

REINSURANCE GROUP OF AMERICA INC
Form 10-Q
November 02, 2018
Table of Contents

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

Commission File Number 1-11848

REINSURANCE GROUP OF AMERICA, INCORPORATED

(Exact name of Registrant as specified in its charter)

MISSOURI 43-1627032

(State or other jurisdiction (IRS employer
of incorporation or organization) identification number)

16600 Swingley Ridge Road

Chesterfield, Missouri 63017

(Address of principal executive offices)

(636) 736-7000

(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 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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer 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 October 31, 2018, 62,774,675 shares of the registrant's common stock were outstanding.

Table of ContentsREINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
TABLE OF CONTENTS

Item	Page
PART I – FINANCIAL INFORMATION	
1	<u>Financial Statements</u>
	<u>Condensed Consolidated Balance Sheets (Unaudited)</u>
	<u>September 30, 2018 and December 31, 2017</u>
	<u>3</u>
	<u>Condensed Consolidated Statements of Income (Unaudited)</u>
	<u>Three and nine months ended September 30, 2018 and 2017</u>
	<u>4</u>
	<u>Condensed Consolidated Statements of Comprehensive Income (Unaudited)</u>
	<u>Three and nine months ended September 30, 2018 and 2017</u>
	<u>5</u>
	<u>Condensed Consolidated Statements of Cash Flows (Unaudited)</u>
	<u>Nine months ended September 30, 2018 and 2017</u>
	<u>6</u>
	<u>Notes to Condensed Consolidated Financial Statements (Unaudited):</u>
	<u>7</u>
	<u>1. Business and Basis of Presentation</u>
	<u>7</u>
	<u>2. Earnings Per Share</u>
	<u>7</u>
	<u>3. Equity</u>
	<u>8</u>
	<u>4. Investments</u>
	<u>10</u>
	<u>5. Derivative Instruments</u>
	<u>20</u>
	<u>6. Fair Value of Assets and Liabilities</u>
	<u>28</u>
	<u>7. Segment Information</u>
	<u>39</u>
	<u>8. Commitments, Contingencies and Guarantees</u>
	<u>40</u>
	<u>9. Income Tax</u>
	<u>41</u>
	<u>10. Employee Benefit Plans</u>
	<u>43</u>
	<u>11. Reinsurance</u>
	<u>43</u>
	<u>12. Financing Activities</u>
	<u>44</u>
	<u>13. New Accounting Standards</u>
	<u>44</u>
2	<u>Management’s Discussion and Analysis of</u>
	<u>Financial Condition and Results of Operations</u>
	<u>46</u>
3	<u>Quantitative and Qualitative Disclosures About Market Risk</u>
	<u>80</u>
4	<u>Controls and Procedures</u>
	<u>81</u>
PART II – OTHER INFORMATION	
1	<u>Legal Proceedings</u>
	<u>82</u>
1A	<u>Risk Factors</u>
	<u>82</u>
2	<u>Unregistered Sales of Equity Securities and Use of Proceeds</u>
	<u>82</u>
6	<u>Exhibits</u>
	<u>82</u>
	<u>Signatures</u>
	<u>84</u>
	<u>Index to Exhibits</u>
	<u>83</u>

Table of Contents

PART I - FINANCIAL INFORMATION

ITEM 1. Financial Statements

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(Unaudited)

	September 30, 2018	December 31, 2017
	(Dollars in thousands, except share data)	
Assets		
Fixed maturity securities available-for-sale, at fair value (amortized cost \$37,751,132 and \$35,281,412)	\$ 39,005,212	\$ 38,150,820
Equity securities, at fair value (cost \$111,248 and \$102,841)	101,069	100,152
Mortgage loans on real estate (net of allowances of \$10,366 and \$9,384)	4,779,074	4,400,533
Policy loans	1,320,050	1,357,624
Funds withheld at interest	5,976,301	6,083,388
Short-term investments	229,928	93,304
Other invested assets	1,706,979	1,505,332
Total investments	53,118,613	51,691,153
Cash and cash equivalents	1,730,489	1,303,524
Accrued investment income	455,296	392,721
Premiums receivable and other reinsurance balances	2,779,556	2,338,481
Reinsurance ceded receivables	769,324	782,027
Deferred policy acquisition costs	3,211,145	3,239,824
Other assets	908,219	767,088
Total assets	\$ 62,972,642	\$ 60,514,818
Liabilities and Stockholders' Equity		
Future policy benefits	\$ 25,139,148	\$ 22,363,241
Interest-sensitive contract liabilities	16,751,379	16,227,642
Other policy claims and benefits	5,424,347	4,992,074
Other reinsurance balances	482,235	488,739
Deferred income taxes	1,883,848	2,198,309
Other liabilities	1,213,595	1,102,975
Long-term debt	2,787,975	2,788,365
Collateral finance and securitization notes	710,792	783,938
Total liabilities	54,393,319	50,945,283
Commitments and contingent liabilities (See Note 8)		
Stockholders' Equity:		
Preferred stock - par value \$.01 per share, 10,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock - par value \$.01 per share, 140,000,000 shares authorized, 79,137,758 shares issued at September 30, 2018 and December 31, 2017	791	791
Additional paid-in capital	1,899,144	1,870,906
Retained earnings	7,215,526	6,736,265
Treasury stock, at cost - 16,186,890 and 14,685,663 shares	(1,348,943)	(1,102,058)
Accumulated other comprehensive income	812,805	2,063,631
Total stockholders' equity	8,579,323	9,569,535

Total liabilities and stockholders' equity	\$ 62,972,642	\$ 60,514,818
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See accompanying notes to condensed consolidated financial statements (unaudited).

Table of Contents

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF INCOME
 (Unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(Dollars in thousands, except per share data)			
Revenues:				
Net premiums	\$2,562,042	\$2,489,797	\$7,739,053	\$7,335,944
Investment income, net of related expenses	572,742	556,918	1,617,132	1,589,820
Investment related gains (losses), net:				
Other-than-temporary impairments on fixed maturity securities	(10,705)	(390)	(14,055)	(20,980)
Other investment related gains (losses), net	(9,312)	23,043	(17,004)	160,451
Total investment related gains (losses), net	(20,017)	22,653	(31,059)	139,471
Other revenues	112,764	75,942	272,020	218,091
Total revenues	3,227,531	3,145,310	9,597,146	9,283,326
Benefits and Expenses:				
Claims and other policy benefits	2,209,920	2,100,680	6,851,614	6,371,188
Interest credited	143,292	126,099	333,068	349,068
Policy acquisition costs and other insurance expenses	310,639	365,424	987,817	1,064,645
Other operating expenses	200,262	168,417	586,495	481,279
Interest expense	33,290	36,836	107,769	108,590
Collateral finance and securitization expense	7,467	7,692	22,509	21,235
Total benefits and expenses	2,904,870	2,805,148	8,889,272	8,396,005
Income before income taxes	322,661	340,162	707,874	887,321
Provision for income taxes	21,462	112,571	102,071	282,028
Net income	\$301,199	\$227,591	\$605,803	\$605,293
Earnings per share:				
Basic earnings per share	\$4.76	\$3.53	\$9.47	\$9.39
Diluted earnings per share	\$4.68	\$3.47	\$9.30	\$9.23
Dividends declared per share	\$0.60	\$0.50	\$1.60	\$1.32

4

Table of Contents

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
 (Unaudited)

	Three months ended September 30, 2018		2017		Nine months ended September 30, 2018		2017	
Comprehensive income (loss)	(Dollars in thousands)							
Net income	\$301,199	\$227,591	\$605,803	\$605,293				
Other comprehensive income (loss), net of tax:								
Foreign currency translation adjustments	25,462	46,733	(30,375)	68,085				
Net unrealized investment gains (losses)	(215,986)	(93,574)	(1,218,309)	415,870				
Defined benefit pension and postretirement plan adjustments	931	700	431	2,473				
Total other comprehensive income (loss), net of tax	(189,593)	(46,141)	(1,248,253)	486,428				
Total comprehensive income (loss)	\$111,606	\$181,450	\$(642,450)	\$1,091,721				
See accompanying notes to condensed consolidated financial statements (unaudited).								

Table of Contents

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
 CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
 (Unaudited)

	Nine months ended September 30,	
	2018	2017
	(Dollars in thousands)	
Cash Flows from Operating Activities:		
Net income	\$605,803	\$605,293
Adjustments to reconcile net income to net cash provided by operating activities:		
Change in operating assets and liabilities:		
Accrued investment income	23,473	(63,321)
Premiums receivable and other reinsurance balances	(519,107)	(421,027)
Deferred policy acquisition costs	23,682	67,471
Reinsurance ceded receivable balances	37,468	(120,013)
Future policy benefits, other policy claims and benefits, and other reinsurance balances	920,492	982,164
Deferred income taxes	(8,136)	236,185
Other assets and other liabilities, net	(47,978)	78,848
Amortization of net investment premiums, discounts and other	(55,154)	(95,227)
Depreciation and amortization expense	32,153	21,384
Investment related (gains) losses, net	31,059	(139,471)
Other, net	56,408	(47,787)
Net cash provided by operating activities	1,100,163	1,104,499
Cash Flows from Investing Activities:		
Sales of fixed maturity securities available-for-sale	6,314,968	6,364,236
Maturities of fixed maturity securities available-for-sale	461,764	385,993
Sales of equity securities	44,952	192,821
Principal payments and sales of mortgage loans on real estate	290,450	208,052
Principal payments on policy loans	43,995	93,286
Purchases of fixed maturity securities available-for-sale	(6,041,665)	(7,450,749)
Purchases of equity securities	(12,578)	(60,790)
Cash invested in mortgage loans on real estate	(671,956)	(751,702)
Cash invested in policy loans	(6,422)	(5,830)
Cash invested in funds withheld at interest	(61,969)	(12,597)
Purchase of businesses, net of cash acquired of \$4,988	(31,441)	—
Purchases of property and equipment	(20,478)	(33,242)
Change in short-term investments	34,856	65,664
Change in other invested assets	(313,464)	(51,476)
Net cash provided by (used in) investing activities	31,012	(1,056,334)
Cash Flows from Financing Activities:		
Dividends to stockholders	(102,441)	(85,086)
Repayment of collateral finance and securitization notes	(75,146)	(56,637)
Principal payments of long-term debt	(2,007)	(301,927)
Purchases of treasury stock	(273,873)	(41,360)
Exercise of stock options, net	2,336	4,450
Change in cash collateral for derivative positions and other arrangements	(21,288)	(46,206)
Deposits on universal life and other investment type policies and contracts	320,871	1,007,563
Withdrawals on universal life and other investment type policies and contracts	(520,649)	(568,789)

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Net cash used in financing activities	(672,197)	(87,992)
Effect of exchange rate changes on cash	(32,013)	43,699
Change in cash and cash equivalents	426,965	3,872
Cash and cash equivalents, beginning of period	1,303,524	1,200,718
Cash and cash equivalents, end of period	\$1,730,489	\$1,204,590
Supplemental disclosures of cash flow information:		
Interest paid	\$124,575	\$129,136
Income taxes paid, net of refunds	\$99,554	\$27,385
Non-cash transactions:		
Transfer of invested assets	\$3,763,195	\$2,247,136
Purchase of businesses:		
Assets acquired, excluding cash acquired	\$69,853	\$—
Liabilities assumed	(38,412)	—
Net cash paid on purchase	\$31,441	\$—
See accompanying notes to condensed consolidated financial statements (unaudited).		

Table of Contents

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES

Notes to Condensed Consolidated Financial Statements

(Unaudited)

1. Business and Basis of Presentation

Reinsurance Group of America, Incorporated (“RGA”) is an insurance holding company that was formed on December 31, 1992. The accompanying unaudited condensed consolidated financial statements of RGA and its subsidiaries (collectively, the “Company”) have been prepared in conformity with accounting principles generally accepted in the United States of America (“GAAP”) for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, these condensed consolidated financial statements do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, all adjustments, including normal recurring adjustments necessary for a fair presentation have been included. Results for the nine months ended September 30, 2018 are not necessarily indicative of the results that may be expected for the year ending December 31, 2018. These unaudited condensed consolidated financial statements include the accounts of RGA and its subsidiaries, and all intercompany accounts and transactions have been eliminated. These condensed consolidated statements should be read in conjunction with the Company’s 2017 Annual Report on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on February 27, 2018 (the “2017 Annual Report”).

2. Earnings Per Share

The following table sets forth the computation of basic and diluted earnings per share on net income (in thousands, except per share information):

	Three months ended		Nine months ended	
	September 30,	September 30,	September 30,	September 30,
	2018	2017	2018	2017
Earnings:				
Net income (numerator for basic and diluted calculations)	\$301,199	\$227,591	\$605,803	\$605,293
Shares:				
Weighted average outstanding shares (denominator for basic calculation)	63,279	64,488	63,941	64,430
Equivalent shares from outstanding stock options	1,017	1,165	1,189	1,174
Denominator for diluted calculation	64,296	65,653	65,130	65,604
Earnings per share:				
Basic	\$4.76	\$3.53	\$9.47	\$9.39
Diluted	\$4.68	\$3.47	\$9.30	\$9.23

The calculation of common equivalent shares does not include the impact of options having a strike or conversion price that exceeds the average stock price for the earnings period, as the result would be antidilutive. The calculation of common equivalent shares also excludes the impact of outstanding performance contingent shares, as the conditions necessary for their issuance have not been satisfied as of the end of the reporting period. The following table presents approximate amounts of stock options and performance contingent shares excluded from the calculation of common equivalent shares (in thousands):

	Three months ended		Nine months ended	
	September 30,	September 30,	September 30,	September 30,
	2018	2017	2018	2017
Excluded from common equivalent shares:				
Stock options	227	87	349	296
Performance contingent shares	276	307	256	293

Table of Contents

3. Equity

Common Stock

The changes in number of common stock shares, issued, held in treasury and outstanding are as follows for the periods indicated:

	Issued	Held In Treasury	Outstanding
Balance, December 31, 2017	79,137,758	14,685,663	64,452,095
Common stock acquired	—	1,750,295	(1,750,295)
Stock-based compensation ⁽¹⁾	—	(249,068)	249,068
Balance, September 30, 2018	79,137,758	16,186,890	62,950,868
	Issued	Held In Treasury	Outstanding
Balance, December 31, 2016	79,137,758	14,835,256	64,302,502
Common stock acquired	—	208,680	(208,680)
Stock-based compensation ⁽¹⁾	—	(274,449)	274,449
Balance, September 30, 2017	79,137,758	14,769,487	64,368,271

(1) Represents net shares issued from treasury pursuant to the Company's equity-based compensation programs.

Common Stock Held in Treasury

Common stock held in treasury is accounted for at average cost. Gains resulting from the reissuance of common stock held in treasury are credited to additional paid-in capital. Losses resulting from the reissuance of common stock held in treasury are charged first to additional paid-in capital to the extent the Company has previously recorded gains on treasury share transactions, then to retained earnings.

In January 2017, RGA's board of directors authorized a share repurchase program for up to \$400.0 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. During the first nine months of 2018, RGA repurchased 1.8 million shares of common stock under this program for \$258.5 million. During the first nine months of 2017, RGA repurchased 0.2 million shares of common stock under this program for \$26.9 million.

Accumulated Other Comprehensive Income (Loss)

The balance of and changes in each component of accumulated other comprehensive income (loss) ("AOCI") for the nine months ended September 30, 2018 and 2017 are as follows (dollars in thousands):

	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments ⁽¹⁾	Pension and Postretirement Benefits	Total
Balance, December 31, 2017	\$ (86,350)	\$ 2,200,661	\$ (50,680)	\$ 2,063,631
Other comprehensive income (loss) before reclassifications	(24,977)	(1,638,146)	(3,391)	(1,666,514)
Amounts reclassified to (from) AOCI	—	79,505	3,986	83,491
Deferred income tax benefit (expense)	(5,398)	340,332	(164)	334,770
Adoption of new accounting standard	(2,573)	—	—	(2,573)
Balance, September 30, 2018	\$ (119,298)	\$ 982,352	\$ (50,249)	\$ 812,805
	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments ⁽¹⁾	Pension and Postretirement Benefits	Total
Balance, December 31, 2016	\$ (172,541)	\$ 1,355,033	\$ (43,163)	\$ 1,139,329
Other comprehensive income (loss) before reclassifications	23,117	671,564	(191)	694,490

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Amounts reclassified to (from) AOCI	—	(51,407) 4,006	(47,401)
Deferred income tax benefit (expense)	44,968	(204,287) (1,342) (160,661)
Balance, September 30, 2017	\$ (104,456	) \$ 1,770,903	\$ (40,690	) \$ 1,625,757	

Includes cash flow hedges of \$29,043 and \$2,619 as of September 30, 2018 and December 31, 2017, respectively, (1) and \$347 and \$(2,496) as of September 30, 2017 and December 31, 2016, respectively. See Note 5 - "Derivative Instruments" for additional information on cash flow hedges.

Table of Contents

The following table presents the amounts of AOCI reclassifications for the three and nine months ended September 30, 2018 and 2017 (dollars in thousands):

Details about AOCI Components	Amount Reclassified from AOCI				Affected Line Item in Statements of Income
	Three months ended September 30,		Nine months ended September 30,		
	2018	2017	2018	2017	
Net unrealized investment gains (losses):					
Net unrealized gains (losses) on available-for-sale securities	\$(21,249)	\$10,515	\$(60,347)	\$39,032	Investment related gains (losses), net
Cash flow hedges - Interest rate	234	—	(108)	—	(1)
Cash flow hedges - Currency/Interest rate	50	230	270	560	(1)
Cash flow hedges - Forward bond purchase commitments	—	224	—	286	(1)
Deferred policy acquisition costs attributed to unrealized gains and losses	(4,893)	1,116	(19,320)	11,529	(2)
Total	(25,858)	12,085	(79,505)	51,407	
Provision for income taxes	5,355	(3,991)	16,978	(16,015)	
Net unrealized gains (losses), net of tax	\$(20,503)	\$8,094	\$(62,527)	\$35,392	
Amortization of defined benefit plan items:					
Prior service cost (credit)	\$246	\$590	\$739	\$732	(3)
Actuarial gains/(losses)	(1,866)	(1,661)	(4,725)	(4,738)	(3)
Total	(1,620)	(1,071)	(3,986)	(4,006)	
Provision for income taxes	340	375	837	1,402	
Amortization of defined benefit plans, net of tax	\$(1,280)	\$(696)	\$(3,149)	\$(2,604)	
Total reclassifications for the period	\$(21,783)	\$7,398	\$(65,676)	\$32,788	

(1) See Note 5 - "Derivative Instruments" for additional information on cash flow hedges.

(2) This AOCI component is included in the computation of the deferred policy acquisition cost. See Note 8 - "Deferred Policy Acquisition Costs" of the 2017 Annual Report for additional details.

(3) This AOCI component is included in the computation of the net periodic pension cost. See Note 10 - "Employee Benefit Plans" for additional details.

Equity Based Compensation

Equity compensation expense was \$28.4 million and \$17.1 million in the first nine months of 2018 and 2017, respectively. In the first quarter of 2018, the Company granted 0.2 million stock appreciation rights at \$150.87 weighted average exercise price per share and 0.1 million performance contingent units to employees. Additionally, non-employee directors were granted a total of 7,623 shares of common stock. As of September 30, 2018, 1.5 million share options at a weighted average strike price per share of \$66.48 were vested and exercisable, with a remaining weighted average exercise period of 4.3 years. As of September 30, 2018, the total compensation cost of non-vested awards not yet recognized in the condensed consolidated financial statements was \$35.1 million. It is estimated that these costs will vest over a weighted average period of 1.3 years.

Table of Contents

4. Investments

Fixed Maturity and Equity Securities Available-for-Sale

The Company holds various types of fixed maturity securities available-for-sale and classifies them as corporate securities (“Corporate”), Canadian and Canadian provincial government securities (“Canadian government”), residential mortgage-backed securities (“RMBS”), asset-backed securities (“ABS”), commercial mortgage-backed securities (“CMBS”), U.S. government and agencies (“U.S. government”), state and political subdivisions, and other foreign government, supranational and foreign government-sponsored enterprises (“Other foreign government”).

The following table provides information relating to investments in fixed maturity securities by sector as of September 30, 2018 (dollars in thousands):

September 30, 2018:	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total	Other-than- temporary impairments in AOCI
Available-for-sale:						
Corporate	\$24,271,467	\$594,444	\$416,413	\$24,449,498	62.7 %	\$ —
Canadian government	2,902,433	1,138,426	4,109	4,036,750	10.3	—
RMBS	1,816,949	14,235	50,422	1,780,762	4.6	—
ABS	1,867,650	10,312	14,945	1,863,017	4.8	275
CMBS	1,282,015	8,403	16,884	1,273,534	3.3	—
U.S. government	1,500,703	6,359	94,653	1,412,409	3.6	—
State and political subdivisions	889,218	36,410	13,637	911,991	2.3	—
Other foreign government	3,220,697	98,574	42,020	3,277,251	8.4	—
Total fixed maturity securities	\$37,751,132	\$1,907,163	\$653,083	\$39,005,212	100.0%	\$ 275

The following table provides information relating to investments in fixed maturity and equity securities by sector as of December 31, 2017 (dollars in thousands):

December 31, 2017:	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total	Other-than- temporary impairments in AOCI
Available-for-sale:						
Corporate	\$21,966,803	\$1,299,594	\$55,429	\$23,210,968	60.9 %	\$ —
Canadian government	2,843,273	1,378,510	1,707	4,220,076	11.1	—
RMBS	1,695,126	36,632	11,878	1,719,880	4.5	—
ABS	1,634,758	18,798	5,194	1,648,362	4.3	275
CMBS	1,285,594	22,627	4,834	1,303,387	3.4	—
U.S. government	1,953,436	12,089	21,933	1,943,592	5.1	—
State and political subdivisions	647,727	59,997	4,296	703,428	1.8	—
Other foreign government	3,254,695	154,507	8,075	3,401,127	8.9	—
Total fixed maturity securities	\$35,281,412	\$2,982,754	\$113,346	\$38,150,820	100.0%	\$ 275
Non-redeemable preferred stock	\$41,553	\$479	\$2,226	\$39,806	39.7 %	
Other equity securities	61,288	479	1,421	60,346	60.3	
Total equity securities	\$102,841	\$958	\$3,647	\$100,152	100.0%	

The Company enters into various collateral arrangements with counterparties that require both the pledging and acceptance of fixed maturity securities as collateral. Pledged fixed maturity securities are included in fixed maturity securities, available-for-sale in the condensed consolidated balance sheets. Fixed maturity securities received as collateral are held in separate custodial accounts and are not recorded on the Company’s condensed consolidated balance sheets. Subject to certain constraints, the Company is permitted by contract to sell or repledge collateral it receives; however, as of September 30, 2018 and December 31, 2017, none of the collateral received had been sold or

repledged. The Company also holds assets in trust to satisfy collateral requirements under derivative transactions and certain third-party reinsurance treaties. The following table includes fixed maturity securities pledged and received as collateral and assets in trust held to satisfy collateral requirements under derivative transactions and certain third-party reinsurance treaties as of September 30, 2018 and December 31, 2017 (dollars in thousands):

10

Table of Contents

	September 30, 2018		December 31, 2017	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities pledged as collateral	\$67,899	\$ 69,792	\$72,542	\$ 75,622
Fixed maturity securities received as collateral	n/a	592,146	n/a	590,417
Assets in trust held to satisfy collateral requirements	19,263,724	19,670,559	15,584,296	16,715,281

The Company monitors its concentrations of financial instruments on an ongoing basis and mitigates credit risk by maintaining a diversified investment portfolio which limits exposure to any one issuer. The Company's exposure to concentrations of credit risk from single issuers greater than 10% of the Company's stockholders' equity included securities of the U.S. government and its agencies as well as the securities disclosed below as of September 30, 2018 and December 31, 2017 (dollars in thousands).

	September 30, 2018		December 31, 2017	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities guaranteed or issued by:				
Canadian province of Quebec	\$1,158,326	\$1,833,972	\$1,119,337	\$1,917,996
Canadian province of Ontario	951,186	1,225,712	939,837	1,282,944

The amortized cost and estimated fair value of fixed maturity securities classified as available-for-sale at September 30, 2018 are shown by contractual maturity in the table below (dollars in thousands). Actual maturities can differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. Asset and mortgage-backed securities are shown separately in the table below, as they are not due at a single maturity date.

	Amortized Cost	Estimated Fair Value
Available-for-sale:		
Due in one year or less	\$986,289	\$993,352
Due after one year through five years	7,797,732	7,888,116
Due after five years through ten years	9,311,737	9,407,186
Due after ten years	14,688,760	15,799,245
Asset and mortgage-backed securities	4,966,614	4,917,313
Total	\$37,751,132	\$39,005,212

Corporate Fixed Maturity Securities

The tables below show the major industry types of the Company's corporate fixed maturity holdings as of September 30, 2018 and December 31, 2017 (dollars in thousands):

September 30, 2018:		Estimated		
	Amortized Cost	Fair Value	% of Total	
Finance	\$ 8,561,885	\$8,564,254	35.1	%
Industrial	12,632,502	12,753,024	52.1	
Utility	3,077,080	3,132,220	12.8	
Total	\$ 24,271,467	\$24,449,498	100.0	%

December 31, 2017:		Estimated		
	Amortized Cost	Fair Value	% of Total	
Finance	\$ 7,977,885	\$8,362,774	36.1	%
Industrial	11,535,166	12,199,333	52.5	
Utility	2,453,752	2,648,861	11.4	

Total	\$ 21,966,803	\$23,210,968	100.0	%
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11

Table of Contents

Other-Than-Temporary Impairments - Fixed Maturity Securities

As discussed in Note 2 – “Summary of Significant Accounting Policies” of the 2017 Annual Report, a portion of certain other-than-temporary impairment (“OTTI”) losses on fixed maturity securities is recognized in AOCI. For these securities, the net amount recognized in the condensed consolidated statements of income (“credit loss impairments”) represents the difference between the amortized cost of the security and the net present value of its projected future cash flows discounted at the effective interest rate implicit in the debt security prior to impairment. Any remaining difference between the fair value and amortized cost is recognized in AOCI. The following table sets forth the amount of pre-tax credit loss impairments on fixed maturity securities held by the Company as of the dates indicated, for which a portion of the OTTI loss was recognized in AOCI, and the corresponding changes in such amounts (dollars in thousands):

	Three months ended		Nine months ended	
	September 30, 2018	September 30, 2017	September 30, 2018	September 30, 2017
Balance, beginning of period	\$3,677	\$3,677	\$3,677	\$6,013
Credit loss OTTI previously recognized on securities impaired to fair value during the period	—	—	—	(2,336)
Balance, end of period	\$3,677	\$3,677	\$3,677	\$3,677

Unrealized Losses for Fixed Maturity and Equity Securities Available-for-Sale

The following table presents the total gross unrealized losses for the 2,866 fixed maturity securities as of September 30, 2018, where the estimated fair value had declined and remained below amortized cost by the indicated amount (dollars in thousands):

	September 30, 2018		
	Gross	Unrealized	% of Total
	Losses		
Less than 20%	\$640,481	98.1	%
20% or more for less than six months	309	—	
20% or more for six months or greater	12,293	1.9	
Total	\$653,083	100.0	%

The following table presents the total gross unrealized losses for the 1,116 fixed maturity and equity securities at December 31, 2017 where the estimated fair value had declined and remained below amortized cost by the indicated amount (dollars in thousands):

	December 31, 2017		
	Gross	Unrealized	% of Total
	Losses		
Less than 20%	\$113,466	97.0	%
20% or more for less than six months	689	0.6	
20% or more for six months or greater	2,838	2.4	
Total	\$116,993	100.0	%

The Company’s determination of whether a decline in value is other-than-temporary includes an analysis of the underlying credit and the extent and duration of a decline in value. The Company’s credit analysis of an investment includes determining whether the issuer is current on its contractual payments, evaluating whether it is probable that the Company will be able to collect all amounts due according to the contractual terms of the security and analyzing the overall ability of the Company to recover the amortized cost of the investment.

The following table presents the estimated fair values and gross unrealized losses, including other-than-temporary impairment losses reported in AOCI, for 2,866 fixed maturity securities that have estimated fair values below amortized cost as of September 30, 2018 (dollars in thousands). These investments are presented by class and grade of security, as well as the length of time the related fair value has remained below amortized cost.

Table of Contents

September 30, 2018:	Less than 12 months		12 months or greater		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Investment grade securities:						
Corporate	\$ 10,117,970	\$ 303,926	\$ 1,290,804	\$ 81,236	\$ 11,408,774	\$ 385,162
Canadian government	58,816	1,211	107,167	2,736	165,983	3,947
RMBS	931,044	23,339	528,739	27,063	1,459,783	50,402
ABS	680,900	8,650	262,544	6,243	943,444	14,893
CMBS	555,716	8,304	207,943	8,580	763,659	16,884
U.S. government	197,114	3,913	1,002,661	90,740	1,199,775	94,653
State and political subdivisions	261,456	6,722	90,649	6,915	352,105	13,637
Other foreign government	1,034,417	24,666	297,566	11,062	1,331,983	35,728
Total investment grade securities	13,837,433	380,731	3,788,073	234,575	17,625,506	615,306
Below investment grade securities:						
Corporate	539,521	23,955	77,675	7,296	617,196	31,251
Canadian government	2,328	162	—	—	2,328	162
RMBS	—	—	1,102	20	1,102	20
ABS	—	—	1,110	52	1,110	52
Other foreign government	140,692	5,931	6,410	361	147,102	6,292
Total below investment grade securities	682,541	30,048	86,297	7,729	768,838	37,777
Total fixed maturity securities	\$ 14,519,974	\$ 410,779	\$ 3,874,370	\$ 242,304	\$ 18,394,344	\$ 653,083
The following table presents the estimated fair values and gross unrealized losses, including other-than-temporary impairment losses reported in AOCI, for 1,116 fixed maturity and equity securities that have estimated fair values below amortized cost as of December 31, 2017 (dollars in thousands):						
December 31, 2017:	Less than 12 months		12 months or greater		Total	
	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Investment grade securities:						
Corporate	\$ 1,886,212	\$ 17,099	\$ 1,009,750	\$ 28,080	\$ 2,895,962	\$ 45,179
Canadian government	18,688	91	111,560	1,596	130,248	1,687
RMBS	566,699	5,852	224,439	6,004	791,138	11,856
ABS	434,274	2,707	168,524	2,434	602,798	5,141
CMBS	220,401	1,914	103,269	2,920	323,670	4,834
U.S. government	800,298	6,177	767,197	15,756	1,567,495	21,933
State and political subdivisions	43,510	242	68,666	4,054	112,176	4,296
Other foreign government	369,717	2,707	191,265	4,704	560,982	7,411
Total investment grade securities	4,339,799	36,789	2,644,670	65,548	6,984,469	102,337
Below investment grade securities:						
Corporate	194,879	3,317	75,731	6,933	270,610	10,250
Canadian government	1,995	20	—	—	1,995	20
RMBS	—	—	1,369	22	1,369	22
ABS	—	—	1,489	53	1,489	53
Other foreign government	28,600	113	15,134	551	43,734	664
Total below investment grade securities	225,474	3,450	93,723	7,559	319,197	11,009
Total fixed maturity securities	\$ 4,565,273	\$ 40,239	\$ 2,738,393	\$ 73,107	\$ 7,303,666	\$ 113,346

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Non-redeemable preferred stock	\$82	\$ 1	\$26,471	\$ 2,225	\$26,553	\$ 2,226
Other equity securities	5,820	1,023	47,251	398	53,071	1,421
Total equity securities	\$5,902	\$ 1,024	\$73,722	\$ 2,623	\$79,624	\$ 3,647

The Company has no intention to sell, nor does it expect to be required to sell, the securities outlined in the table above, as of the dates indicated. However, unforeseen facts and circumstances may cause the Company to sell fixed maturity securities in the

13

Table of Contents

ordinary course of managing its portfolio to meet certain diversification, credit quality and liquidity guidelines. Changes in unrealized losses are primarily being driven by changes in interest rates.

Investment Income, Net of Related Expenses

Major categories of investment income, net of related expenses, consist of the following (dollars in thousands):

	Three months ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
Fixed maturity securities available-for-sale	\$378,669	\$359,157	\$1,121,496	\$1,039,392
Equity securities	1,319	942	3,710	3,296
Mortgage loans on real estate	54,424	50,040	155,083	138,829
Policy loans	14,730	15,404	44,285	45,870
Funds withheld at interest	108,232	102,144	270,094	327,089
Short-term investments and cash and cash equivalents	3,067	1,977	9,276	5,266
Other invested assets	35,594	46,653	80,207	87,192
Investment income	596,035	576,317	1,684,151	1,646,934
Investment expense	(23,293)	(19,399)	(67,019)	(57,114)
Investment income, net of related expenses	\$572,742	\$556,918	\$1,617,132	\$1,589,820

Investment Related Gains (Losses), Net

Investment related gains (losses), net consist of the following (dollars in thousands):

	Three months ended		Nine months ended	
	September 30,		September 30,	
	2018	2017	2018	2017
Fixed maturity securities available for sale:				
Other-than-temporary impairment losses	\$(10,705)	\$(390)	\$(14,055)	\$(20,980)
Gain on investment activity	20,040	19,512	52,146	91,611
Loss on investment activity	(37,880)	(7,593)	(94,194)	(26,577)
Equity securities:				
Other-than-temporary impairment losses	—	(889)	—	(889)
Gain on investment activity	3,932	10	4,429	24
Loss on investment activity	(174)	(85)	(1,124)	(4,135)
Change in unrealized gains (losses) recognized in earnings	3,539	—	(7,564)	—
Other impairment losses and change in mortgage loan provision	(6,566)	(2,446)	(8,235)	(9,220)
Derivatives and other, net	7,797	14,534	37,538	109,637
Total investment related gains (losses), net	\$(20,017)	\$22,653	\$(31,059)	\$139,471

The fixed maturity impairments for the three and nine months ended September 30, 2018 and 2017 were largely related to high-yield corporate securities. The equity impairments for the three and nine months ended September 30, 2017 were related to an equity position received as part of a debt restructuring. The other impairment losses and change in mortgage loan provision for the three and nine months ended September 30, 2018 includes impairments on real estate joint ventures and limited partnerships. The other impairment losses and change in mortgage loan provision for the three and nine months ended September 30, 2017 includes impairments on limited partnerships. The fluctuations in investment related gains (losses) for derivatives and other for the three and nine months ended September 30, 2018, compared to the same periods in 2017, are primarily due to changes in the fair value of embedded derivatives and interest rate swaps.

During the three months ended September 30, 2018 and 2017, the Company sold fixed maturity securities with fair values of \$1,345.3 million and \$479.7 million at losses of \$37.9 million and \$7.6 million, respectively. During the nine months ended September 30, 2018 and 2017, the Company sold fixed maturity securities with fair values of

\$3,783.3 million and \$1,604.7 million at losses of \$94.2 million and \$26.6 million, respectively. During the three months ended September 30, 2018 and 2017, the Company sold equity securities with fair values of \$3.1 million and \$5.0 million at losses of \$0.2 million and \$0.1 million, respectively. During the nine months ended September 30, 2018 and 2017, the Company sold equity securities with fair values of \$31.5 million and \$166.7 million at losses of \$1.1 million and \$4.1 million, respectively. The Company generally does not buy and sell securities on a short-term basis.

Table of Contents

Securities Borrowing, Lending and Other

The following table includes the amount of borrowed securities, securities lent and securities collateral received as part of the securities lending program and repurchased/reverse repurchased securities pledged and received as of September 30, 2018 and December 31, 2017 (dollars in thousands).

	September 30, 2018		December 31, 2017	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Borrowed securities	\$353,650	\$370,323	\$358,875	\$377,820
Securities lending:				
Securities loaned	101,965	102,489	117,246	121,551
Securities received	n/a	112,000	n/a	128,000
Repurchase program/reverse repurchase program:				
Securities pledged	408,679	404,905	413,819	428,344
Securities received	n/a	400,515	n/a	417,550

The Company also held cash collateral for securities lending and the repurchase program/reverse repurchase programs of \$28.9 million and \$31.2 million at September 30, 2018 and December 31, 2017, respectively. No cash or securities have been pledged by the Company for its securities borrowing program as of September 30, 2018 and December 31, 2017.

The following tables present information on the Company's securities lending and repurchase transactions as of September 30, 2018 and December 31, 2017 (dollars in thousands). Collateral associated with certain borrowed securities is not included within the table, as the collateral pledged to each counterparty is the right to reinsurance treaty cash flows.

	September 30, 2018			
	Remaining Contractual Maturity of the Agreements			
	Overnight and Continuous	30-90 Days	Greater than 90 Days	Total
Securities lending transactions:				
Corporate	\$-\$	-\$	-\$102,489	\$102,489
Total	—	—	102,489	102,489
Repurchase transactions:				
Corporate	—	—	132,228	132,228
U.S. government	—	—	219,906	219,906
Foreign government	—	—	52,771	52,771
Other	—	—	—	—
Total	—	—	404,905	404,905
Total transactions	\$-\$	-\$	-\$507,394	\$507,394

Gross amount of recognized liabilities for securities lending and repurchase transactions in preceding table	\$541,411
Amounts related to agreements not included in offsetting disclosure	\$34,017

Table of Contents

	December 31, 2017				Total
	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 Days	30-90 Days	Greater than 90 Days	
Securities lending transactions:					
Corporate	\$—	\$—	\$—	\$121,551	\$121,551
Total	\$—	\$—	\$—	\$121,551	\$121,551
Repurchase transactions:					
Corporate	\$—	\$—	—\$312	\$184,334	\$184,646
U.S. government	—	—	—	220,765	220,765
Foreign government	—	—	—	21,802	21,802
Other	1,131	—	—	—	1,131
Total	1,131	—	312	426,901	428,344
Total borrowings	\$1,131	\$—	—\$312	\$548,452	\$549,895

Gross amount of recognized liabilities for securities lending and repurchase transactions in preceding table \$576,786

Amounts related to agreements not included in offsetting disclosure \$26,891

The Company has elected to offset amounts recognized as receivables and payables resulting from the repurchase/reverse repurchase programs. After the effect of offsetting, the net amount presented on the condensed consolidated balance sheets was a liability of \$0.4 million and \$1.1 million of September 30, 2018 and December 31, 2017, respectively. As of September 30, 2018 and December 31, 2017, the Company recognized payables resulting from cash received as collateral associated with a repurchase agreement as discussed above. Amounts owed to and due from the counterparties may be settled in cash or offset, in accordance with the agreements.

Mortgage Loans on Real Estate

Mortgage loans represented approximately 9.0% and 8.5% of the Company's total investments as of September 30, 2018 and December 31, 2017. As of September 30, 2018, mortgage loans were geographically dispersed throughout the U.S. with the largest concentrations in California (18.8%), Texas (10.0%) and Georgia (7.5%) and include loans secured by properties in Canada (2.6%). The recorded investment in mortgage loans on real estate presented below is gross of unamortized deferred loan origination fees and expenses, and valuation allowances.

The distribution of mortgage loans by property type is as follows as of September 30, 2018 and December 31, 2017 (dollars in thousands):

Property type:	September 30, 2018		December 31, 2017	
	Carrying Value	% of Total	Carrying Value	% of Total
Office building	\$1,633,887	34.1 %	\$1,487,392	33.6 %
Retail	1,365,157	28.5	1,270,676	28.8
Industrial	983,553	20.5	938,612	21.3
Apartment	543,917	11.3	510,052	11.6
Other commercial	267,712	5.6	206,439	4.7
Recorded investment	4,794,226	100.0%	4,413,171	100.0%
Unamortized balance of loan origination fees and expenses	(4,786)		(3,254)	
Valuation allowances	(10,366)		(9,384)	
Total mortgage loans on real estate	\$4,779,074		\$4,400,533	

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The maturities of mortgage loans as of September 30, 2018 and December 31, 2017 are as follows (dollars in thousands):

	September 30, 2018		December 31, 2017	
	Recorded Investment	% of Total	Recorded Investment	% of Total
Due within five years	\$1,216,241	25.4 %	\$1,091,066	24.8 %
Due after five years through ten years	2,738,400	57.1	2,516,872	57.0
Due after ten years	839,585	17.5	805,233	18.2
Total	\$4,794,226	100.0 %	\$4,413,171	100.0 %

Table of Contents

The following tables set forth certain key credit quality indicators of the Company's recorded investment in mortgage loans as of September 30, 2018 and December 31, 2017 (dollars in thousands):

	Recorded Investment Debt Service Ratios			Construction loans	Total	% of Total
	>1.20x	1.00x - 1.20x	<1.00x			
September 30, 2018:						
Loan-to-Value Ratio						
0% - 59.99%	\$2,146,401	\$63,794	\$43,486	\$ 25,724	\$2,279,405	47.6 %
60% - 69.99%	1,666,525	117,726	62,617	—	1,846,868	38.5
70% - 79.99%	386,137	70,884	76,054	—	533,075	11.1
Greater than 80%	108,233	22,429	4,216	—	134,878	2.8
Total	\$4,307,296	\$274,833	\$186,373	\$ 25,724	\$4,794,226	100.0%

	Recorded Investment Debt Service Ratios			Construction loans	Total	% of Total
	>1.20x	1.00x - 1.20x	<1.00x			
December 31, 2017:						
Loan-to-Value Ratio						
0% - 59.99%	\$2,148,428	\$53,979	\$3,801	\$ —	\$2,206,208	50.0 %
60% - 69.99%	1,517,029	47,128	43,921	—	1,608,078	36.4
70% - 79.99%	396,446	19,461	15,367	—	431,274	9.8
Greater than 80%	120,850	30,713	6,362	9,686	167,611	3.8
Total	\$4,182,753	\$151,281	\$69,451	\$ 9,686	\$4,413,171	100.0%

The age analysis of the Company's past due recorded investments in mortgage loans as of September 30, 2018 and December 31, 2017 (dollars in thousands):

	September 30, 2018	December 31, 2017
31-60 days past due	\$—	\$17,100
61-90 days past due	—	2,056
Total past due	—	19,156
Current	4,794,226	4,394,015
Total	\$4,794,226	\$4,413,171

The following table presents the recorded investment in mortgage loans, by method of measuring impairment, and the related valuation allowances as of September 30, 2018 and December 31, 2017 (dollars in thousands):

	September 30, 2018	December 31, 2017
Mortgage loans:		
Individually measured for impairment	\$30,629	\$5,858
Collectively measured for impairment	4,763,597	4,407,313
Recorded investment	\$4,794,226	\$4,413,171
Valuation allowances:		
Individually measured for impairment	\$—	\$—
Collectively measured for impairment	10,366	9,384
Total valuation allowances	\$10,366	\$9,384

Table of Contents

Information regarding the Company's loan valuation allowances for mortgage loans for the three and nine months ended September 30, 2018 and 2017 is as follows (dollars in thousands):

	Three months ended September 30, 2018		Nine months ended September 30, 2017	
Balance, beginning of period	\$9,706	\$8,156	\$9,384	\$7,685
Provision (release)	656	977	986	1,444
Translation adjustment	4	4	(4)	8
Balance, end of period	\$10,366	\$9,137	\$10,366	\$9,137

Information regarding the portion of the Company's mortgage loans that were impaired as of September 30, 2018 and December 31, 2017 is as follows (dollars in thousands):

	Unpaid Principal Balance	Recorded Investment	Related Allowance	Carrying Value
September 30, 2018:				
Impaired mortgage loans with no valuation allowance recorded	\$30,660	\$30,629	\$—	\$30,629
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	\$30,660	\$30,629	\$—	\$30,629
December 31, 2017:				
Impaired mortgage loans with no valuation allowance recorded	\$6,427	\$5,858	\$—	\$5,858
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	\$6,427	\$5,858	\$—	\$5,858

The Company's average investment in impaired mortgage loans and the related interest income are reflected in the table below for the periods indicated (dollars in thousands):

	Three months ended September 30, 2018		September 30, 2017	
	Average Recorded Investment	Average Interest Income	Average Recorded Investment	Average Interest Income
Impaired mortgage loans with no valuation allowance recorded	\$30,641	\$346	\$3,967	\$33
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	\$30,641	\$346	\$3,967	\$33
	Nine months ended September 30, 2018		September 30, 2017	
	Average Recorded Investment	Average Interest Income	Average Recorded Investment	Average Interest Income
Impaired mortgage loans with no valuation allowance recorded	\$22,641	\$650	\$3,062	\$100
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	\$22,641	\$650	\$3,062	\$100

(1) Average recorded investment represents the average loan balances as of the beginning of period and all subsequent quarterly end of period balances.

The Company did not acquire any impaired mortgage loans during the nine months ended September 30, 2018 and 2017. The Company had no mortgage loans that were on a nonaccrual status at September 30, 2018 and December 31,

2017.

Policy Loans

Policy loans comprised approximately 2.5% and 2.6% of the Company's total investments as of September 30, 2018 and December 31, 2017, respectively, the majority of which are associated with one client. These policy loans present no credit risk because the amount of the loan cannot exceed the obligation due to the ceding company upon the death of the insured or surrender of the underlying policy. The provisions of the treaties in force and the underlying policies determine the policy loan interest rates. The Company earns a spread between the interest rate earned on policy loans and the interest rate credited to corresponding liabilities.

18

Table of Contents**Funds Withheld at Interest**

Funds withheld at interest comprised approximately 11.3% and 11.8% of the Company's total investments as of both September 30, 2018 and December 31, 2017. Of the \$6.0 billion funds withheld at interest balance, net of embedded derivatives, as of September 30, 2018, \$3.9 billion of the balance is associated with one client. For reinsurance agreements written on a modified coinsurance basis and certain agreements written on a coinsurance funds withheld basis, assets equal to the net statutory reserves are withheld and legally owned and managed by the ceding company and are reflected as funds withheld at interest on the Company's condensed consolidated balance sheets. In the event of a ceding company's insolvency, the Company would need to assert a claim on the assets supporting its reserve liabilities. However, the risk of loss to the Company is mitigated by its ability to offset amounts it owes the ceding company for claims or allowances against amounts owed to the Company from the ceding company.

Other Invested Assets

Other invested assets include limited partnership interests, joint ventures (other than operating joint ventures), equity release mortgages, derivative contracts and fair value option ("FVO") contractholder-directed unit-linked investments. Other invested assets also include Federal Home Loan Bank of Des Moines ("FHLB") common stock which is included in other in the table below. Other invested assets represented approximately 3.2% and 2.9% of the Company's total investments as of September 30, 2018 and December 31, 2017, respectively. Carrying values of these assets as of September 30, 2018 and December 31, 2017 are as follows (dollars in thousands):

	September 30, 2018	December 31, 2017
Limited partnership interests and real estate joint ventures	\$924,006	\$781,124
Equity release mortgages	383,450	219,940
Derivatives	101,124	137,613
FVO contractholder-directed unit-linked investments	212,315	218,541
Other	86,084	148,114
Total other invested assets	\$1,706,979	\$1,505,332

Table of Contents

5. Derivative Instruments

Derivatives, except for embedded derivatives and longevity and mortality swaps, are carried on the Company's condensed consolidated balance sheets in other invested assets or other liabilities, at fair value. Longevity and mortality swaps are included on the condensed consolidated balance sheets in other assets or other liabilities, at fair value. Embedded derivative assets and liabilities on modified coinsurance or funds withheld arrangements are included on the condensed consolidated balance sheets with the host contract in funds withheld at interest, at fair value. Embedded derivative liabilities on indexed annuity and variable annuity products are included on the condensed consolidated balance sheets with the host contract in interest-sensitive contract liabilities, at fair value. The following table presents the notional amounts and gross fair value of derivative instruments prior to taking into account the netting effects of master netting agreements as of September 30, 2018 and December 31, 2017 (dollars in thousands):

	September 30, 2018			December 31, 2017		
	Notional Amount	Carrying Value Assets	Value/Fair Liabilities	Notional Amount	Carrying Value Assets	Value/Fair Liabilities
Derivatives not designated as hedging instruments:						
Interest rate swaps	\$1,074,173	\$37,238	\$1,818	\$996,204	\$59,809	\$2,372
Financial futures	347,916	—	—	412,438	—	—
Foreign currency forwards	—	—	—	6,030	—	28
Consumer price index swaps	409,023	127	2,836	221,932	—	2,160
Credit default swaps	1,373,300	6,759	114	961,200	8,319	1,651
Equity options	571,845	19,372	—	632,251	23,271	—
Longevity swaps	928,320	46,090	—	960,400	40,659	—
Mortality swaps	25,000	—	308	—	—	1,683
Synthetic guaranteed investment contracts	10,844,558	—	—	10,052,576	—	—
Embedded derivatives in:						
Modified coinsurance or funds withheld arrangements	—	142,529	—	—	122,194	—
Indexed annuity products	—	—	815,970	—	—	861,758
Variable annuity products	—	—	90,229	—	—	152,470
Total non-hedging derivatives	15,574,135	252,115	911,275	14,243,031	254,252	1,022,122
Derivatives designated as hedging instruments:						
Interest rate swaps	435,000	99	20,579	435,000	—	20,389
Foreign currency swaps	537,249	46,141	3,770	672,921	65,207	8,496
Foreign currency forwards	834,238	8,948	2,067	553,175	1,265	7,720
Total hedging derivatives	1,806,487	55,188	26,416	1,661,096	66,472	36,605
Total derivatives	\$17,380,622	\$307,303	\$937,691	\$15,904,127	\$320,724	\$1,058,727

Netting Arrangements

Certain of the Company's derivatives are subject to enforceable master netting arrangements and reported as a net asset or liability in the condensed consolidated balance sheets. The Company nets all derivatives that are subject to such arrangements.

The Company has elected to include all derivatives, except embedded derivatives, in the tables below, irrespective of whether they are subject to an enforceable master netting arrangement or a similar agreement. See Note 4 – "Investments" for information regarding the Company's securities borrowing, lending, repurchase and repurchase/reverse repurchase programs. See "Embedded Derivatives" below for information regarding the Company's bifurcated embedded derivatives.

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The following table provides information relating to the Company's derivative instruments as of September 30, 2018 and December 31, 2017 (dollars in thousands):

	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Gross Amounts Not Offset in the Balance Sheet Financial Instruments	Cash Collateral Pledged/Received	Net Amount
September 30, 2018:						
Derivative assets	\$ 164,774	\$ (17,560)	\$ 147,214	\$—	\$ (159,194)	\$ (11,980)
Derivative liabilities	31,492	(17,560)	13,932	(61,293)	(13,400)	(60,761)
December 31, 2017:						
Derivative assets	\$ 198,530	\$ (20,258)	\$ 178,272	\$(862)	\$ (185,900)	\$ (8,490)
Derivative liabilities	44,499	(20,258)	24,241	(58,156)	(22,221)	(56,136)

(1) Includes initial margin posted to a central clearing partner.

Table of Contents

Accounting for Derivative Instruments and Hedging Activities

The Company does not enter into derivative instruments for speculative purposes. As discussed below under “Non-qualifying Derivatives and Derivatives for Purposes Other Than Hedging,” the Company uses various derivative instruments for risk management purposes that either do not qualify or have not been qualified for hedge accounting treatment. As of September 30, 2018 and December 31, 2017, the Company held interest rate swaps that were designated and qualified as cash flow hedges of interest rate risk, for variable rate liabilities and foreign currency assets, foreign currency swaps and foreign currency forwards that were designated and qualified as hedges of a portion of its net investment in its foreign operations, foreign currency swaps that were designated and qualified as fair value hedges of foreign currency risk, and derivative instruments that were not designated as hedging instruments. See Note 2 – “Summary of Significant Accounting Policies” of the Company’s 2017 Annual Report for a detailed discussion of the accounting treatment for derivative instruments, including embedded derivatives. Derivative instruments are carried at fair value and generally require an insignificant amount of cash at inception of the contracts.

Fair Value Hedges

The Company designates and reports certain foreign currency swaps to hedge the foreign currency fair value exposure of foreign currency denominated assets as fair value hedges when they meet the requirements of the general accounting principles for Derivatives and Hedging. The gain or loss on the hedged item attributable to a change in foreign currency and the offsetting gain or loss on the related foreign currency swaps as of September 30, 2018 and 2017, were (dollars in thousands):

Type of Fair Value Hedge	Hedged Item	Gains (Losses) Recognized for Derivatives (1)	Gains (Losses) Recognized for Hedged Items (1)
For the three months ended September 30, 2018:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ (2,258)	\$ 2,832
For the three months ended September 30, 2017:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ 2,100	\$ (2,100)
For the nine months ended September 30, 2018:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ (5,284)	\$ 9,666
For the nine months ended September 30, 2017:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ 9,541	\$ (9,541)

(1) The net amount represents the ineffective portion of the fair value hedges

Cash Flow Hedges

Certain derivative instruments are designated as cash flow hedges when they meet the requirements of the general accounting principles for Derivatives and Hedging. The Company designates and accounts for the following as cash flows: (i) certain interest rate swaps, in which the cash flows of liabilities are variable based on a benchmark rate; (ii) certain interest rate swaps, in which the cash flows of assets are denominated in different currencies, commonly referred to as cross-currency swaps; and (iii) forward bond purchase commitments.

The following table presents the components of AOCI, before income tax, and the condensed consolidated income statement classification where the gain or loss is recognized related to cash flow hedges for the three and nine months ended September 30, 2018 and 2017 (dollars in thousands):

Table of Contents

	Three months ended September 30,	
	2018	2017
Balance beginning of period	\$22,656	\$7,690
Gains (losses) deferred in other comprehensive income (loss) on the effective portion of cash flow hedges	6,671	(6,889)
Amounts reclassified to investment related (gains) losses, net	—	(183)
Amounts reclassified to investment income	(50)	(271)
Amounts reclassified to interest expense	(234)	—
Balance end of period	\$29,043	\$347

	Nine months ended September 30,	
	2018	2017
Balance beginning of period	\$2,619	\$(2,496)
Gains (losses) deferred in other comprehensive income (loss) on the effective portion of cash flow hedges	26,586	3,689
Amounts reclassified to investment related (gains) losses, net	—	(142)
Amounts reclassified to investment income	(270)	(704)
Amounts reclassified to interest expense	108	—
Balance end of period	\$29,043	\$347

As of September 30, 2018, the before-tax deferred net gains (losses) on derivative instruments recorded in AOCI that are expected to be reclassified to earnings during the next twelve months are approximately \$0.2 million and \$1.9 million in investment income and interest expense, respectively.

The following table presents the effective portion of derivatives in cash flow hedging relationships on the condensed consolidated statements of income and the condensed consolidated statements of comprehensive income for the three and nine months ended September 30, 2018 and 2017 (dollars in thousands):

Derivative Type	Effective Portion			
	Gain (Loss) Deferred in OCI	Gain into OCI	Loss into OCI	Reclassified into Income from OCI
	Investment Related Gains (Losses)	Investment Income	Interest Expense	
For the three months ended September 30, 2018:				
Interest rate	\$7,490	\$—	\$—	\$ 234
Currency/Interest rate	(819)	—	50	—
Total	\$6,671	\$—	\$ 50	\$ 234
For the three months ended September 30, 2017:				
Interest rate	\$(8,421)	\$—	\$—	\$—
Currency/Interest rate	1,544	—	230	—
Forward bond purchase commitments	(12)	183	41	—
Total	\$(6,889)	\$183	\$ 271	\$—

For the nine months ended September 30, 2018:

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Interest rate	\$27,217	\$—	\$ —	\$ (108)
Currency/Interest rate	(631)	—	270	—
Total	\$26,586	\$—	\$ 270	\$ (108)

For the nine months ended September 30, 2017:

Interest rate	\$(6,205)	\$—	\$ —	\$ —
Currency/Interest rate	9,894	—	560	—
Forward bond purchase commitments	—	142	144	—
Total	\$3,689	\$142	\$ 704	\$ —

For the three and nine months ended September 30, 2018 and 2017, the ineffective portion of derivatives reported as cash flow hedges was not material to the Company's results of operations. Also, there were no material amounts reclassified into earnings relating to instances in which the Company discontinued cash flow hedge accounting because the forecasted transaction did not occur by the anticipated date or within the additional time period permitted by the authoritative guidance for the accounting for derivatives and hedging.

Table of Contents

Hedges of Net Investments in Foreign Operations

The Company uses foreign currency swaps and foreign currency forwards to hedge a portion of its net investment in certain foreign operations against adverse movements in exchange rates. The following table illustrates the Company's net investments in foreign operations ("NIFO") hedges for the three and nine months ended September 30, 2018 and 2017 (dollars in thousands):

Type of NIFO Hedge ⁽¹⁾⁽²⁾	Derivative Gains (Losses) Deferred in AOCI			
	For the three months ended September 30,		For the nine months ended September 30,	
	2018	2017	2018	2017
Foreign currency swaps	\$(5,877)	\$(35,198)	\$ 11,125	\$(60,723)
Foreign currency forwards	(11,562)	4,627	11,737	8,785
Total	\$(17,439)	\$(30,571)	\$ 22,862	\$(51,938)

There were no sales or substantial liquidations of net investments in foreign operations that would have required (1) the reclassification of gains or losses from accumulated other comprehensive income (loss) into investment income during the periods presented.

(2) There was no ineffectiveness recognized for the Company's hedges of net investments in foreign operations.

The cumulative foreign currency translation gain recorded in AOCI related to these hedges was \$136.5 million and \$113.7 million at September 30, 2018 and December 31, 2017, respectively. If a hedged foreign operation was sold or substantially liquidated, the amounts in AOCI would be reclassified to the condensed consolidated statements of income. A pro rata portion would be reclassified upon partial sale of a hedged foreign operation.

Non-qualifying Derivatives and Derivatives for Purposes Other Than Hedging

The Company uses various other derivative instruments for risk management purposes that either do not qualify or have not been qualified for hedge accounting treatment. The gain or loss related to the change in fair value for these derivative instruments is recognized in investment related gains (losses), net in the condensed consolidated statements of income, except where otherwise noted.

A summary of the effect of non-hedging derivatives, including embedded derivatives, on the Company's condensed consolidated statements of income for the three and nine months ended September 30, 2018 and 2017 is as follows (dollars in thousands):

Table of Contents

Type of Non-hedging Derivative	Income Statement Location of Gain (Loss)	Gain (Loss) for the three months ended September 30,	
		2018	2017
Interest rate swaps	Investment related gains (losses), net	\$ (12,228	) \$ 641
Financial futures	Investment related gains (losses), net	(6,544	) (8,890)
Foreign currency forwards	Investment related gains (losses), net	(58	) 24
CPI swaps	Investment related gains (losses), net	(4,223	) 220
Credit default swaps	Investment related gains (losses), net	4,689	4,137
Equity options	Investment related gains (losses), net	(9,793	) (8,295)
Longevity swaps	Other revenues	2,426	3,334
Mortality swaps	Other revenues	473	(132)
Subtotal		(25,258	) (8,961)
Embedded derivatives in:			
Modified coinsurance or funds withheld arrangements	Investment related gains (losses), net	(2,081	) 23,044
Indexed annuity products	Interest credited	(25,347	) (13,133)
Variable annuity products	Investment related gains (losses), net	32,133	(6,205)
Total non-hedging derivatives		\$ (20,553	) \$ (5,255)

Type of Non-hedging Derivative	Income Statement Location of Gain (Loss)	Gain (Loss) for the nine months ended September 30,	
		2018	2017
Interest rate swaps	Investment related gains (losses), net	\$ (47,399	) \$ 12,318
Financial futures	Investment related gains (losses), net	(7,312	) (28,107)
Foreign currency forwards	Investment related gains (losses), net	3	577
CPI swaps	Investment related gains (losses), net	(996	) 211
Credit default swaps	Investment related gains (losses), net	5,371	15,374
Equity options	Investment related gains (losses), net	(15,207	) (34,757)
Longevity swaps	Other revenues	6,983	7,180
Mortality swaps	Other revenues	(326) (921)
Subtotal		(58,883) (28,125)
Embedded derivatives in:			

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Modified coinsurance or funds withheld arrangements	Investment related gains (losses), net	20,335	106,854
Indexed annuity products	Interest credited	6,523	(35,490)
Variable annuity products	Investment related gains (losses), net	62,242	16,518
Total non-hedging derivatives		\$ 30,217	\$ 59,757

Types of Derivatives Used by the Company

Interest Rate Swaps

Interest rate swaps are used by the Company primarily to reduce market risks from changes in interest rates, to alter interest rate exposure arising from mismatches between assets and liabilities (duration mismatches) and to manage the risk of cash flows of liabilities that are variable based on a benchmark rate. With an interest rate swap, the Company agrees with another party to exchange, at specified intervals, the difference between two rates, which can be either fixed-rate or floating-rate interest amounts, tied to an agreed-upon notional principal amount. These transactions are executed pursuant to master agreements that provide for a single net payment or individual gross payments at each due date. The Company utilizes interest rate swaps in cash flow and non-qualifying hedging relationships.

Financial Futures

Exchange-traded futures are used primarily to economically hedge liabilities embedded in certain variable annuity products. With exchange-traded futures transactions, the Company agrees to purchase or sell a specified number of contracts, the value of which is determined by the relevant indices, and to post variation margin on a daily basis in an amount equal to the difference between the daily estimated fair values of those contracts. The Company enters into exchange-traded futures with regulated futures commission merchants that are members of the exchange.

Table of Contents

Equity Options

Equity index options are used by the Company primarily to hedge minimum guarantees embedded in certain variable annuity products. To hedge against adverse changes in equity indices volatility, the Company buys put options. The contracts are net settled in cash based on differentials in the indices at the time of exercise and the strike price.

Consumer Price Index Swaps

Consumer price index (“CPI”) swaps are used by the Company primarily to economically hedge liabilities embedded in certain insurance products where value is directly affected by changes in a designated benchmark consumer price index. With a CPI swap transaction, the Company agrees with another party to exchange the actual amount of inflation realized over a specified period of time for a fixed amount of inflation determined at inception. These transactions are executed pursuant to master agreements that provide for a single net payment or individual gross payments to be made by the counterparty at each due date. Most of these swaps will require a single payment to be made by one counterparty at the maturity date of the swap.

Foreign Currency Swaps

Foreign currency swaps are used by the Company to reduce the risk from fluctuations in foreign currency exchange rates associated with its assets and liabilities denominated in foreign currencies. With a foreign currency swap transaction, the Company agrees with another party to exchange, at specified intervals, the difference between one currency and another at a forward exchange rate calculated by reference to an agreed upon principal amount. The principal amount of each currency is exchanged at the termination of the currency swap by each party. The Company uses foreign currency swaps in hedges of net investments in foreign operations and non-qualifying hedge relationships.

Foreign Currency Forwards

Foreign currency forwards are used by the Company to reduce the risk from fluctuations in foreign currency exchange rates associated with its assets and liabilities denominated in foreign currencies. With a foreign currency forward transaction, the Company agrees with another party to deliver a specified amount of an identified currency at a specified future date. The price is agreed upon at the time of the contract and payment for such a contract is made in a different currency at the specified future date. The Company uses foreign currency forwards in hedges of net investments in foreign operations and non-qualifying hedge relationships.

Forward Bond Purchase Commitments

Forward bond purchase commitments have been used by the Company to hedge against the variability in the anticipated cash flows required to purchase securities. With forward bond purchase commitments, the forward price is agreed upon at the time of the contract and payment for such contract is made at the future specified settlement date of the securities.

Credit Default Swaps

The Company sells protection under single name credit default swaps and credit default swap index tranches to diversify its credit risk exposure in certain portfolios and, in combination with purchasing securities, to replicate characteristics of similar investments based on the credit quality and term of the credit default swap. Credit default triggers for indexed reference entities and single name reference entities are defined in the contracts. The Company’s maximum exposure to credit loss equals the notional value for credit default swaps. In the event of default of a referencing entity, the Company is typically required to pay the protection holder the full notional value less a recovery amount determined at auction.

Table of Contents

The following table presents the estimated fair value, maximum amount of future payments and weighted average years to maturity of credit default swaps sold by the Company at September 30, 2018 and December 31, 2017 (dollars in thousands):

Rating Agency Designation of Referenced Credit Obligations ⁽¹⁾	September 30, 2018			December 31, 2017		
	Estimated Fair Value of Default Swaps	Maximum Amount of Future Payments under Credit Default Swaps ⁽²⁾	Weighted Average Years to Maturity ⁽³⁾	Estimated Fair Value of Default Swaps	Maximum Amount of Future Payments under Credit Default Swaps ⁽²⁾	Weighted Average Years to Maturity ⁽³⁾
AAA/AA+/AA/AA-/A+/A/A-						
Single name credit default swaps	\$2,470	\$ 152,000	2.5	\$3,128	\$ 162,000	2.9
Subtotal	2,470	152,000	2.5	3,128	162,000	2.9
BBB+/BBB/BBB-						
Single name credit default swaps	4,220	343,700	2.4	4,469	361,700	2.9
Credit default swaps referencing indices	(80)	642,600	3.4	(55)	422,600	4.0
Subtotal	4,140	986,300	3.1	4,414	784,300	3.5
BB+/BB/BB-						
Single name credit default swaps	32	15,000	1.0	30	5,000	1.5
Subtotal	32	15,000	1.0	30	5,000	1.5
Total	\$6,642	\$ 1,153,300	3.0	\$7,572	\$ 951,300	3.4

(1) The rating agency designations are based on ratings from Standard and Poor's ("S&P").

(2) Assumes the value of the referenced credit obligations is zero.

(3) The weighted average years to maturity of the credit default swaps is calculated based on weighted average notional amounts.

The Company also purchases credit default swaps to reduce its risk against a drop in bond prices due to credit concerns of certain bond issuers. If a credit event, as defined by the contract, occurs, the Company is able to put the bond back to the counterparty at par.

Longevity Swaps

The Company enters into longevity swaps in the form of out-of-the-money options, which provide protection against changes in mortality improvement to retirement plans and insurers of such plans. With a longevity swap transaction, the Company agrees with another party to exchange a proportion of a notional value. The proportion is determined by the difference between a predefined benefit, and the realized benefit plus the future expected benefit, calculated by reference to a population index for a fixed premium.

Mortality Swaps

Mortality swaps are used by the Company to hedge risk from changes in mortality experience associated with its reinsurance of life insurance risk. The Company agrees with another party to exchange, at specified intervals, a proportion of a notional value determined by the difference between a predefined expected and realized claim amount on a designated index of reinsured lives, for a fixed percentage (premium) each term.

Synthetic Guaranteed Investment Contracts

The Company sells fee-based synthetic guaranteed investment contracts to retirement plans which include investment-only, stable value contracts. The assets are owned by the trustees of such plans, who invest the assets under the terms of investment guidelines to which the Company agrees. The contracts contain a guarantee of a minimum rate of return on participant balances supported by the underlying assets, and a guarantee of liquidity to meet certain participant-initiated plan cash flow requirements. These contracts are reported as derivatives and recorded at fair value.

Embedded Derivatives

The Company has certain embedded derivatives which are required to be separated from their host contracts and reported as derivatives. Host contracts include reinsurance treaties structured on a modified coinsurance (“modco”) or funds withheld basis. Additionally, the Company reinsures equity-indexed annuity and variable annuity contracts with benefits that are considered embedded derivatives, including guaranteed minimum withdrawal benefits, guaranteed minimum accumulation benefits, and guaranteed minimum income benefits. The changes in fair values of embedded derivatives on equity-indexed annuities described below relate to changes in the fair value associated with capital market and other related assumptions. The Company’s utilization of a credit valuation adjustment (“CVA”) did not have a material effect on the change in fair value of its embedded derivatives for the three and nine months ended September 30, 2018 and 2017.

The related gains (losses) and the effect on net income after amortization of deferred acquisition costs (“DAC”) and income taxes for the three and nine months ended September 30, 2018 and 2017 are reflected in the following table (dollars in thousands):

Table of Contents

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Embedded derivatives in modco or funds withheld arrangements included in investment related gains	\$(2,081)	\$23,044	\$20,335	\$106,854
After the associated amortization of DAC and taxes, the related amounts included in net income	(1,320)	7,515	11,517	36,300
Embedded derivatives in variable annuity contracts included in investment related gains	32,133	(6,205)	62,242	16,518
After the associated amortization of DAC and taxes, the related amounts included in net income	9,463	(1,074)	33,061	30,785
Amounts related to embedded derivatives in equity-indexed annuities included in benefits and expenses	(25,347)	(13,133)	6,523	(35,490)
After the associated amortization of DAC and taxes, the related amounts included in net income	(17,311)	(9,737)	(6,808)	(38,059)

Credit Risk

The Company manages its credit risk related to over-the-counter (“OTC”) derivatives by entering into transactions with creditworthy counterparties, maintaining collateral arrangements and through the use of master netting agreements that provide for a single net payment to be made by one counterparty to another at each due date and upon termination.

The credit exposure of the Company’s OTC derivative transactions is represented by the contracts with a positive fair value (market value) at the reporting date. To reduce credit exposures, the Company seeks to (i) enter into OTC derivative transactions pursuant to master netting agreements that provide for a netting of payments and receipts with a single counterparty, and (ii) enter into agreements that allow the use of credit support annexes, which are bilateral rating-sensitive agreements that require collateral postings at established threshold levels. Certain of the Company’s OTC derivatives are cleared derivatives, which are bilateral transactions between the Company and a counterparty where the transactions are cleared through a clearinghouse, such that each derivative counterparty is only exposed to the default of the clearinghouse. These cleared transactions require initial and daily variation margin collateral postings and include certain interest rate swaps and credit default swaps entered into on or after June 10, 2013, related to guidelines implemented under the Dodd-Frank Wall Street Reform and Consumer Protection Act. In 2017, the Company followed the Chicago Mercantile Exchange amended rulebook to legally characterize variation margin payments as settlements of the derivative’s mark-to-market exposure and not collateral. Also, the Company enters into exchange-traded futures through regulated exchanges and these transactions are settled on a daily basis, thereby reducing credit risk exposure in the event of non-performance by counterparties to such financial instruments.

The Company enters into various collateral arrangements, which require both the posting and accepting of collateral in connection with its derivative instruments. Collateral agreements contain attachment thresholds that may vary depending on the posting party’s ratings. Additionally, a decline in the Company’s or the counterparty’s credit ratings to specified levels could result in potential settlement of the derivative positions under the Company’s agreements with its counterparties. The Company also has exchange-traded futures, which require the maintenance of a margin account. As exchange-traded futures are affected through regulated exchanges, and positions are marked to market on a daily basis, the Company has minimal exposure to credit-related losses in the event of nonperformance by counterparties. The Company’s credit exposure related to derivative contracts is generally limited to the fair value at the reporting date plus or minus any collateral posted or held by the Company. The Company’s credit exposure to mortality swaps is minimal, as they are fully collateralized by a counterparty. Information regarding the Company’s credit exposure related to its over-the-counter derivative contracts, centrally cleared derivative contracts and margin account for exchange-traded futures, excluding mortality swaps, at September 30, 2018 and December 31, 2017 are reflected in the following table (dollars in thousands):

	September 30, 2018	December 31, 2017
Estimated fair value of derivatives in net asset position	\$133,590	\$155,714
Cash provided as collateral ⁽¹⁾	13,400	22,221
Securities pledged to counterparties as collateral ⁽²⁾	61,293	58,156
Cash pledged from counterparties as collateral ⁽³⁾	(159,194)	(185,900)
Securities pledged from counterparties as collateral ⁽⁴⁾	—	(862)
Initial margin for cleared derivatives ⁽²⁾	(61,293)	(58,156)
Net amount after application of master netting agreements and collateral	\$(12,204)	\$(8,827)
Margin account related to exchange-traded futures ⁽⁵⁾	\$8,348	\$6,538

(1) Consists of receivable from counterparty, included in other assets.

(2) Included in available-for-sale securities, primarily consists of U.S. Treasury and government agency securities.

(3) Included in cash and cash equivalents, with obligation to return cash collateral recorded in other liabilities.

(4) Consists of U.S. Treasury and government securities.

(5) Included in other assets.

Table of Contents

6. Fair Value of Assets and Liabilities

Fair Value Measurement

General accounting principles for Fair Value Measurements and Disclosures define fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. These principles also establish a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value and describes three levels of inputs that may be used to measure fair value:

Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities. The Company's Level 1 assets and liabilities are traded in active exchange markets.

Level 2 - Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or market standard valuation techniques and assumptions that use significant inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the related assets or liabilities. Prices are determined using valuation methodologies such as discounted cash flow models and other similar techniques that require management's judgment or estimation in developing inputs that are consistent with those other market participants would use when pricing similar assets and liabilities. Additionally, the Company's embedded derivatives, all of which are associated with reinsurance treaties and longevity and mortality swaps, are classified in Level 3 since their values include significant unobservable inputs.

For a discussion of the Company's valuation methodologies for assets and liabilities measured at fair value and the fair value hierarchy, see Note 6 in the Notes to Consolidated Financial Statements included in the Company's 2017 Annual Report.

Table of Contents

Assets and Liabilities by Hierarchy Level

Assets and liabilities measured at fair value on a recurring basis as of September 30, 2018 and December 31, 2017 are summarized below (dollars in thousands):

September 30, 2018:

	Total	Fair Value Measurements Using:		
		Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	\$24,449,498	\$—	\$23,193,563	\$1,255,935
Canadian government	4,036,750	—	3,488,008	548,742
RMBS	1,780,762	—	1,780,762	—
ABS	1,863,017	—	1,780,250	82,767
CMBS	1,273,534	—	1,271,752	1,782
U.S. government	1,412,409	1,284,932	107,225	20,252
State and political subdivisions	911,991	—	898,346	13,645
Other foreign government	3,277,251	—	3,272,239	5,012
Total fixed maturity securities – available-for-sale	39,005,212	1,284,932	35,792,145	1,928,135
Equity securities	101,069	57,584	—	43,485
Funds withheld at interest – embedded derivatives	142,529	—	—	142,529
Cash equivalents	657,280	657,280	—	—
Short-term investments	186,051	5,957	177,891	2,203
Other invested assets:				
Derivatives:				
Interest rate swaps	29,106	—	29,106	—
Foreign currency forwards	6,881	—	6,881	—
CPI swaps	(13	) —	(13) —
Credit default swaps	5,961	—	5,961	—
Equity options	16,818	—	16,818	—
Foreign currency swaps	42,371	—	42,371	—
FVO contractholder-directed unit-linked investments	212,315	211,253	1,062	—
Total other invested assets	313,439	211,253	102,186	—
Other assets - longevity swaps	46,090	—	—	46,090
Total	\$40,451,670	\$2,217,006	\$36,072,222	\$2,162,442
Liabilities:				
Interest sensitive contract liabilities – embedded derivatives				
Other liabilities:	\$906,199	\$—	\$—	\$906,199
Derivatives:				
Interest rate swaps	14,166	—	14,166	—
CPI swaps	2,696	—	2,696	—
Credit default swaps	(684	) —	(684) —
Equity options	(2,554	) —	(2,554) —
Mortality swaps	308	—	—	308
Total	\$920,131	\$—	\$13,624	\$906,507

Table of Contents

December 31, 2017:		Fair Value Measurements Using:		
	Total	Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	\$23,210,968	\$—	\$21,873,696	\$1,337,272
Canadian government	4,220,076	—	3,626,134	593,942
RMBS	1,719,880	—	1,611,998	107,882
ABS	1,648,362	—	1,524,888	123,474
CMBS	1,303,387	—	1,300,153	3,234
U.S. government	1,943,592	1,818,006	103,075	22,511
State and political subdivisions	703,428	—	662,225	41,203
Other foreign government	3,401,127	—	3,396,035	5,092
Total fixed maturity securities – available-for-sale	38,150,820	1,818,006	34,098,204	2,234,610
Equity securities:				
Non-redeemable preferred stock	39,806	39,806	—	—
Other equity securities	60,346	60,346	—	—
Funds withheld at interest – embedded derivatives	122,194	—	—	122,194
Cash equivalents	356,788	354,071	2,717	—
Short-term investments	50,746	—	47,650	3,096
Other invested assets:				
Derivatives:				
Interest rate swaps	51,359	—	51,359	—
Foreign currency forwards	730	—	730	—
CPI swaps	(221)	) —	(221)) —
Credit default swaps	5,908	—	5,908	—
Equity options	16,932	—	16,932	—
Foreign currency swaps	62,905	—	62,905	—
FVO contractholder-directed unit-linked investments	218,541	217,618	923	—
Total other invested assets	356,154	217,618	138,536	—
Other assets - longevity swaps	40,659	—	—	40,659
Total	\$39,177,513	\$2,489,847	\$34,287,107	\$2,400,559
Liabilities:				
Interest sensitive contract liabilities – embedded derivatives	\$1,014,228	\$—	\$—	\$1,014,228
Other liabilities:				
Derivatives:				
Interest rate swaps	14,311	—	14,311	—
Foreign currency forwards	7,213	—	7,213	—
CPI swaps	1,939	—	1,939	—
Credit default swaps	(760)	) —	(760)) —
Equity options	(6,339)	) —	(6,339)) —
Foreign currency swaps	6,194	—	6,194	—
Mortality swaps	1,683	—	—	1,683
Total	\$1,038,469	\$—	\$22,558	\$1,015,911

Table of Contents

Transfers between Levels 1 and 2

Transfers between Levels 1 and 2 are made to reflect changes in observability of inputs and market activity. There were no transfers between Level 1 and Level 2 for the nine months ended September 30, 2018. The Company recognizes transfers of assets and liabilities into and out of levels within the fair value hierarchy at the beginning of the quarter in which the actual event or change in circumstances that caused the transfer occurs. The following tables present the transfers between Level 1 and Level 2 during the three and nine months ended September 30, 2017 (dollars in thousands):

	2017
	Transfers from
	Level 1
	Transfers from
	Level 2 to
	Level 1
	Level 2
Three months ended September 30:	
Fixed maturity securities - available-for-sale:	
Corporate securities	\$ —\$ —
Nine months ended September 30:	
Fixed maturity securities - available-for-sale:	
Corporate securities	\$ —\$ 88,674

Table of Contents

Quantitative Information Regarding Internally - Priced Level 3 Assets and Liabilities

The following table presents quantitative information about significant unobservable inputs used in Level 3 fair value measurements that are developed internally by the Company as of September 30, 2018 and December 31, 2017 (dollars in thousands):

	Estimated Fair Value		Valuation Technique	Unobservable Inputs	Range (Weighted Average)	
	September 30, 2018	December 31, 2017			September 30, 2018	December 31, 2017
Assets:						
Corporate	\$630,328	\$173,579	Market comparable securities	Liquidity premium	0-5% (1%)	0-2% (1%)
				EBITDA Multiple	5.9x-7.5x (6.9x)	—
ABS	64,475	—	Market comparable securities	Liquidity premium	0-1% (1%)	—
U.S. government	20,252	22,511	Market comparable securities	Liquidity premium	0-1% (1%)	0-1% (1%)
State and political subdivisions	—	4,616	Market comparable securities	Liquidity premium	—	1 %
Other foreign government	5,012	—	Market comparable securities	Liquidity premium	1	% —
Equity securities	33,074	—	Market comparable securities	Liquidity premium	4	% —
				EBITDA Multiple	6.9x-12.3x (7.9x)	—
			Discounted cash flow	Discount rate	20	%
Funds withheld at interest-embedded derivatives	142,529	122,194	Total return swap	Mortality	0-100% (2%)	0-100% (2%)
				Lapse	0-35% (9%)	0-35% (9%)
				Withdrawal	0-5% (3%)	0-5% (3%)
				CVA	0-5% (1%)	0-5% (1%)
				Crediting rate	2-4% (2%)	2-4% (2%)
Longevity swaps	46,090	40,659	Discounted cash flow	Mortality	0-100% (2%)	0-100% (2%)
				Mortality improvement	(10%)-10% (3%)	(10%)-10% (3%)
Liabilities:						
Interest sensitive contract liabilities-embedded derivatives-indexed	815,970	861,758	Discounted cash flow	Mortality	0-100% (2%)	0-100% (2%)

annuities

Lapse	0-35% (9%)	0-35% (9%)
Withdrawal	0-5% (3%)	0-5% (3%)
Option budget projection	2-4% (2%)	2-4% (2%)

Interest sensitive contract liabilities-embedded derivatives-variable annuities

90,229 152,470 Discounted cash flow

Mortality	0-100% (1%)	0-100% (1%)
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Lapse	0-25% (5%)	0-25% (5%)
Withdrawal	0-7% (4%)	0-7% (3%)
CVA	0-5% (1%)	0-5% (1%)
Long-term volatility	0-27% (13%)	0-27% (8%)

Mortality swaps 308 1,683 Discounted cash flow

Mortality	0-100% (1%)	0-100% (1%)
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Table of Contents

Changes in Level 3 Assets and Liabilities

Assets and liabilities transferred into Level 3 are due to a lack of observable market transactions and price information. Assets and liabilities are transferred out of Level 3 when circumstances change such that significant inputs can be corroborated with market observable data. This may be due to a significant increase in market activity for the asset or liability, a specific event, one or more significant input(s) becoming observable. Transfers out of Level 3 were primarily the result of the Company obtaining observable pricing information or a third party pricing quotation that appropriately reflects the fair value of those assets and liabilities. The Company also transferred equity securities with a fair value of approximately \$38.9 million into Level 3 as a result of the adoption of the new accounting guidance for the recognition and measurement of equity securities.

For further information on the Company's valuation processes, see Note 6 in the Notes to Consolidated Financial Statements included in the Company's 2017 Annual Report.

The reconciliations for all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) are as follows (dollars in thousands):

For the three months ended September 30, 2018:

	Fixed maturity securities - available-for-sale			
	Corporate	Canadian government	RMBS	ABS
Fair value, beginning of period	\$ 1,367,154	\$ 572,698	\$ 54,839	\$ 70,686
Total gains/losses (realized/unrealized)				
Included in earnings, net:				
Investment income, net of related expenses	(156)	3,520	3	20
Investment related gains (losses), net	239	—	—	626
Included in other comprehensive income	(4,858)	(27,476)	(1)	(130)
Purchases ⁽¹⁾	123,808	—	—	11,099
Sales ⁽¹⁾	(62,047)	—	—	(462)
Settlements ⁽¹⁾	(101,868)	—	(3)	(24,166)
Transfers into Level 3	2,782	—	—	64,009
Transfers out of Level 3	(69,119)	—	(54,838)	(38,915)
Fair value, end of period	\$ 1,255,935	\$ 548,742	\$—	\$ 82,767
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period				
Included in earnings, net:				
Investment income, net of related expenses	\$(180)	\$ 3,520	\$—	\$ 13
Investment related gains (losses), net	(1,430)	—	—	—

For the three months ended September 30, 2018 (continued):

	Fixed maturity securities available-for-sale			
	CMBS	U.S. government	State and political subdivisions	Other foreign government
Fair value, beginning of period	\$ 1,867	\$ 20,735	\$ 16,505	\$ 5,044
Total gains/losses (realized/unrealized)				
Included in earnings, net:				
Investment income, net of related expenses	—	(107)	6	—
Included in other comprehensive income	7	(122)	(544)	(32)
Purchases ⁽¹⁾	—	120	—	—
Settlements ⁽¹⁾	(1)	(374)	(37)	—
Transfers into Level 3	1,752	—	9,859	—
Transfers out of Level 3	(1,843)	—	(12,144)	—

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Fair value, end of period	\$1,782	\$ 20,252	\$ 13,645	\$ 5,012
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period				
Included in earnings, net:				
Investment income, net of related expenses	\$—	\$ (107)	\$ 6	\$ —

33

Table of Contents

For the three months ended September 30, 2018 (continued):	Equity securities	Funds withheld at interest- embedded derivatives	Short-term Investments	Other assets - longevity swaps	Interest sensitive contract liabilities embedded derivatives	Other liabilities - mortality swaps	
Fair value, beginning of period	\$42,937	\$144,610	\$ 3,217	\$43,971	\$(928,797)	\$(782)	
Total gains/losses (realized/unrealized) Included in earnings, net:							
Investment related gains (losses), net	5,532	(2,081)	—	—	32,133	—	
Interest credited	—	—	—	—	(25,348)	—	
Included in other comprehensive income	—	—	47	(307)	—	1	
Other revenues	—	—	—	2,426	—	473	
Purchases ⁽¹⁾	863	—	1,721	—	(4,231)	—	
Sales ⁽¹⁾	(5,847)	—	—	—	—	—	
Settlements ⁽¹⁾	—	—	—	—	20,044	—	
Transfers out of Level 3	—	—	(2,782)	—	—	—	
Fair value, end of period	\$43,485	\$142,529	\$ 2,203	\$46,090	\$(906,199)	\$(308)	
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period							
Included in earnings, net:							
Investment related gains (losses), net	\$2,178	\$(2,081)	\$ —	\$—	\$30,433	\$ —	
Other revenues	—	—	—	2,426	—	473	
Interest credited	—	—	—	—	(45,393)	—	
For the nine months ended September 30, 2018:							
				Fixed maturity securities - available-for-sale			
				Corporate	Canadian government	RMBS	ABS
Fair value, beginning of period				\$1,337,272	\$593,942	\$107,882	\$123,474
Total gains/losses (realized/unrealized) Included in earnings, net:							
Investment income, net of related expenses				(822)	10,432	(132)	202
Investment related gains (losses), net				(2,902)	—	312	1,910
Included in other comprehensive income				(35,532)	(55,632)	(1,782)	(821)
Purchases ⁽¹⁾				379,476	—	45,328	22,099
Sales ⁽¹⁾				(79,316)	—	(4,961)	(462)
Settlements ⁽¹⁾				(245,342)	—	(4,538)	(46,449)
Transfers into Level 3				9,948	—	3,031	68,977
Transfers out of Level 3				(106,847)	—	(145,140)	(86,163)
Fair value, end of period				\$1,255,935	\$548,742	\$—	\$82,767
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period							
Included in earnings, net:							
Investment income, net of related expenses				\$(845)	\$10,432	\$—	\$187
Investment related gains (losses), net				(4,571)	—	—	—
For the nine months ended September 30, 2018 (continued):							

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	CMBS	U.S. government	State and political subdivisions	Other foreign government
Fair value, beginning of period	\$3,234	\$ 22,511	\$ 41,203	\$ 5,092
Total gains/losses (realized/unrealized)				
Included in earnings, net:				
Investment income, net of related expenses	—	(324	) 4	—
Included in other comprehensive income	(56	) (635	) 46	(80
Purchases ⁽¹⁾	—	334	—	—
Settlements ⁽¹⁾	(4	) (1,634	) (158) —
Transfers into Level 3	1,752	—	9,859	—
Transfers out of Level 3	(3,144	) —	(37,309) —
Fair value, end of period	\$1,782	\$ 20,252	\$ 13,645	\$ 5,012
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period				
Included in earnings, net:				
Investment income, net of related expenses	\$—	\$ (325	) \$ 3	\$ —

34

Table of Contents

For the nine months ended September 30, 2018 (continued):	Equity securities	Funds withheld at interest- embedded derivatives	Short-term Investments	Other assets - longevity swaps	Interest sensitive contract liabilities embedded derivatives	Other liabilities - mortality swaps	
Fair value, beginning of period	\$—	\$ 122,194	\$ 3,096	\$ 40,659	\$(1,014,228)	\$(1,683)	
Total gains/losses (realized/unrealized) Included in earnings, net:							
Investment related gains (losses), net	(2,067)	20,335	—	—	62,242	—	
Interest credited	—	—	—	—	6,523	—	
Included in other comprehensive income	—	—	1	(1,552)	—	1	
Other revenues	—	—	—	6,983	—	(326)	
Purchases ⁽¹⁾	13,111	—	2,202	—	(16,946)	—	
Sales ⁽¹⁾	(6,416)	—	—	—	—	—	
Settlements ⁽¹⁾	(48)	—	(314)	—	56,210	1,700	
Transfers into Level 3	38,905	—	—	—	—	—	
Transfers out of Level 3	—	—	(2,782)	—	—	—	
Fair value, end of period	\$43,485	\$ 142,529	\$ 2,203	\$ 46,090	\$(906,199)	\$(308)	
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period							
Included in earnings, net:							
Investment related gains (losses), net	\$(5,527)	\$ 20,335	\$ —	\$ —	\$ 56,808	\$ —	
Other revenues	—	—	—	6,983	—	(326)	
Interest credited	—	—	—	—	(49,688)	—	
For the three months ended September 30, 2017:							
				Fixed maturity securities - available-for-sale			
				Corporate	Canadian government	RMBS	ABS
Fair value, beginning of period				\$ 1,291,054	\$ 533,270	\$ 148,685	\$ 201,589
Total gains/losses (realized/unrealized) Included in earnings, net:							
Investment income, net of related expenses			(383)	3,460	(30)	160	
Investment related gains (losses), net			396	—	44	—	
Included in other comprehensive income			(2,700)	(11,365)	104	(101)	
Purchases ⁽¹⁾			107,670	—	26,765	—	
Sales ⁽¹⁾			(26,337)	—	(3,553)	—	
Settlements ⁽¹⁾			(88,551)	—	(3,645)	(15,243)	
Transfers into Level 3			3,844	—	15	36,994	
Transfers out of Level 3			(12,973)	—	(50,390)	(78,202)	
Fair value, end of period			\$ 1,272,020	\$ 525,365	\$ 117,995	\$ 145,197	
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period							
Included in earnings, net:							
Investment income, net of related expenses			\$(394)	\$ 3,460	\$(27)	\$ 156	

Table of Contents

For the three months ended September 30, 2017 (continued):	Fixed maturity securities available-for-sale				
	CMBS	U.S. government	State and political subdivisions	Other foreign government	
Fair value, beginning of period	\$ 1,943	\$ 23,567	\$ 34,434	\$ 11,994	
Total gains/losses (realized/unrealized)					
Included in earnings, net:					
Investment income, net of related expenses	—	(116)	26	(1)	
Included in other comprehensive income	5	6	(208)	(7)	
Purchases ⁽¹⁾	—	134	—	495	
Settlements ⁽¹⁾	(1)	(340)	(35)	—	
Transfers into Level 3	—	—	7,295	—	
Transfers out of Level 3	—	—	—	(6,853)	
Fair value, end of period	\$ 1,947	\$ 23,251	\$ 41,512	\$ 5,628	
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period					
Included in earnings, net:					
Investment income, net of related expenses	\$ —	\$ (116)	\$ 26	\$ (1)	
For the three months ended September 30, 2017 (continued):	Short-term Investments	Funds withheld at interest-embedded derivatives	Other assets - longevity swaps	Interest sensitive contract liabilities embedded derivatives	Other liabilities - mortality swaps
Fair value, beginning of period	\$ 3,548	\$ 61,281	\$ 33,349	\$ (974,631)	\$ (1,552)
Total gains/losses (realized/unrealized)					
Included in earnings, net:					
Investment related gains (losses), net	—	23,044	—	(10,047)	—
Interest credited	—	—	—	(8,335)	—
Included in other comprehensive income	(3)	—	1,144	—	1
Other revenues	—	—	3,334	—	(132)
Purchases ⁽¹⁾	3,164	—	—	(18,736)	—
Settlements ⁽¹⁾	(114)	—	—	21,809	—
Transfers out of Level 3	(3,236)	—	—	—	—
Fair value, end of period	\$ 3,359	\$ 84,325	\$ 37,827	\$ (989,940)	\$ (1,683)
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period					
Included in earnings, net:					
Investment related gains (losses), net	\$ —	\$ 23,044	\$ —	\$ (11,900)	\$ —
Other revenues	—	—	3,334	—	(132)
Interest credited	—	—	—	(30,145)	—
For the nine months ended September 30, 2017:	Fixed maturity securities - available-for-sale				
	Corporate	Canadian government	RMBS	ABS	
Fair value, beginning of period	\$ 1,272,253	\$ 475,965	\$ 160,291	\$ 219,280	

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Total gains/losses (realized/unrealized)			
Included in earnings, net:			
Investment income, net of related expenses	(1,202)	9,731	(304) 1,689
Investment related gains (losses), net	7,592	—	524 —
Included in other comprehensive income	(2,300)	39,669	2,716 6,802
Purchases ⁽¹⁾	257,671	—	72,582 45,215
Sales ⁽¹⁾	(49,511)	—	(18,624) —
Settlements ⁽¹⁾	(234,552)	—	(15,084) (60,966)
Transfers into Level 3	35,042	—	5,515 75,752
Transfers out of Level 3	(12,973)	—	(89,621) (142,575)
Fair value, end of period	\$1,272,020	\$ 525,365	\$117,995 \$145,197
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period			
Included in earnings, net:			
Investment income, net of related expenses	\$(1,213)	\$ 9,731	\$(155) \$556
Investment related gains (losses), net	(2,788)	—	(346) —

Table of Contents

For the nine months ended September 30, 2017 (continued):	Fixed maturity securities available-for-sale			
	CMBS	U.S. government	State and political subdivisions	Other foreign government
Fair value, beginning of period	\$21,145	\$ 24,488	\$ 41,666	\$ 12,869
Total gains/losses (realized/unrealized)				
Included in earnings, net:				
Investment income, net of related expenses	709	(348)	(68)	(1)
Investment related gains (losses), net	(595)	—	—	—
Included in other comprehensive income	(57)	269	(228)	(210)
Purchases ⁽¹⁾	—	370	—	495
Sales ⁽¹⁾	(3,720)	—	—	—
Settlements ⁽¹⁾	(5,403)	(1,528)	(309)	(672)
Transfers into Level 3	—	—	7,295	—
Transfers out of Level 3	(10,132)	—	(6,844)	(6,853)
Fair value, end of period	\$1,947	\$ 23,251	\$ 41,512	\$ 5,628
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period				
Included in earnings, net:				
Investment income, net of related expenses	\$—	\$ (348)	\$ (68)	\$ (1)

For the nine months ended September 30, 2017 (continued):	Short-term Investments	Funds withheld at interest-embedded derivatives	Other assets - longevity swaps	Interest sensitive contract liabilities embedded derivatives		Other liabilities - mortality swaps
Fair value, beginning of period	\$ 3,346	\$(22,529)	\$ 26,958	\$(990,308)	\$(2,462)	
Total gains/losses (realized/unrealized)						
Included in earnings, net:						
Investment related gains (losses), net	—	106,854	—	9,005	—	
Interest credited	—	—	—	(20,408)	—	
Included in other comprehensive income	1	—	3,689	—	1	
Other revenues	—	—	7,180	—	(922)	
Purchases ⁽¹⁾	3,520	—	—	(51,276)	—	
Settlements ⁽¹⁾	(272)	—	—	63,047	1,700	
Transfers out of Level 3	(3,236)	—	—	—	—	
Fair value, end of period	\$ 3,359	\$84,325	\$ 37,827	\$(989,940)	\$(1,683)	
Unrealized gains and losses recorded in earnings for the period relating to those Level 3 assets and liabilities that were still held at the end of the period						
Included in earnings, net:						
Investment related gains (losses), net	\$ —	\$106,854	\$—	\$2,934	\$—	
Other revenues	—	—	7,180	—	(922)	
Interest credited	—	—	—	(83,456)	—	

The amount reported within purchases, sales and settlements is the purchase price (for purchases) and the sales/settlement proceeds (for sales and settlements) based upon the actual date purchased or sold/settled. Items (1) purchased and sold/settled in the same period are excluded from the rollforward. The Company had no issuances during the period.

Table of Contents

Nonrecurring Fair Value Measurements

The following table presents information for assets measured at an estimated fair value on a nonrecurring basis during the periods presented and still held at the reporting date (for example, when there is evidence of impairment). The estimated fair values for these assets were determined using significant unobservable inputs (Level 3).

	Carrying Value					
	After Measurement		Net Investment Gains (Losses)			
	At September 30,		Three months ended September 30,		Nine months ended September 30,	
(dollars in thousands)	2018	2017	2018	2017	2018	2017
Limited partnership interests ⁽¹⁾	\$2,246	\$4,656	\$(1,860)	\$(896)	\$(1,860)	\$(7,204)
Private equities ⁽²⁾	—	106	—	(531)	—	(531)

The impaired limited partnership interests presented above were accounted for using the cost method. Impairments on these cost method investments were recognized at estimated fair value determined using the net asset values of the Company's ownership interest as provided in the financial statements of the investees. The market for these investments has limited activity and price transparency.

(1) The fair value of the Company's ownership interest as provided in the financial statements of the investees. The market for these investments has limited activity and price transparency.

(2) The fair value of the Company's private equity investments is based on external valuation models.

Fair Value of Financial Instruments

The Company is required by general accounting principles for Fair Value Measurements and Disclosures to disclose the fair value of certain financial instruments including those that are not carried at fair value. The following table presents the carrying amounts and estimated fair values of the Company's financial instruments, which were not measured at fair value on a recurring basis, as of September 30, 2018 and December 31, 2017 (dollars in thousands). For additional information regarding the methods and significant assumptions used by the Company to estimate these fair values, see Note 6 in the Notes to Consolidated Financial Statements included in the Company's 2017 Annual Report. This table excludes any payables or receivables for collateral under repurchase agreements and other transactions. The estimated fair value of the excluded amount approximates carrying value as they equal the amount of cash collateral received/paid.

September 30, 2018:	Carrying Value (1)	Estimated Fair Value	Fair Value Measurement Using:			
			Level 1	Level 2	Level 3	NAV
Assets:						
Mortgage loans on real estate	\$ 4,779,074	\$4,652,481	\$—	—	\$4,652,481	\$ —
Policy loans	1,320,050	1,320,050	—	1,320,050	—	—
Funds withheld at interest	5,833,925	6,040,671	—	—	6,040,671	—
Cash and cash equivalents	1,073,209	1,073,209	1,073,209	—	—	—
Short-term investments	43,877	43,877	43,877	—	—	—
Other invested assets	842,626	839,280	5,618,401	382,284	—	379,977
Accrued investment income	455,296	455,296	—	455,296	—	—
Liabilities:						
Interest-sensitive contract liabilities	\$ 13,319,348	\$13,113,427	\$—	—	\$13,113,427	\$ —
Long-term debt	2,787,975	2,850,344	—	—	2,850,344	—
Collateral finance and securitization notes	710,792	652,380	—	—	652,380	—

December 31, 2017:	Carrying Value (1)	Estimated Fair Value	Fair Value Measurement Using:		
			Level 1	Level 2	Level 3

Assets:

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Mortgage loans on real estate	\$ 4,400,533	\$4,477,654	\$—	—\$4,477,654	\$ —
Policy loans	1,357,624	1,357,624	—1,357,624	—	—
Funds withheld at interest	5,955,092	6,275,623	—	6,275,623	—
Cash and cash equivalents	946,736	946,736	946,736	—	—
Short-term investments	42,558	42,558	42,558	—	—
Other invested assets	651,792	679,377	28,574	247,934	335,125
Accrued investment income	392,721	392,721	—392,721	—	—
Liabilities:					
Interest-sensitive contract liabilities	\$ 12,683,872	\$12,917,243	\$—	—\$12,917,243	\$ —
Long-term debt	2,788,365	2,959,912	—	2,959,912	—
Collateral finance and securitization notes	783,938	722,145	—	722,145	—

Carrying values presented herein may differ from those in the Company's condensed consolidated balance sheets (1) because certain items within the respective financial statement captions may be measured at fair value on a recurring basis.

Table of Contents

7. Segment Information

The accounting policies of the segments are the same as those described in the Summary of Significant Accounting Policies in Note 2 of the consolidated financial statements accompanying the 2017 Annual Report. The Company measures segment performance primarily based on profit or loss from operations before income taxes. There are no intersegment reinsurance transactions and the Company does not have any material long-lived assets.

The Company allocates capital to its segments based on an internally developed economic capital model, the purpose of which is to measure the risk in the business and to provide a basis upon which capital is deployed. The economic capital model considers the unique and specific nature of the risks inherent in the Company's businesses. As a result of the economic capital allocation process, a portion of investment income is attributed to the segments based on the level of allocated capital. In addition, the segments are charged for excess capital utilized above the allocated economic capital basis. This charge is included in policy acquisition costs and other insurance expenses.

The Company has geographic-based and business-based operational segments. Geographic-based operations are further segmented into traditional and financial solutions businesses. Information related to revenues, income (loss) before income taxes and total assets of the Company for each reportable segment are summarized below (dollars in thousands).

	Three months ended		Nine months ended	
	September 30,		September 30,	
Revenues:	2018	2017	2018	2017
U.S. and Latin America:				
Traditional	\$1,547,790	\$1,521,383	\$4,601,631	\$4,532,584
Financial Solutions	290,848	264,170	734,148	834,992
Total	1,838,638	1,785,553	5,335,779	5,367,576
Canada:				
Traditional	295,962	281,095	910,480	814,643
Financial Solutions	12,168			