favorable change of $52 million, or 7%, to $751 million for the nine months ended September 30, 2018, when compared to the same period in 2017. This change was primarily related to higher asset-based variable fee income, which was driven by growth in assets and an increase in participants.

Adjusted net investment income had a favorable change of $30 million, or 9%, to $365 million for the nine months ended September 30, 2018, when compared to the same period in 2017. The change was primarily related to higher investment income earned on bonds and mortgages principally as a result of higher invested asset balances.

Policyholder benefits had an unfavorable change of $8 million, or 5%, to $160 million for the nine months ended September 30, 2018, when compared to the same period in 2017, primarily due an increase in policy reserves and interest paid.

Operating expenses had an unfavorable change of $27 million, or 4%, to $788 million for the nine months ended September 30, 2018, when compared to the same period in 2017. The primary driver of this change is higher DAC, VOBA and contract cost amortization and higher general expenses due to growth in the business.

Adjusted income tax expense had a favorable change of $3 million or 7%, to $41 million for the nine months ended September 30, 2018, when compared to the same period in 2017 primarily due to the impact of the U.S. corporate tax rate changes.

Other Segment Results of Operations

Three months ended September 30, 2018 compared with the three months ended September 30, 2017

The following is a summary of certain financial data of the Company's Other segment:

Income statement data (In millions)	Three Months Ended September 30, 2018	Three Months Ended September 30, 2017	Increase (decrease)	Percentage change
Premium income	$ 6	$ 19	$ (13)	(68)%
Fee income	2	1	1	100 %
Adjusted net investment income	12	12	—	— %
Total adjusted operating revenues	20	32	(12)	(38)%
Policyholder benefits	3	18	(15)	(83)%
Operating expenses	8	18	(10)	(56)%
Total benefits and expenses	11	36	(25)	(69)%
Adjusted operating income (loss) before income taxes	9	(4)	13	325 %
Adjusted income tax expense (benefit)	2	(1)	3	300 %
Adjusted operating income (loss)	$ 7	$ (3)	$ 10	333 %

Adjusted operating income for the Company's Other segment had a favorable change of $10 million, or 333%, to $7 million for the three months ended September 30, 2018 compared to a loss of $3 million in 2017. The change in adjusted operating income was primarily due to lower policyholder benefits and lower operating expenses, partially offset by lower premium income and higher adjusted income tax expense.

Premium income had an unfavorable change of $13 million, or 68%, to $6 million for the three months ended September 30, 2018 primarily due to lower premiums on a closed block of business.

Policyholder benefits expense had a favorable change of $15 million, or 83%, to $3 million for the three months ended September 30, 2018 primarily due to a release of reserves on a closed block of business.

Operating expense had a favorable change of $10 million, or 56%, to $8 million for the three months ended September 30, 2018 due to a decrease in commissions and decreased letter of credit fees.

Adjusted income tax expense had an unfavorable change of $3 million, or 300%, to $2 million for the three months ended September 30, 2018 due to a higher adjusted operating income before income taxes, partially offset by the impact of U.S. corporate tax rate changes.

Nine months ended September 30, 2018 compared with the nine months ended September 30, 2017

The following is a summary of certain financial data of the Company's Other segment:

Income statement data (In millions)	Nine Months Ended September 30, 2018	Nine Months Ended September 30, 2017	Increase (decrease)	Percentage change
Premium income	$ 54	$ 61	$ (7)	(11)%
Fee income	5	5	—	— %
Adjusted net investment income	37	35	2	6 %
Total adjusted operating revenues	96	101	(5)	(5)%
Policyholder benefits	24	60	(36)	(60)%
Operating expenses	54	60	(6)	(10)%
Total benefits and expenses	78	120	(42)	(35)%
Adjusted operating income (loss) before income taxes	18	(19)	37	195 %
Adjusted income tax expense (benefit)	4	(7)	11	157 %
Adjusted operating income (loss)	$ 14	$ (12)	$ 26	217 %

Adjusted operating income for the Company's Other segment had a favorable change of $26 million, or 217%, to $14 million for the nine months ended September 30, 2018 compared to a loss of $12 million in 2017. The change in adjusted operating income was primarily due to lower policyholder benefits, partially offset by higher adjusted income tax expense.

Policyholder benefits expense had a favorable change of $36 million, or 60%, to $24 million for the nine months ended September 30, 2018 primarily due to a release of reserves on a closed block of business.

Adjusted income tax expense had an unfavorable change of $11 million, or 157%, to an expense of $4 million for the nine months ended September 30, 2018 primarily due to higher adjusted operating income before income taxes, partially offset by the impact of the U.S. corporate tax rate changes.

Investment Operations

The Company's primary investment objective is to acquire assets with duration and cash flow characteristics reflective of its liabilities, while meeting industry, size, issuer, and geographic diversification standards. Formal liquidity and credit quality parameters have also been established.

The Company follows rigorous procedures to control interest rate risk and observes strict asset and liability matching guidelines. These guidelines ensure that even under changing market conditions, the Company's assets should meet the cash flow and income requirements of its liabilities. Using dynamic modeling to analyze the effects of a range of possible market changes upon investments and policyholder benefits, the Company works to ensure that its investment portfolio is appropriately structured to fulfill financial obligations to its policyholders.

The following table presents the percentage distribution of the carrying values of the Company's general account investment portfolio:

(In millions)	September 30, 2018		December 31, 2017	
Fixed maturities, available-for-sale	$ 22,550	71.1%	$ 23,593	73.4%
Fixed maturities, held-for-trading	142	0.4%	21	0.1%
Mortgage loans on real estate	4,365	13.8%	4,005	12.4%
Policy loans	4,104	13.0%	4,104	12.8%
Short-term investments	415	1.3%	350	1.1%
Limited partnership interests	72	0.2%	46	0.1%
Other investments	55	0.2%	18	0.1%
Total investments	$ 31,703	100.0%	$ 32,137	100.0%

Fixed Maturity Investments

Fixed maturity investments include public and privately placed corporate bonds, government bonds, and mortgage-backed and asset-backed securities. Included in available-for-sale fixed maturities are perpetual debt investments which primarily consist of junior subordinated debt instruments that have no stated maturity date but pay fixed or floating interest in perpetuity. The Company's strategy related to mortgage-backed and asset-backed securities is to focus on those investments with low prepayment risk and minimal credit risk.

Private placement investments are generally less marketable than publicly traded assets, yet they typically offer enhanced covenant protection that allows the Company, if necessary, to take appropriate action to protect its investment. The Company believes that the cost of the additional monitoring and analysis required by private placement investments is more than offset by their enhanced yield.

One of the Company's primary objectives is to ensure that its fixed maturity portfolio is maintained at a high average credit quality to limit credit risk. All securities are internally rated by the Company on a basis intended to be similar to that of independent external rating agencies and the Company generally considers ratings from several of these major ratings agencies to develop its internal rating. In addition, the National Association of Insurance Commissioners ("NAIC") implemented a ratings methodology for residential mortgage-backed securities ("RMBS"), commercial mortgage-backed securities ("CMBS"), and other structured securities. The Company may also utilize inputs from this ratings process to develop its internal rating.

The percentage distribution of the estimated fair value of the Company's fixed maturity portfolio by the Company's internal credit rating is summarized as follows:

Credit Rating	September 30, 2018	December 31, 2017
AAA	21.4%	22.7%
AA	15.1%	14.9%
A	33.2%	33.8%
BBB	29.6%	27.7%
BB and below (Non-investment grade)	0.7%	0.9%
Total	100.0%	100.0%

The September 30, 2018, AAA rating percentage decreased as compared to December 31, 2017, as the Company sold AAA-rated government agency MBS pools to enter into forward settling TBA contracts which are treated as derivatives.

The percentage distribution of the estimated fair value of the corporate sector fixed maturity portfolio, calculated as a percentage of fixed maturities, is summarized as follows:

Sector	September 30, 2018	December 31, 2017
Utility	16.5%	17.8%
Finance	16.0%	14.8%
Consumer	10.8%	11.0%
Natural resources	7.2%	6.1%
Transportation	4.9%	4.2%
Other	12.2%	12.6%

Mortgage Loans on Real Estate

The Company's mortgage loans on real estate are comprised primarily of domestic commercial collateralized real estate loans. The mortgage loan portfolio is diversified with regard to geographical markets and commercial real estate property types. The Company originates, directly or through correspondents, real estate mortgages with the intent to hold to maturity. The Company's portfolio includes loans which are fully amortizing, amortizing with a balloon balance at maturity, interest only to maturity, and interest only for a number of years followed by an amortizing period.

Derivatives

The Company uses certain derivatives, such as futures, swaps, forwards, and interest rate swaptions, for purposes of managing the interest rate, foreign currency exchange rate, and equity market risks impacting the Company's business. These derivatives, when taken alone, may subject the Company to varying degrees of market and credit risk; however, since used for hedging purposes, these instruments are intended to reduce risk. For derivative instruments where hedge accounting is either not elected or the transactions are not eligible for hedge accounting, changes in interest rates, foreign currencies, or equity markets may generate derivative gains or losses which may cause the Company to experience volatility in net income. The Company also uses forward settling TBA securities to gain exposure to the investment risk and return of agency mortgage-backed securities (pass-throughs). These transactions enhance the return on the Company's investment portfolio and provide a more liquid and cost effective method of achieving these goals than purchasing or selling individual agency mortgage-backed pools. The Company controls the credit risk of its over-the-counter derivative contracts through credit approvals, limits, monitoring procedures, and in most cases, requiring collateral. Risk of loss is generally limited to the portion of the fair value of derivative instruments that exceeds the value of the collateral held and not to the notional or contractual amounts of the derivatives.

Summary of Critical Accounting Estimates

The preparation of financial statements in conformity with U.S. GAAP requires the Company's management to adopt accounting policies to enable them to make a significant variety of accounting and actuarial estimates and assumptions. These estimates and assumptions are evaluated on an ongoing basis based on historical developments, market conditions, industry trends, and other information that is reasonable given the facts and circumstances for the Company. These critical estimates and assumptions affect, among other things, the reported amounts of assets and liabilities, the disclosure of contingent liabilities, and the reported amounts of revenues and expenses. Actual results can differ from the amounts previously estimated, which were based on information available at the time the estimates were made.

The Company has identified the following accounting policies, judgments, and estimates as critical in that they involve a higher degree of judgment and are subject to a significant degree of variability:

- Valuation of investments;
- Impairment of investments;
- Valuation of derivatives and related hedge accounting;
- Valuation of DAC and related amortization (including unlocking of assumptions); and
- Valuation of policy benefit liabilities

A discussion of each of these critical accounting policies may be found in the Company's Annual Report on Form 10-K for the year ended December 31, 2017, under Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Application of Recent Accounting Pronouncements

See Note 2 to the accompanying condensed consolidated financial statements for a discussion of the application of recent accounting pronouncements.

Liquidity and Capital Resources

Liquidity refers to a company's ability to generate sufficient cash flows to meet the short-term needs of its operations. The Company manages its operations to create stable, reliable, and cost-effective sources of cash flows to meet all of its obligations.

The principal sources of the Company's liquidity are premiums and contract deposits, fees, investment income, and investment maturities and sales. Funds provided from these sources are reasonably predictable and normally exceed liquidity requirements for payment of policy benefits, payments to policy and contractholders in connection with surrenders and withdrawals, and general expenses. However, since the timing of available funds cannot always be matched precisely to commitments, imbalances may arise when demands for funds exceed those on hand. A primary liquidity concern regarding cash flows from operations is the risk of early policyholder and contractholder withdrawals. A primary liquidity concern regarding investment activity is the risk of defaults and market volatility.

In addition, a demand for funds may arise as a result of the Company taking advantage of current investment opportunities. The sources of the funds that may be required in such situations include the issuance of commercial paper or other debt instruments.

Management believes that the liquidity profile of its assets is sufficient to satisfy the short-term liquidity requirements of reasonably foreseeable scenarios.

Generally, the Company has met its operating requirements by utilizing cash flows from operations and maintaining appropriate levels of liquidity in its investment portfolio. Liquidity for the Company has remained strong, as evidenced by the amounts of short-term investments and cash and cash equivalents that totaled $403 million and $367 million as of September 30, 2018 and December 31, 2017, respectively. The September 30, 2018 and December 31, 2017, short-term investments included above exclude any amounts held to settle TBA forward contracts. In addition, 99% of the fixed maturity portfolio carried an investment grade rating at September 30, 2018 and December 31, 2017, which provides significant liquidity to the Company's overall investment portfolio.

The Company continues to be well capitalized, with sufficient borrowing capacity. Additionally, the Company anticipates that cash on hand and expected net cash generated by operating activities will exceed the forecasted needs of the business over the next 12 months. The Company's financial strength provides the capacity and flexibility to enable it to raise funds in the capital markets through the issuance of commercial paper. The Company had $100 million of commercial paper outstanding as of September 30, 2018 and December 31, 2017. The commercial paper has been given a rating of A-1+ by Standard & Poor's Ratings Services and a rating of P-1 by Moody's Investors Service, each being the highest rating available. The Company's issuance of commercial paper is not used to fund daily operations and does not have a significant impact on the Company's liquidity.

The Company also has available a revolving credit facility agreement with U.S. Bank, which expires on March 1, 2023, in the amount of $50 million for general corporate purposes. The Company had no borrowings under this credit facility as of or during the nine months ended September 30, 2018. The Company does not anticipate the need for borrowings under this facility and the loss of its availability would not significantly impact its liquidity.

Capital resources provide protection for policyholders and financial strength to support the underwriting of insurance risks and allow for continued business growth. The amount of capital resources that may be needed is determined by the Company's senior management and Board of Directors, as well as by regulatory requirements. The allocation of resources to new long-term business commitments is designed to achieve an attractive return, tempered by considerations of risk and the need to support the Company's existing business.

Off-Balance Sheet Arrangements

The Company makes commitments to fund partnership interests, mortgage loans on real estate, and other investments in the normal course of its business. The amounts of these unfunded commitments at September 30, 2018 and December 31, 2017, were $293 million and $313 million, respectively. The precise timing of the fulfillment of the commitment cannot be predicted; however, all $293 million of the September 30, 2018 balance, and $312 million of the December 31, 2017 balance may be required to be paid within one year of the dates indicated. The remaining $1 million of the December 31, 2017 balance is due within one to three years. There are no other obligations or liabilities arising from such arrangements that are reasonably likely to become material.

The Company participates in a short-term reverse repurchase program for the purpose of enhancing the total return on its investment portfolio. This type of transaction involves the purchase of securities with a simultaneous agreement to sell similar securities at a future date at an agreed-upon price. In exchange, the counterparty financial institutions put non-cash collateral on deposit with a third-party custodian on behalf of the Company. The amount of securities purchased in connection with these transactions was zero and $23 million at September 30, 2018 and December 31, 2017, respectively. Non-cash collateral on deposit with the third-party custodian on the Company’s behalf was zero and $24 million at September 30, 2018 and December 31, 2017, respectively, which cannot be sold or re-pledged and which has not been recorded on the condensed consolidated balance sheets. Collateral related to the reverse repurchase agreements generally consists of U.S. government or U.S. government agency securities.

The Company participates in a securities lending program in which the Company lends securities that are held as part of its general account investment portfolio to third parties for the purpose of enhancing the total return on its investment portfolio. The Company generally requires initial collateral in an amount greater than or equal to 102% of the fair value of domestic securities loaned and 105% of foreign securities loaned. The Company received securities with a fair value of $21 million as collateral at September 30, 2018, which have not been recorded on the condensed consolidated balance sheets as the Company does not have effective control. There were no securities on loan and therefore no securities were received as collateral at December 31, 2017.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

The Company has established processes and procedures to effectively identify, monitor, measure, and manage the risks associated with its invested assets and its interest rate sensitive insurance and annuity products. Management has identified investment portfolio management, including the use of derivative instruments, insurance and annuity product design, and asset/liability management as three critical means to accomplish a successful risk management program.

The major risks to which the Company is exposed include the following:

- Market risk - the potential of loss arising from adverse fluctuations in interest rates and equity market prices and the levels of their volatility.
- Insurance risk - the potential of loss resulting from claims, persistency, and expense experience exceeding that assumed in the liabilities held.
- Credit risk - the potential of loss arising from an obligator’s inability or unwillingness to meet its obligations to the Company.
- Operational and corporate risk - the potential of direct or indirect loss resulting from inadequate or failed internal processes, people and systems, or from other external events.

A discussion of each of these risk factors may be found in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, under Item 7A, “Quantitative and Qualitative Disclosures About Market Risk.”

Item 4. Controls and Procedures

Disclosure Controls and Procedures

The Company's management, with the participation of its President and Chief Executive Officer and its Principal Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures, as required by Rule 13a-15(b) under the Securities Exchange Act of 1934 ("Exchange Act"). The Company's disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in reports it files or submits under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and to ensure that the information required to be disclosed by the Company in reports that it files under the Exchange Act is accumulated and communicated to the Company's management, including the principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, the President and Chief Executive Officer and Principal Financial Officer have concluded that the Company's disclosure controls and procedures are effective as of September 30, 2018.

Changes in Internal Control over Financial Reporting

As disclosed in Item 9A, "Controls and Procedures," of the Company's Annual Report on Form 10-K for the year ended December 31, 2017, management concluded that the Company maintained effective internal control over financial reporting. There has been no significant change in the control environment for the three and nine months ended September 30, 2018. Management is committed to continuing to improve its internal control processes and will continue to review its financial reporting controls and procedures.

Part II Other Information

Item 1. Legal Proceedings

From time to time, the Company may be threatened with, or named as a defendant in, lawsuits, arbitrations, and administrative claims. Any such claims that are decided against the Company could harm the Company’s business. The Company is also subject to periodic regulatory audits and inspections which could result in fines or other disciplinary actions. Unfavorable outcomes in such matters may result in a material impact on the Company's financial position, results of operations, or cash flows.

The Company is defending lawsuits relating to the costs and features of certain of its retirement or fund products. Management believes the claims are without merit and will defend these actions. Based on the information known, these actions will not have a material adverse effect on the consolidated financial position of the Company.

The Company is involved in other various legal proceedings that arise in the ordinary course of its business. In the opinion of management, after consultation with counsel, the likelihood of loss from the resolution of these proceedings is remote and/or the estimated loss is not expected to have a material effect on the Company’s consolidated financial position, results of its operations or cash flows.

Item 1A. Risk Factors

In the normal course of its business, the Company is exposed to certain operational, regulatory, and financial risks and uncertainties. The most significant risks include the following:

- Competition could negatively affect the ability of the Company to maintain or increase market share or profitability.
- The insurance and financial services industries are heavily regulated and changes in regulation may reduce profitability.
- A downgrade or potential downgrade in the Company’s financial strength or claims paying ratings could result in a loss of business and negatively affect results of operations and financial condition.
- Deviations from assumptions regarding future persistency, mortality, and interest rates used in calculating liabilities for future policyholder benefits and claims could adversely affect the Company’s results of operations and financial condition.
- The Company may be required to accelerate the amortization of DAC or VOBA, or recognize impairment in the value of goodwill or other intangible assets, which could adversely affect its results of operations and financial condition.
- If the companies that provide reinsurance default or fail to perform or the Company is unable to obtain adequate reinsurance for some of the risks underwritten, the Company could incur significant losses adversely affecting results of operations and financial condition.
- Interest rate fluctuations could have a negative impact on results of operations and financial condition.
- Market fluctuations and general economic conditions may adversely affect results of operations and financial condition.
- Changes in U.S. federal income tax law could make some of the Company’s products less attractive to consumers and increase its tax costs.
- The Company may be subject to litigation resulting in substantial awards or settlements and this may adversely affect its reputation and results of operations.
- The Company’s risk management policies and procedures may leave it exposed to unidentified or unanticipated risk, which could adversely affect its business, results of operations, and financial condition.
- The Company may experience difficulty in marketing and distributing products through its current and future distribution channels.

- A failure in cyber or information security systems could result in a loss or disclosure of confidential information, damage the Company’s reputation, and could impair its ability to conduct business effectively.

- The Company could face difficulties, unforeseen liabilities, or asset impairments arising from business acquisitions or integrations and managing growth of such businesses.

- Counterparties with whom the Company transfers risk may be unable or unwilling to do business with the Company.

- The Company may not be able to secure financing to meet the liquidity or capital needs of the Company.

Item 6. Exhibits

The documents identified below are filed as a part of this report:

Index to Exhibits

Exhibit Number	Title
3(ii)	Bylaws of Great-West Life & Annuity Insurance Company
31.1	Rule 13a-14(a)/15-d14(a) Certification
31.2	Rule 13a-14(a)/15-d14(a) Certification
32	18 U.S.C. 1350 Certification
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

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

Great-West Life & Annuity Insurance Company

By: /s/ Kara Roe Date: November 14, 2018

Kara Roe

Vice President, Controller, and Principal Accounting Officer

BYLAWS OF GREAT-WEST LIFE & ANNUITY INSURANCE COMPANY

ARTICLE I
MEETING OF SHAREHOLDERS

SECTION 1. The Annual Meeting of Shareholders shall be held at such time, on such date and at such place within or without the State of Colorado as the Board of Directors may determine from time to time.

SECTION 2. Special Meetings of Shareholders may be called by the Chairman or a majority of the Board of Directors at any time upon written notice given pursuant to law (which notice may be waived in accordance with law).

ARTICLE II
BOARD OF DIRECTORS

SECTION 1. The number of directors may be fixed by the Board of Directors from time to time to such number, not less than seven (7) nor more than twenty-five (25), as the Board may determine.

SECTION 2. Any vacancy on the Board of Directors, whether resulting from an increase in the number of directors or otherwise, may be filled by the affirmative vote of a majority of directors then in office, even though less than a quorum, or by a sole remaining director. Directors shall be elected by the Board of Directors to serve until the next annual meeting of the Shareholders.

SECTION 3. A meeting of the Board may be called by the Chairman of the Board, by the Chairman of the Executive Committee, by such other Director as may from time to time be authorized by the Chairman of the Board, or by a majority of the Directors, on not less than 48 hours notice to the members of the Board specifying the place, date and time of the meeting. Meetings may be held at any time without notice if all members of the Board waive notice. If a meeting of the Board is called by anyone other than the Chairman of the Board, the person[s] calling such a meeting shall so advise the Chairman of the Board. A meeting of a Committee of the Board may be called by the Chairman of the Committee, by the Chairman of the Board, by such other Director(s) as may from time to time be authorized by the Chairman of the Committee, or by a majority of the Committee members, on not less than 48 hours notice to the members of the Committee specifying the place, date and time of the meeting. Meetings may be held at any time without notice if all members of the Committee waive notice. If a meeting of the Committee is called by anyone other than the Chairman of the Board, the person[s] calling the meeting shall so inform the Chairman of the Board and the Chairman of the Committee.

SECTION 4. A quorum at any meeting of the Board shall be a majority of the number of Board members fixed by the Board from time to time. A quorum at any meeting of a Committee of the Board shall be a majority of the Committee members.

SECTION 5. The Board shall establish an Executive Committee, an Audit Committee, a Conduct Review Committee, a Governance and Nominating Committee and a Compensation Committee, and may establish such other Committees as it deems advisable to assist it in discharging its duties, and may establish Committee charters and otherwise delegate to those Committees such duties and responsibilities as may be permitted by law and as it deems necessary or advisable.

ARTICLE III
OFFICERS

The Chairman of the Board and the President and Chief Executive Officer shall be initially appointed by the Board of Directors. Officers at the level of Senior Vice President and above shall be initially appointed by the Chairman of the Board. The Board of Directors shall annually reappoint all officers at the level of Senior Vice President and above. Officers at a level below Senior Vice President may be appointed by the President and Chief Executive Officer. Any number of offices may be held by the same person. Such officers shall have such authority and perform such duties as normally pertain to their offices or as may from time to time be determined by the Board of Directors.

ARTICLE IV
INDEMNIFICATION

SECTION 1. In this Article, the following terms shall have the following meanings:

(a) "expenses" means reasonable expenses incurred in a proceeding, including expenses of investigation and preparation, expenses in connection with an appearance as a witness, and fees and disbursement of counsel, accountants or other experts;

(b) "liability" means an obligation incurred with respect to a proceeding to pay a judgment, settlement, penalty or fine;

(c) "party" includes a person who was, is, or is threatened to be made a named defendant or respondent in a proceeding;

(d) "proceeding" means any threatened, pending or completed action, suit, or proceeding whether civil, criminal, administrative or investigative, and whether formal or informal.

SECTION 2. Subject to applicable law, if any person who is or was a director, officer or employee of the corporation is made a party to a proceeding because the person is or was a director, officer or employee of the corporation, the corporation shall indemnify the person, or the estate or personal representative of the person, from and against all liability and expenses incurred by the person in the proceeding (and advance to the person expenses incurred in the proceeding) if, with respect to the matter(s) giving rise to the proceeding:

(a) the person conducted himself or herself in good faith; and

(b) the person reasonably believed that his or her conduct was in the corporation's best interests; and

(c) in the case of any criminal proceeding, the person had no reasonable cause to believe that his or her conduct was unlawful; and

(d) if the person is or was an employee of the corporation, the person acted in the ordinary course of the person's employment with the corporation.

SECTION 3. Subject to applicable law, if any person who is or was serving as a director, officer, trustee, plan administrator or employee of another company or entity at the request of the corporation is made a party to a proceeding because the person is or was serving as a director, officer, trustee or employee of the other company or entity, the corporation shall indemnify the person, or the estate or personal representative of the person, from and against all liability and expenses incurred by the person in the proceeding (and advance to the person expenses incurred in the proceeding) if:

(a) the person is or was appointed to serve at the request of the corporation as a director, officer, trustee or employee of the other company or entity in accordance with Indemnification Procedures approved by the Board of Directors of the corporation; and

(b) with respect to the matter(s) giving rise to the proceeding:

(i) the person conducted himself or herself in good faith; and

(ii) the person reasonably believed that his or her conduct was at least not opposed to the corporation's best interests (in the case of a trustee or plan administrator of one of the corporation's staff benefits plans, this means that the person's conduct was for a purpose the person reasonably believed to be in the interests of the plan participants); and

(iii) in the case of any criminal proceeding, the person had no reasonable cause to believe that his or her conduct was unlawful; and

(iv) if the person is or was an employee of the other company or entity, the person acted in the ordinary course of the person's employment with the other company or entity.

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Exhibit 31.1

CERTIFICATION

I, Robert L. Reynolds, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Great-West Life & Annuity Insurance Company (the "registrant");

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

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

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

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

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

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

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

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

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

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

Date: November 14, 2018

/s/ Robert L. Reynolds

Robert L. Reynolds
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Andra Bolotin, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Great-West Life & Annuity Insurance Company (the "registrant");

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

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

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

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

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

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

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

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

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

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

Date: November 14, 2018

/s/ Andra Bolotin

Andra Bolotin
Executive Vice President, Chief Financial Officer, and Principal Financial Officer

Exhibit 32

CERTIFICATION

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Great-West Life & Annuity Insurance Company, a Colorado corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 (the "Form 10-Q") of the Company fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 and information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated:	November 14, 2018	/s/	Robert L. Reynolds
			Robert L. Reynolds
			President and Chief Executive Officer
Dated:	November 14, 2018	/s/	Andra Bolotin
			Andra Bolotin
			Executive Vice President, Chief Financial Officer, and Principal Financial Officer

The foregoing certification is being furnished solely pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code) and is not being filed as part of the Form 10-Q or as a separate disclosure document.