

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

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarterly period ended September 30, 2022

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
(State or other jurisdiction
of incorporation or organization)

43-1627032
(IRS employer
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

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.01	RGA	New York Stock Exchange
6.20% Fixed-To-Floating Rate Subordinated Debentures due 2042	RZA	New York Stock Exchange
5.75% Fixed-To-Floating Rate Subordinated Debentures due 2056	RZB	New York Stock Exchange
7.125% Fixed Rate Reset Subordinated Debentures due 2052	RZC	New York Stock Exchange

As of October 31, 2022, 66,835,999 shares of the registrant's common stock were outstanding.

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES

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PART I - FINANCIAL INFORMATION
ITEM 1. Financial Statements

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

	September 30, 2022	December 31, 2021
(Dollars in millions, except share data)		
Assets		
Fixed maturity securities available-for-sale, at fair value (amortized cost of \$57,630 and \$55,873; allowance for credit losses of \$52 and \$31)	\$ 50,495	\$ 60,749
Equity securities, at fair value	137	151
Mortgage loans (net of allowance for credit losses of \$43 and \$35)	6,558	6,283
Policy loans	1,202	1,234
Funds withheld at interest	6,177	6,954
Short-term investments	225	87
Other invested assets	3,246	3,070
Total investments	68,040	78,528
Cash and cash equivalents	3,512	2,948
Accrued investment income	628	533
Premiums receivable and other reinsurance balances	2,820	2,888
Reinsurance ceded receivables and other	2,456	2,580
Deferred policy acquisition costs	3,887	3,690
Other assets	1,362	1,008
Total assets	\$ 82,705	\$ 92,175
Liabilities and Equity		
Future policy benefits	\$ 33,715	\$ 35,782
Interest-sensitive contract liabilities	30,286	26,377
Other policy claims and benefits	6,249	6,993
Other reinsurance balances	909	613
Deferred income taxes	686	2,886
Other liabilities	2,910	2,663
Long-term debt	4,207	3,667
Collateral finance and securitization notes	—	180
Total liabilities	78,962	79,161
Commitments and contingent liabilities (See Note 8)		
Equity:		
Preferred stock – par value \$0.01 per share, 10,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock – par value \$0.01 per share, 140,000,000 shares authorized, 85,310,598 shares issued at September 30, 2022 and December 31, 2021	1	1
Additional paid-in capital	2,493	2,461
Retained earnings	8,820	8,563
Treasury stock, at cost – 18,483,720 and 18,139,868 shares	(1,697)	(1,653)
Accumulated other comprehensive income (loss)	(5,964)	3,642
Total Reinsurance Group of America, Inc. stockholders' equity	3,653	13,014
Noncontrolling interest	90	—
Total equity	3,743	13,014
Total liabilities and stockholders' equity	\$ 82,705	\$ 92,175

See accompanying notes to condensed consolidated financial statements (unaudited).

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

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
(Dollars in millions, except per share data)				
Revenues:				
Net premiums	\$ 3,247	\$ 3,094	\$ 9,632	\$ 9,106
Net investment income	769	796	2,333	2,367
Investment related gains (losses), net	(134)	58	(514)	472
Other revenues	184	95	432	354
Total revenues	4,066	4,043	11,883	12,299
Benefits and Expenses:				
Claims and other policy benefits	2,815	3,289	8,855	9,294
Interest credited	189	177	468	541
Policy acquisition costs and other insurance expenses	396	338	1,144	1,010
Other operating expenses	251	229	720	683
Interest expense	46	41	130	129
Collateral finance and securitization expense	3	3	6	8
Total benefits and expenses	3,700	4,077	11,323	11,665
Income before income taxes	366	(34)	560	634
Provision for income taxes	81	(12)	139	173
Net income (loss)	\$ 285	\$ (22)	\$ 421	\$ 461
Net income attributable to noncontrolling interest	1	—	2	—
Net income (loss) available to RGA, Inc. shareholders	\$ 284	\$ (22)	\$ 419	\$ 461
Earnings per share:				
Basic earnings per share	\$ 4.24	\$ (0.32)	\$ 6.25	\$ 6.78
Diluted earnings per share	\$ 4.19	\$ (0.32)	\$ 6.19	\$ 6.74

See accompanying notes to condensed consolidated financial statements (unaudited).

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

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Comprehensive income (loss)	(Dollars in millions)			
Net income (loss)	\$ 285	\$ (22)	\$ 421	\$ 461
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	(177)	(30)	(207)	19
Net unrealized investment gains (losses)	(2,228)	(429)	(9,398)	(1,796)
Defined benefit pension and postretirement plan adjustments	—	1	(1)	1
Total other comprehensive income (loss), net of tax	(2,405)	(458)	(9,606)	(1,776)
Total comprehensive income (loss)	(2,120)	(480)	(9,185)	(1,315)
Comprehensive income attributable to noncontrolling interest	1	—	2	—
Total comprehensive income (loss) available to RGA, Inc. shareholders	\$ (2,121)	\$ (480)	\$ (9,187)	\$ (1,315)

See accompanying notes to condensed consolidated financial statements (unaudited).

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY
(in millions except per share amounts)
(Unaudited)

Three months ended September 30, 2022 and 2021								
	Common Stock	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total RGA, Inc. Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance, June 30, 2022	\$ 1	\$ 2,478	\$ 8,592	\$ (1,673)	\$ (3,559)	\$ 5,839	\$ 90	\$ 5,929
Distributions to noncontrolling interest							(1)	(1)
Net income			284			284	1	285
Total other comprehensive income (loss)					(2,405)	(2,405)		(2,405)
Dividends to stockholders, \$0.80 per share			(54)			(54)		(54)
Purchase of treasury stock				(27)		(27)		(27)
Reissuance of treasury stock		15	(2)	3		16		16
Balance, September 30, 2022	\$ 1	\$ 2,493	\$ 8,820	\$ (1,697)	\$ (5,964)	\$ 3,653	\$ 90	\$ 3,743
Balance, June 30, 2021	\$ 1	\$ 2,430	\$ 8,531	\$ (1,559)	\$ 4,041	\$ 13,444	\$ —	\$ 13,444
Net income (loss)			(22)			(22)		(22)
Total other comprehensive income (loss)					(458)	(458)		(458)
Dividends to stockholders, \$0.73 per share			(50)			(50)		(50)
Purchase of treasury stock				(46)		(46)		(46)
Reissuance of treasury stock		17	(1)	1		17		17
Balance, September 30, 2021	\$ 1	\$ 2,447	\$ 8,458	\$ (1,604)	\$ 3,583	\$ 12,885	\$ —	\$ 12,885

Nine months ended September 30, 2022 and 2021								
	Common Stock	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total RGA, Inc. Stockholders' Equity	Noncontrolling Interest	Total Equity
Balance, December 31, 2021	\$ 1	\$ 2,461	\$ 8,563	\$ (1,653)	\$ 3,642	\$ 13,014	\$ —	\$ 13,014
Issuance of preferred interests by subsidiary							90	90
Distributions to noncontrolling interest							(2)	(2)
Net income			419			419	2	421
Total other comprehensive income (loss)					(9,606)	(9,606)		(9,606)
Dividends to stockholders, \$2.26 per share			(152)			(152)		(152)
Purchase of treasury stock				(54)		(54)		(54)
Reissuance of treasury stock		32	(10)	10		32		32
Balance, September 30, 2022	\$ 1	\$ 2,493	\$ 8,820	\$ (1,697)	\$ (5,964)	\$ 3,653	\$ 90	\$ 3,743
Balance, December 31, 2020	\$ 1	\$ 2,406	\$ 8,148	\$ (1,562)	\$ 5,359	\$ 14,352	\$ —	\$ 14,352
Net income			461			461		461
Total other comprehensive income (loss)					(1,776)	(1,776)		(1,776)
Dividends to stockholders, \$2.13 per share			(145)			(145)		(145)
Purchase of treasury stock				(48)		(48)		(48)
Reissuance of treasury stock		41	(6)	6		41		41
Balance, September 30, 2021	\$ 1	\$ 2,447	\$ 8,458	\$ (1,604)	\$ 3,583	\$ 12,885	\$ —	\$ 12,885

See accompanying notes to condensed consolidated financial statements (unaudited).

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

	Nine months ended September 30,	
	2022	2021
	(Dollars in millions)	
Net cash provided by (used in) operating activities	\$ 1,077	\$ 3,821
Cash flows from investing activities:		
Sales of fixed maturity securities available-for-sale	8,072	9,673
Maturities of fixed maturity securities available-for-sale	669	682
Sales of equity securities	7	26
Principal payments and sales of mortgage loans	784	728
Principal payments on policy loans	36	32
Purchases of fixed maturity securities available-for-sale	(13,035)	(13,698)
Purchases of equity securities	(14)	(21)
Cash invested in mortgage loans	(1,113)	(980)
Cash invested in policy loans	(5)	(8)
Cash invested in funds withheld at interest	(8)	(60)
Purchase of business, net of cash acquired of \$53	—	(156)
Proceeds from sale of businesses, net of cash transferred of \$1 and \$43	7	19
Purchases of property and equipment	(19)	(15)
Change in short-term investments	(161)	379
Change in other invested assets	(15)	(93)
Net cash provided by (used in) investing activities	(4,795)	(3,492)
Cash flows from financing activities:		
Dividends to stockholders	(152)	(145)
Repayment of collateral finance and securitization notes	(181)	(74)
Proceeds from long-term debt issuance	700	—
Debt issuance costs	(10)	—
Principal payments of long-term debt	(153)	(402)
Purchases of treasury stock	(54)	(48)
Change in cash collateral for derivative positions and other arrangements	99	29
Change in deposit asset on reinsurance	(32)	14
Deposits on investment-type policies and contracts	5,232	857
Withdrawals on investment-type policies and contracts	(1,076)	(908)
Distributions to noncontrolling interest	(2)	—
Issuance of preferred interests by subsidiary	90	—
Net cash used in financing activities	4,461	(677)
Effect of exchange rate changes on cash	(179)	(33)
Change in cash and cash equivalents	564	(381)
Cash and cash equivalents, beginning of period	2,948	3,408
Cash and cash equivalents, end of period	\$ 3,512	\$ 3,027
Supplemental disclosures of cash flow information:		
Interest paid	\$ 106	\$ 121
Income taxes paid (received), net of refunds	\$ 108	\$ 313
Non-cash investing activities:		
Transfer of invested assets	\$ 494	\$ 1,798
Non-cash financing activities:		
Non-cash deposits on reinsurance	\$ —	\$ 1,581
Purchase of a business:		
Assets acquired, excluding cash acquired	\$ —	\$ 847
Liabilities assumed	\$ —	\$ (691)
Sale of businesses:		
Assets disposed, net of cash transferred	\$ (6)	\$ (512)
Liabilities disposed	\$ 1	\$ 504

See accompanying notes to condensed consolidated financial statements (unaudited).

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Business and Basis of Presentation

Business

Reinsurance Group of America, Incorporated (“RGA”) is an insurance holding company that was formed on December 31, 1992. RGA and its subsidiaries (collectively, the “Company”) is engaged in providing traditional reinsurance, which includes individual and group life and health, disability, and critical illness reinsurance. The Company also provides financial solutions, which includes longevity reinsurance, asset-intensive products, primarily annuities, financial reinsurance, capital solutions and stable value products.

Basis of Presentation

The unaudited condensed consolidated financial statements of 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 of the Securities and Exchange Commission (“SEC”). Accordingly, these condensed consolidated financial statements do not include all of the information and footnotes required by GAAP for complete financial statements and should be read in conjunction with the Company’s 2021 Annual Report on Form 10-K filed with the SEC on February 25, 2022 (the “2021 Annual Report”).

In the opinion of management, all adjustments, including normal recurring adjustments necessary for a fair presentation have been included. Interim results are not necessarily indicative of the results that may be expected for the year ending December 31, 2022.

Consolidation

These unaudited condensed consolidated financial statements include the accounts of RGA and its subsidiaries and all intercompany accounts and transactions have been eliminated. Entities in which the Company has significant influence over the operating and financing decisions but are not required to be consolidated are reported under the equity method of accounting.

2. Earnings Per Share

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

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Earnings:				
Net income	\$ 285	\$ (22)	\$ 421	\$ 461
Less: Net income attributable to noncontrolling interest	1	—	2	—
Net income available to RGA, Inc. shareholders	\$ 284	\$ (22)	\$ 419	\$ 461
Shares:				
Weighted average outstanding shares	67	68	67	68
Equivalent shares from outstanding stock awards	1	—	1	—
Denominator for diluted calculation	68	68	68	68
Earnings per share:				
Basic	\$ 4.24	\$ (0.32)	\$ 6.25	\$ 6.78
Diluted	\$ 4.19	\$ (0.32)	\$ 6.19	\$ 6.74

As a result of the net loss for the three months ended September 30, 2021, the Company is required to use basic weighted average common shares outstanding of 68 million in the calculation of diluted loss per share since the inclusion of shares for outstanding stock awards would have been anti-dilutive to the loss per share calculations.

The calculation of common equivalent shares does not include the impact of stock awards with a conversion price that exceeds the average stock price for the earnings period, as the result would be antidilutive. Approximately 0.9 million and 1.5 million stock awards were excluded from the calculation of common equivalent shares during the three and nine month periods ended September 30, 2022, respectively. 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. Approximately 0.2 million performance contingent shares were excluded from the calculation of common equivalent shares during both the three and nine month periods ended September 30, 2022, respectively.

3. Equity

Common Stock

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

	Issued	Held In Treasury	Outstanding
Balance, December 31, 2021	85,310,598	18,139,868	67,170,730
Issuance of common stock	—	—	—
Common stock acquired	—	414,350	(414,350)
Stock-based compensation ⁽¹⁾	—	(70,498)	70,498
Balance, September 30, 2022	85,310,598	18,483,720	66,826,878

	Issued	Held In Treasury	Outstanding
Balance, December 31, 2020	85,310,598	17,353,697	67,956,901
Issuance of common stock	—	—	—
Common stock acquired	—	405,644	(405,644)
Stock-based compensation ⁽¹⁾	—	(48,566)	48,566
Balance, September 30, 2021	85,310,598	17,710,775	67,599,823

(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.

On January 24, 2019, RGA's board of directors authorized a share repurchase program for up to \$400 million of RGA's outstanding common stock. During the nine months ended September 30, 2022, RGA repurchased 219,116 shares of common stock under this program for \$25 million.

On February 25, 2022, RGA's board of directors authorized a share repurchase program for up to \$400 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. During the nine months ended September 30, 2022, RGA repurchased 195,234 shares of common stock under this program for \$25 million.

Noncontrolling Interest

In 2022, Papara Financing LLC ("Papara"), a subsidiary of RGA Reinsurance Company, issued nonconvertible preferred interests to an unaffiliated third party. Papara holds investments in mortgage loans.

The membership interests in Papara consist of (1) common interests, which are held by RGA Reinsurance Company and (2) preferred interests. The preferred interests total \$90 million and pay an initial preferred distribution at an annual rate of 2.375% plus three month LIBOR. The applicable rate of interest is reset every five years. Distributions are paid quarterly, if declared by Papara. RGA can call the Papara preferred interests at the issue price beginning five years from the issuance date or upon the receipt of proceeds from the sale of the underlying assets.

The holders of the Papara preferred interests have the option to require redemption upon the occurrence of certain contingent events, such as the failure of Papara to pay the preferred distribution for two or more periods or to meet certain other requirements, including a minimum credit rating. If notice is given upon such an event, all other holders of equal or more subordinate classes of membership interests in Papara are entitled to receive the same form of consideration payable to the holders of the preferred interests, resulting in a deemed liquidation for accounting purposes. The preferred interests are included in noncontrolling interest, and net income attributable to noncontrolling interest was \$2 million for the nine months ended September 30, 2022.

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, 2022 and 2021 are as follows (dollars in millions):

	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments ⁽¹⁾	Pension and Postretirement Benefits	Total
Balance, December 31, 2021	\$ (9)	\$ 3,701	\$ (50)	\$ 3,642
Other comprehensive income (loss) before reclassifications	(173)	(12,398)	(3)	(12,574)
Amounts reclassified to (from) AOCI	—	418	2	420
Deferred income tax benefit (expense)	(34)	2,582	—	2,548
Balance, September 30, 2022	\$ (216)	\$ (5,697)	\$ (51)	\$ (5,964)

	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments ⁽¹⁾	Pension and Postretirement Benefits	Total
Balance, December 31, 2020	\$ (69)	\$ 5,500	\$ (72)	\$ 5,359
Other comprehensive income (loss) before reclassifications	33	(2,136)	(5)	(2,108)
Amounts reclassified to (from) AOCI	—	(181)	6	(175)
Deferred income tax benefit (expense)	(14)	521	—	507
Balance, September 30, 2021	\$ (50)	\$ 3,704	\$ (71)	\$ 3,583

(1) Includes cash flow hedges of \$(230) and \$(22) as of September 30, 2022 and December 31, 2021, respectively, and \$(55) and \$(49) as of September 30, 2021 and December 31, 2020, respectively. See Note 5 – “Derivative Instruments” for additional information on cash flow hedges.

The following table presents the amounts reclassified from AOCI to the Statements of Income for the three and nine months ended September 30, 2022 and 2021 (dollars in millions):

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,		
	2022	2021	2022	2021	
Net unrealized investment gains (losses):					
Net unrealized gains (losses) on available-for-sale securities	\$ (92)	\$ 35	\$ (195)	\$ 218	Investment related gains (losses), net
Cash flow hedges – Interest rate	—	(2)	(2)	(6)	(1)
Cash flow hedges – Currency/Interest rate	(3)	—	(5)	—	(1)
Deferred policy acquisition costs attributed to unrealized gains and losses	(15)	(8)	(216)	(31)	(2)
Total	(110)	25	(418)	181	
Provision for income taxes	24	(5)	88	(38)	
Net unrealized gains (losses), net of tax	\$ (86)	\$ 20	\$ (330)	\$ 143	
Amortization of defined benefit plan items:					
Prior service cost (credit)	\$ —	\$ —	\$ 1	\$ 1	(3)
Actuarial gains (losses)	—	(3)	(3)	(7)	(3)
Total	—	(3)	(2)	(6)	
Provision for income taxes	—	—	—	1	
Amortization of defined benefit plans, net of tax	\$ —	\$ (3)	\$ (2)	\$ (5)	
Total reclassifications for the period	\$ (86)	\$ 17	\$ (332)	\$ 138	

(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 2021 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 \$31 million and \$40 million in the first nine months of 2022 and 2021, respectively. In the first quarter of 2022, the Company granted 258,327 stock appreciation rights at \$106.53 weighted average exercise price per share, 78,687 performance contingent shares and 219,553 restricted stock units to employees. Additionally, non-employee directors were granted a total of 17,937 shares of common stock. As of September 30, 2022, 1,652,736 share awards at a weighted average strike price per share of \$107.03 were vested and exercisable, with a remaining weighted average exercise period of 4.2 years. As of September 30, 2022, the total compensation cost of non-vested awards not yet recognized in the condensed consolidated financial statements was \$31 million. It is estimated that these costs will vest over a weighted average period of 0.7 years.

4. Investments

Fixed Maturity 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”). RMBS, ABS and CMBS are collectively “structured securities.”

The following tables provide information relating to investments in fixed maturity securities by type as of September 30, 2022 and December 31, 2021 (dollars in millions):

September 30, 2022:	Amortized Cost	Allowance for Credit Losses	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total
Available-for-sale:						
Corporate	\$ 38,293	\$ 43	\$ 163	\$ 5,758	\$ 32,655	64.6 %
Canadian government	3,124	—	503	41	3,586	7.1
RMBS	1,054	—	4	105	953	1.9
ABS	4,165	4	6	444	3,723	7.4
CMBS	1,843	1	3	175	1,670	3.3
U.S. government	1,064	—	3	204	863	1.7
State and political subdivisions	1,254	—	9	177	1,086	2.2
Other foreign government	6,833	4	21	891	5,959	11.8
Total fixed maturity securities	\$ 57,630	\$ 52	\$ 712	\$ 7,795	\$ 50,495	100.0 %

December 31, 2021:	Amortized Cost	Allowance for Credit Losses	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total
Available-for-sale:						
Corporate	\$ 35,239	\$ 26	\$ 3,084	\$ 194	\$ 38,103	62.8 %
Canadian government	3,339	—	1,606	1	4,944	8.1
RMBS	1,020	—	37	7	1,050	1.7
ABS	4,024	—	22	41	4,005	6.6
CMBS	1,790	1	66	6	1,849	3.0
U.S. government	2,082	—	31	8	2,105	3.5
State and political subdivisions	1,191	—	137	5	1,323	2.2
Other foreign government	7,188	4	273	87	7,370	12.1
Total fixed maturity securities	\$ 55,873	\$ 31	\$ 5,256	\$ 349	\$ 60,749	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, 2022 and December 31, 2021, 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, 2022 and December 31, 2021 (dollars in millions):

	September 30, 2022		December 31, 2021	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities pledged as collateral	\$ 414	\$ 362	\$ 100	\$ 103
Fixed maturity securities received as collateral	n/a	1,273	n/a	1,922
Assets in trust held to satisfy collateral requirements	31,060	26,993	28,671	31,173

The Company monitors its concentrations of financial instruments on an ongoing basis and mitigates credit risk by maintaining a diversified investment portfolio that 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 equity included securities of the U.S. government and its agencies as well as the securities disclosed below, as of September 30, 2022 and December 31, 2021 (dollars in millions).

	September 30, 2022		December 31, 2021	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities guaranteed or issued by:				
Government of Japan	\$ 2,761	\$ 2,440	\$ 3,080	\$ 3,063
Canadian province of Quebec	1,304	1,646	1,377	2,347
Canadian province of Ontario	964	1,058	1,092	1,451

The amortized cost and estimated fair value of fixed maturity securities classified as available-for-sale as of September 30, 2022, are shown by contractual maturity in the table below (dollars in millions). 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. Structured 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	\$ 1,480	\$ 1,473
Due after one year through five years	9,448	9,138
Due after five years through ten years	11,292	10,015
Due after ten years	28,348	23,523
Structured securities	7,062	6,346
Total	\$ 57,630	\$ 50,495

Corporate Fixed Maturity Securities

The tables below show the major sectors of the Company's corporate fixed maturity holdings as of September 30, 2022 and December 31, 2021 (dollars in millions):

September 30, 2022:

	Amortized Cost	Estimated Fair Value	% of Total
Finance	\$ 14,152	\$ 12,064	36.9 %
Industrial	19,434	16,736	51.3
Utility	4,707	3,855	11.8
Total	\$ 38,293	\$ 32,655	100.0 %

December 31, 2021:

	Amortized Cost	Estimated Fair Value	% of Total
Finance	\$ 13,101	\$ 14,045	36.9 %
Industrial	17,857	19,375	50.8
Utility	4,281	4,683	12.3
Total	\$ 35,239	\$ 38,103	100.0 %

Allowance for Credit Losses and Impairments – Fixed Maturity Securities Available-for-Sale

As discussed in Note 2 – “Significant Accounting Policies and Pronouncements” of the Company’s 2021 Annual Report, allowances for credit losses on fixed maturity securities are recognized in investment related gains (losses), net. The amount recognized 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 fixed maturity security prior to the allowance for credit losses. Any remaining difference between the fair value and amortized cost is recognized in OCI.

The following tables present the rollforward of the allowance for credit losses in fixed maturity securities by type for the nine months ended September 30, 2022 and 2021 (dollars in millions):

	Nine months ended September 30, 2022				
	Corporate	ABS	CMBS	Other Foreign Government	Total
Balance, beginning of period	\$ 26	\$ —	\$ 1	\$ 4	\$ 31
Credit losses recognized on securities for which credit losses were not previously recorded	26	4	—	1	31
Reductions for securities sold during the period	(9)	—	—	(3)	(12)
Reductions for securities the Company intends to sell or more likely than not will be required to sell before recovery of its amortized cost	(4)	—	—	—	(4)
Additional increases or decreases for credit losses on securities that had an allowance recorded in a previous period	4	—	—	2	6
Balance, end of period	\$ 43	\$ 4	\$ 1	\$ 4	\$ 52

	Nine months ended September 30, 2021				
	Corporate	ABS	CMBS	Other Foreign Government	Total
Balance, beginning of period	\$ 17	\$ —	\$ 3	\$ —	\$ 20
Credit losses recognized on securities for which credit losses were not previously recorded	5	—	1	4	10
Reductions for securities sold during the period	(8)	—	(2)	—	(10)
Reductions for securities the Company intends to sell or more likely than not will be required to sell before recovery of its amortized cost	—	—	—	—	—
Additional increases or decreases for credit losses on securities that had an allowance recorded in a previous period	(2)	—	(1)	—	(3)
Balance, end of period	\$ 12	\$ —	\$ 1	\$ 4	\$ 17

Unrealized Losses for Fixed Maturity Securities Available-for-Sale

The Company’s determination of whether a decline in value necessitates the recording of an allowance for credit losses includes an analysis of 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 tables present the estimated fair value and gross unrealized losses for the 6,618 and 1,862 fixed maturity securities for which an allowance for credit loss has not been recorded as of September 30, 2022 and December 31, 2021, and the estimated fair value had declined and remained below amortized cost (dollars in millions). These investments are presented by class and grade of security, as well as the length of time the related fair value has continuously remained below amortized cost.

	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
September 30, 2022:						
Investment grade securities:						
Corporate	\$ 25,451	\$ 4,761	\$ 2,283	\$ 811	\$ 27,734	\$ 5,572
Canadian government	368	36	12	5	380	41
RMBS	678	69	128	36	806	105
ABS	2,333	296	1,054	121	3,387	417
CMBS	1,461	149	83	17	1,544	166
U.S. government	721	190	116	14	837	204
State and political subdivisions	883	161	44	16	927	177
Other foreign government	3,834	509	1,291	290	5,125	799
Total investment grade securities	35,729	6,171	5,011	1,310	40,740	7,481
Below investment grade securities:						
Corporate	1,144	118	202	62	1,346	180
ABS	53	12	23	7	76	19
CMBS	22	3	18	3	40	6
Other foreign government	186	28	124	62	310	90
Total below investment grade securities	1,405	161	367	134	1,772	295
Total fixed maturity securities	\$ 37,134	\$ 6,332	\$ 5,378	\$ 1,444	\$ 42,512	\$ 7,776

	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
December 31, 2021:						
Investment grade securities:						
Corporate	\$ 4,135	\$ 86	\$ 946	\$ 51	\$ 5,081	\$ 137
Canadian government	20	1	—	—	20	1
RMBS	132	3	102	4	234	7
ABS	1,747	22	589	6	2,336	28
CMBS	152	2	35	2	187	4
U.S. government	1,513	6	31	2	1,544	8
State and political subdivisions	109	3	28	2	137	5
Other foreign government	2,237	33	724	37	2,961	70
Total investment grade securities	10,045	156	2,455	104	12,500	260
Below investment grade securities:						
Corporate	463	13	97	44	560	57
ABS	—	—	13	13	13	13
CMBS	—	—	—	—	—	—
Other foreign government	136	7	75	10	211	17
Total below investment grade securities	599	20	185	67	784	87
Total fixed maturity securities	\$ 10,644	\$ 176	\$ 2,640	\$ 171	\$ 13,284	\$ 347

The Company has no intention to sell, nor does it expect to be required to sell, the securities outlined in the tables above, as of the dates indicated. However, unforeseen facts and circumstances may cause the Company to sell fixed maturity securities in the ordinary course of managing its portfolio to meet certain diversification, credit quality and liquidity guidelines. Changes in unrealized losses are primarily driven by changes in risk-free interest rates and credit spreads.

Net Investment Income

Major categories of net investment income consist of the following (dollars in millions):

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Fixed maturity securities available-for-sale	\$ 591	\$ 519	\$ 1,683	\$ 1,530
Equity securities	2	1	5	4
Mortgage loans	74	81	223	220
Policy loans	13	14	40	41
Funds withheld at interest	67	100	175	279
Short-term investments and cash and cash equivalents	7	1	11	2
Other invested assets – limited partnerships and real estate joint ventures	43	96	281	327
Other invested assets – all other	3	14	5	44
Investment income	800	826	2,423	2,447
Investment expense	(31)	(30)	(90)	(80)
Net investment income	\$ 769	\$ 796	\$ 2,333	\$ 2,367

Investment Related Gains (Losses), Net

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

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Fixed maturity securities available-for-sale:				
Change in allowance for credit losses and impairments	\$ (9)	\$ (1)	\$ (36)	\$ 2
Realized gains on investment activity	20	45	65	265
Realized losses on investment activity	(106)	(9)	(236)	(52)
Net gains (losses) on equity securities	7	8	(16)	31
Other impairment losses and change in mortgage loan allowance for credit losses	(6)	4	(9)	25
Change in fair value of certain limited partnership investments and other, net	7	27	52	170
Net gains (losses) on derivatives	(47)	(16)	(334)	31
Total investment related gains (losses), net	\$ (134)	\$ 58	\$ (514)	\$ 472

Securities Borrowing, Lending and Repurchase/Reverse Repurchase Agreements

The following table provides information relating to securities borrowing, lending and repurchase/reverse repurchase agreements as of September 30, 2022 and December 31, 2021 (dollars in millions):

	September 30, 2022		December 31, 2021	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Securities borrowing agreements:				
Securities borrowed ⁽¹⁾	n/a	\$ 630	n/a	\$ 420
Securities pledged as collateral ⁽²⁾	545	459	279	290
Securities lending agreements:				
Securities loaned ⁽²⁾	59	55	94	102
Securities received as collateral ⁽³⁾	n/a	66	n/a	102
Repurchase/reverse repurchase agreements:				
Securities pledged ⁽²⁾	745	629	704	736
Cash ⁽⁴⁾	—	—	10	10
Securities received ⁽³⁾	n/a	620	n/a	728
Cash received ⁽⁵⁾	66	66	—	—

(1) Securities borrowed are not reflected on the condensed consolidated balance sheets. Collateral associated with certain borrowed securities is not included within this table as the collateral pledged to the counterparty is the right to reinsurance treaty cash flows.

(2) Securities loaned and pledged to counterparties are included within fixed maturity securities.

(3) Securities received as collateral from counterparties are not reflected on the condensed consolidated financial statements.

(4) A receivable for the cash held by counterparties is included within other assets.

(5) A payable for the cash received by the Company is included within other liabilities.

The following tables present information on the remaining contractual maturity of the Company's securities lending and repurchase agreements as of September 30, 2022 and December 31, 2021 (dollars in millions):

	September 30, 2022				
	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 Days	30 – 90 Days	Greater than 90 Days	Total
Securities lending agreements:					
Corporate	\$ —	\$ —	\$ —	\$ 42	\$ 42
State and political subdivisions	—	—	—	3	3
Other foreign government	—	—	—	10	10
Total	—	—	—	55	55
Repurchase agreements:					
Corporate	—	—	—	278	278
Other foreign government	—	—	118	233	351
Total	—	—	118	511	629
Total agreements	\$ —	\$ —	\$ 118	\$ 566	\$ 684

	December 31, 2021				
	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 Days	30 – 90 Days	Greater than 90 Days	Total
Securities lending agreements:					
Corporate	\$ —	\$ —	\$ —	\$ 94	\$ 94
State and political subdivisions	—	—	—	3	3
Other foreign government	—	—	—	5	5
Total	—	—	—	102	102
Repurchase agreements:					
Corporate	—	—	—	366	366
Other foreign government	—	—	—	370	370
Total	—	—	—	736	736
Total agreements	\$ —	\$ —	\$ —	\$ 838	\$ 838

Mortgage Loans

As of September 30, 2022, mortgage loans were geographically dispersed throughout the U.S. with the largest concentrations in California (13.1%), Texas (11.4%) and Washington (8.2%), in addition to loans secured by properties in Canada (3.1%) and United Kingdom (2.3%). The recorded investment in mortgage loans presented below is gross of unamortized deferred loan origination fees and expenses and allowance for credit losses.

The following table presents the distribution of the Company's recorded investment in mortgage loans by property type as of September 30, 2022 and December 31, 2021 (dollars in millions):

Property type:	September 30, 2022		December 31, 2021	
	Carrying Value	% of Total	Carrying Value	% of Total
Office	\$ 1,727	26.1 %	\$ 1,683	26.6 %
Retail	2,317	35.0	2,090	33.0
Industrial	1,431	21.6	1,249	19.7
Apartment	751	11.4	801	12.7
Other commercial	387	5.9	506	8.0
Recorded investment	6,613	100.0 %	6,329	100.0 %
Unamortized balance of loan origination fees and expenses	(12)		(11)	
Allowance for credit losses	(43)		(35)	
Total mortgage loans	\$ 6,558		\$ 6,283	

The following table presents the maturities of the Company's recorded investment in mortgage loans as of September 30, 2022 and December 31, 2021 (dollars in millions):

	September 30, 2022		December 31, 2021	
	Recorded Investment	% of Total	Recorded Investment	% of Total
Due within five years	\$ 2,504	37.8 %	\$ 2,660	42.0 %
Due after five years through ten years	3,047	46.0	2,593	41.0
Due after ten years	1,062	16.2	1,076	17.0
Total	\$ 6,613	100.0 %	\$ 6,329	100.0 %

The following tables set forth certain key credit quality indicators of the Company's recorded investment in mortgage loans as of September 30, 2022 and December 31, 2021 (dollars in millions):

	Recorded Investment					
	Debt Service Ratios			Construction Loans	Total	% of Total
	>1.20x	1.00x – 1.20x	<1.00x			
September 30, 2022:						
Loan-to-Value Ratio						
0% – 59.99%	\$ 3,334	\$ 226	\$ 74	\$ 27	\$ 3,661	55.3 %
60% – 69.99%	1,946	181	113	—	2,240	33.9
70% – 79.99%	434	34	35	—	503	7.6
80% or greater	84	—	125	—	209	3.2
Total	\$ 5,798	\$ 441	\$ 347	\$ 27	\$ 6,613	100.0 %

	Recorded Investment					
	Debt Service Ratios			Construction Loans	Total	% of Total
	>1.20x	1.00x – 1.20x	<1.00x			
December 31, 2021:						
Loan-to-Value Ratio						
0% – 59.99%	\$ 3,111	\$ 238	\$ 51	\$ 6	\$ 3,406	53.8 %
60% – 69.99%	1,906	190	46	—	2,142	33.8
70% – 79.99%	520	41	12	—	573	9.1
80% or greater	148	—	60	—	208	3.3
Total	\$ 5,685	\$ 469	\$ 169	\$ 6	\$ 6,329	100.0 %

The following table sets forth credit quality grades by year of origination of the Company's recorded investment in mortgage loans as of September 30, 2022 and December 31, 2021 (dollars in millions):

	Recorded Investment						
	Year of Origination						Total
	2022	2021	2020	2019	2018	Prior	
September 30, 2022:							
Internal credit quality grade:							
High investment grade	\$ 619	\$ 697	\$ 331	\$ 568	\$ 417	\$ 1,538	\$ 4,170
Investment grade	460	284	245	323	279	629	2,220
Average	—	6	—	26	66	89	187
Watch list	—	—	—	—	—	—	—
In or near default	—	—	—	—	—	36	36
Total	\$ 1,079	\$ 987	\$ 576	\$ 917	\$ 762	\$ 2,292	\$ 6,613

	Recorded Investment							Total
	Year of Origination							
	2021	2020	2019	2018	2017	Prior		
December 31, 2021:								
Internal credit quality grade:								
High investment grade	\$ 725	\$ 402	\$ 645	\$ 461	\$ 344	\$ 1,534	\$ 4,111	
Investment grade	367	272	331	301	296	502	2,069	
Average	6	—	27	39	5	32	109	
Watch list	—	—	—	—	—	4	4	
In or near default	—	—	—	—	—	36	36	
Total	\$ 1,098	\$ 674	\$ 1,003	\$ 801	\$ 645	\$ 2,108	\$ 6,329	

The following table presents the current and past due composition of the Company's recorded investment in mortgage loans as of September 30, 2022 and December 31, 2021 (dollars in millions):

	September 30, 2022	December 31, 2021
Current	\$ 6,577	\$ 6,329
31 – 60 days past due	17	—
Greater than 90 days	19	—
Total	\$ 6,613	\$ 6,329

The following table presents information regarding the Company's allowance for credit losses for mortgage loans for the three and nine months ended September 30, 2022 and 2021 (dollars in millions):

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Balance, beginning of period	\$ 38	\$ 45	\$ 35	\$ 64
Change in allowance for credit losses	5	(6)	8	(25)
Balance, end of period	\$ 43	\$ 39	\$ 43	\$ 39

For the nine months ended September 30, 2022, the Company restructured 3 mortgage loans to interest only payments as a result of lower occupancy levels. The total recorded investment before allowance for credit losses for mortgage loans, which were modified and met the criteria of Troubled Debt Restructuring ("TDR"), is \$77 million as of September 30, 2022. For the nine months ended September 30, 2021, the Company did not have any significant loans that were modified and met the criteria of a TDR. The Company has a mortgage loan in the amount of \$19 million that was on a nonaccrual status as of September 30, 2022. The Company had no mortgage loans that were on a nonaccrual status as of September 30, 2021. The Company did not acquire any impaired mortgage loans during nine months ended September 30, 2022 and 2021.

Policy Loans

The majority of policy loans are associated with one client. These policy loans present no credit risk as 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.

Funds Withheld at Interest

As of September 30, 2022, \$4.0 billion of the funds withheld at interest balance is primarily associated with two clients. For reinsurance agreements written on a modco 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. 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), lifetime mortgages and derivative contracts. Other invested assets also includes FHLB common stock and unit-linked investments, which are included in “Other” in the table below. As of September 30, 2022 and December 31, 2021, the allowance for credit losses for lifetime mortgages was not material. The carrying values of other invested assets as of September 30, 2022 and December 31, 2021 are as follows (dollars in millions):

	September 30, 2022	December 31, 2021
Limited partnership interests and real estate joint ventures	\$ 2,196	\$ 1,996
Lifetime mortgages	786	758
Derivatives	161	175
Other	103	141
Total other invested assets	<u>\$ 3,246</u>	<u>\$ 3,070</u>

5. Derivative Instruments*Accounting for Derivative Instruments and Hedging Activities*

See Note 2 – “Significant Accounting Policies and Pronouncements” of the Company’s 2021 Annual Report for a detailed discussion of the accounting treatment for derivative instruments, including embedded derivatives. See Note 6 – “Fair Value of Assets and Liabilities” for additional disclosures related to the fair value hierarchy for derivative instruments, including embedded derivatives.

Types of Derivatives Used by the Company

Commonly used derivative instruments include, but are not necessarily limited to: credit default swaps, financial futures, equity options, foreign currency swaps, foreign currency forwards, interest rate swaps, interest rate options, synthetic guaranteed investment contracts (“GICs”), consumer price index (“CPI”) swaps, forward bond purchase commitments, total return swaps, other derivatives and embedded derivatives.

For detailed information on these derivative instruments and the related strategies, see Note 5 – “Derivative Instruments” of the Company’s 2021 Annual Report.

Summary of Derivative Positions

Derivatives, except for embedded derivatives, are included in other invested assets or other liabilities, at fair value. Embedded derivative assets and liabilities on modco or funds withheld arrangements are included on the condensed consolidated balance sheets with the host contract in funds withheld at interest or other liabilities, 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, 2022 and December 31, 2021 (dollars in millions):

	Primary Underlying Risk	September 30, 2022			December 31, 2021		
		Notional Amount	Carrying Value/Fair Value		Notional Amount	Carrying Value/Fair Value	
			Assets	Liabilities		Assets	Liabilities
Derivatives not designated as hedging instruments:							
Interest rate swaps	Interest rate	\$ 1,048	\$ 2	\$ 7	\$ 1,273	\$ 66	\$ 1
Interest rate options	Interest rate	5,312	40	—	—	—	—
Total return swaps	Interest rate	500	—	2	—	—	—
Financial futures	Equity	215	—	—	240	—	—
Foreign currency swaps	Foreign currency	150	27	—	150	1	—
Foreign currency forwards	Foreign currency	776	—	34	395	2	4
CPI swaps	CPI	462	25	8	563	34	7
Credit default swaps	Credit	1,723	6	50	1,321	29	1
Equity options	Equity	296	49	—	472	29	—
Synthetic GICs	Interest rate	17,485	—	—	16,143	—	—
Embedded derivatives in:							
Modco or funds withheld arrangements		—	316	256	—	227	62
Indexed annuity products		—	—	550	—	—	693
Variable annuity products		—	—	139	—	—	162
Total non-hedging derivatives		27,967	465	1,046	20,557	388	930
Derivatives designated as hedging instruments:							
Interest rate swaps	Foreign currency/Interest rate	1,335	4	140	941	4	33
Foreign currency swaps	Foreign currency	114	—	7	153	1	—
Foreign currency forwards	Foreign currency	1,028	67	—	1,320	14	11
Forward bond purchase commitments	Interest rate	407	—	109	545	14	1
Total hedging derivatives		2,884	71	256	2,959	33	45
Total derivatives		\$ 30,851	\$ 536	\$ 1,302	\$ 23,516	\$ 421	\$ 975

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, 2022 and 2021 were as follows (dollars in millions):

Type of Fair Value Hedge	Hedged Item	Gains (Losses) Recognized for Derivatives	Gains (Losses) Recognized for Hedged Items
Investment Related Gains (Losses)			
For the three months ended September 30, 2022:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ (7)	\$ 8
For the three months ended September 30, 2021:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ (4)	\$ 4
For the nine months ended September 30, 2022:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ (8)	\$ 13
For the nine months ended September 30, 2021:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	\$ (6)	\$ 7

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 flow hedges: (i) certain interest rate swaps, in which the cash flows of assets and 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 tables present 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, 2022 and 2021 (dollars in millions):

	Three months ended September 30,	
	2022	2021
Balance, beginning of period	\$ (206)	\$ (40)
Gains (losses), net deferred in other comprehensive income (loss)	(27)	(17)
Amounts reclassified to investment income	3	—
Amounts reclassified to interest expense	—	2
Balance, end of period	\$ (230)	\$ (55)

	Nine months ended September 30,	
	2022	2021
Balance, beginning of period	\$ (22)	\$ (49)
Gains (losses), net deferred in other comprehensive income (loss)	(215)	(12)
Amounts reclassified to investment income	5	—
Amounts reclassified to interest expense	2	6
Balance, end of period	\$ (230)	\$ (55)

As of September 30, 2022, approximately \$8 million of before-tax deferred net gains recorded in AOCI are expected to be reclassified to investment income during the next twelve months. As of September 30, 2022, approximately \$1 million of before-tax deferred net losses on derivative instruments recorded in AOCI are expected to be reclassified to interest expense during the next twelve months.

The following table presents the effect 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, 2022 and 2021 (dollars in millions):

Derivative Type	Gains (Losses) Deferred in OCI	Gains (Losses) Reclassified into Income from AOCI	
		Investment Income	Interest Expense
For the three months ended September 30, 2022:			
Interest rate	\$ (20)	\$ —	\$ —
Foreign currency/interest rate	(7)	(3)	—
Total	\$ (27)	\$ (3)	\$ —
For the three months ended September 30, 2021:			
Interest rate	\$ (12)	\$ —	\$ (2)
Foreign currency/interest rate	(5)	—	—
Total	\$ (17)	\$ —	\$ (2)
For the nine months ended September 30, 2022:			
Interest rate	\$ (190)	\$ —	\$ (2)
Foreign currency/interest rate	(25)	(5)	—
Total	\$ (215)	\$ (5)	\$ (2)
For the nine months ended September 30, 2021:			
Interest rate	\$ (6)	\$ —	\$ (6)
Foreign currency/interest rate	(6)	—	—
Total	\$ (12)	\$ —	\$ (6)

For the three and nine months ended September 30, 2022 and 2021, 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.

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 and the gains (losses) deferred in OCI for the three and nine months ended September 30, 2022 and 2021 (dollars in millions):

Type of NIFO Hedge	Derivative Gains (Losses) Deferred in OCI			
	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Foreign currency swaps	\$ —	\$ 2	\$ 1	\$ (1)
Foreign currency forwards	66	28	88	4
Total	\$ 66	\$ 30	\$ 89	\$ 3

The cumulative foreign currency translation gain recorded in AOCI related to these hedges was \$226 million and \$137 million at September 30, 2022 and December 31, 2021, 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. There were no sales or substantial liquidations of net investments in foreign operations that would have required the reclassification of gains or losses from AOCI into investment income during the periods presented.

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 elected 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, 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, 2022 and 2021 is as follows (dollars in millions):

Type of Non-hedging Derivative	Income Statement Location of Gain (Loss)	Three months ended September 30,	
		2022	2021
Interest rate swaps	Investment related gains (losses), net	\$ (33)	\$ (4)
Interest rate options	Investment related gains (losses), net	18	—
Total return swaps	Investment related gains (losses), net	(1)	—
Financial futures	Investment related gains (losses), net	7	—
Foreign currency swaps	Investment related gains (losses), net	9	3
Foreign currency forwards	Investment related gains (losses), net	(55)	(2)
CPI swaps	Investment related gains (losses), net	7	12
Credit default swaps	Investment related gains (losses), net	(12)	(12)
Equity options	Investment related gains (losses), net	8	3
Subtotal		(52)	—
Embedded derivatives in:			
Modco or funds withheld arrangements	Investment related gains (losses), net	(17)	21
Indexed annuity products	Interest credited	18	(15)
Variable annuity products	Investment related gains (losses), net	21	(37)
Total non-hedging derivatives		\$ (30)	\$ (31)

Type of Non-hedging Derivative	Income Statement Location of Gain (Loss)	Nine months ended September 30,	
		2022	2021
Interest rate swaps	Investment related gains (losses), net	\$ (129)	\$ (41)
Interest rate options	Investment related gains (losses), net	12	—
Total return swaps	Investment related gains (losses), net	(1)	—
Financial futures	Investment related gains (losses), net	38	(19)
Foreign currency swaps	Investment related gains (losses), net	27	15
Foreign currency forwards	Investment related gains (losses), net	(154)	(11)
CPI swaps	Investment related gains (losses), net	25	33
Credit default swaps	Investment related gains (losses), net	(103)	20
Equity options	Investment related gains (losses), net	29	(18)
Subtotal		(256)	(21)
Embedded derivatives in:			
Modco or funds withheld arrangements	Investment related gains (losses), net	(106)	87
Indexed annuity products	Interest credited	98	(14)
Variable annuity products	Investment related gains (losses), net	23	(36)
Total non-hedging derivatives		\$ (241)	\$ 16

Credit Derivatives

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, 2022 and December 31, 2021 (dollars in millions):

Rating Agency Designation of Referenced Credit Obligations ⁽¹⁾	September 30, 2022			December 31, 2021		
	Estimated Fair Value of Credit Default Swaps	Maximum Amount of Future Payments under Credit Default Swaps ⁽²⁾	Weighted Average Years to Maturity ⁽³⁾	Estimated Fair Value of Credit 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	\$ (40)	\$ 433	18.8	\$ 28	\$ 600	14.2
Subtotal	(40)	433	18.8	28	600	14.2
BBB+/BBB/BBB-						
Single name credit default swaps	—	150	3.6	1	141	2.4
Credit default swaps referencing indices	(1)	1,115	6.7	—	565	5.1
Subtotal	(1)	1,265	6.3	1	706	4.6
BB+/BB/BB-						
Single name credit default swaps	(3)	25	3.4	(1)	15	3.5
Subtotal	(3)	25	3.4	(1)	15	3.5
Total	\$ (44)	\$ 1,723	9.4	\$ 28	\$ 1,321	9.0

(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.

Netting Arrangements and Credit Risk

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 table 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 and repurchase/reverse repurchase agreements.

The following table provides information relating to the netting of the Company's derivative instruments as of September 30, 2022 and December 31, 2021 (dollars in millions):

	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Financial Instruments/ Collateral ⁽¹⁾	Net Amount
September 30, 2022:					
Derivative assets	\$ 220	\$ (59)	\$ 161	\$ (161)	\$ —
Derivative liabilities	357	(59)	298	(298)	—
December 31, 2021:					
Derivative assets	\$ 194	\$ (19)	\$ 175	\$ (175)	\$ —
Derivative liabilities	58	(19)	39	(39)	—

(1) Includes initial margin posted to a central clearing partner for financial instruments and excludes the excess of collateral received/pledged from/to the counterparty.

The Company may be exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments. Generally, the credit exposure of the Company's derivative contracts is limited to the fair value and accrued interest of non-collateralized derivative contracts in an asset position at the reporting date. As of September 30, 2022, the Company had credit exposure of \$14 million.

Derivatives may be exchange-traded or they may be privately negotiated contracts, which are referred to as over-the-counter ("OTC") derivatives. Certain of the Company's OTC derivatives are cleared and settled through central clearing counterparties ("OTC cleared") and others are bilateral contracts between two counterparties. The Company manages its credit risk related to 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 Company is only exposed to the default of the central clearing counterparties for OTC cleared derivatives, and these transactions require initial and daily variation margin collateral postings. Exchange-traded

derivatives are settled on a daily basis, thereby reducing the credit risk exposure in the event of non-performance by counterparties to such financial instruments.

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 three-level fair value hierarchy that requires an entity to maximize the use of observable inputs and to minimize the use of unobservable inputs when measuring fair value:

Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities. Active markets are defined through various characteristics for the measured asset/liability, such as having many transactions and narrow bid/ask spreads.

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 and include those whose value is determined using market standard valuation techniques described above. 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.

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 – "Fair Value of Assets and Liabilities" in the Notes to Consolidated Financial Statements included in the Company's 2021 Annual Report.

Assets and Liabilities by Hierarchy Level

Assets and liabilities measured at fair value on a recurring basis as of September 30, 2022 and December 31, 2021 are summarized below (dollars in millions):

September 30, 2022:

	Total	Fair Value Measurements Using:		
		Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	\$ 32,655	\$ —	\$ 28,369	\$ 4,286
Canadian government	3,586	—	3,586	—
RMBS	953	—	952	1
ABS	3,723	—	2,599	1,124
CMBS	1,670	—	1,607	63
U.S. government	863	767	87	9
State and political subdivisions	1,086	—	1,058	28
Other foreign government	5,959	—	5,926	33
Total fixed maturity securities – available-for-sale	50,495	767	44,184	5,544
Equity securities	137	73	—	64
Funds withheld at interest – embedded derivatives	(197)	—	—	(197)
Funds withheld at interest	52	—	—	52
Cash equivalents	2,114	2,114	—	—
Short-term investments	196	141	48	7
Other invested assets:				
Derivatives	161	—	161	—
Other	23	—	23	—
Total other invested assets ⁽¹⁾	184	—	184	—
Total	\$ 52,981	\$ 3,095	\$ 44,416	\$ 5,470
Liabilities:				
Interest-sensitive contract liabilities – embedded derivatives	\$ 689	\$ —	\$ —	\$ 689
Other liabilities:				
Funds withheld at interest – embedded derivatives	(256)	—	—	(256)
Derivatives	298	—	298	—
Total	\$ 731	\$ —	\$ 298	\$ 433

(1) Other invested assets included in the fair value hierarchy exclude limited partnership interests that are measured at estimated fair value using the net asset value (“NAV”) per share (or its equivalent) as a practical expedient. As of September 30, 2022, the fair value of such investments was \$656 million.

December 31, 2021:

	Total	Fair Value Measurements Using:		
		Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	\$ 38,103	\$ —	\$ 34,215	\$ 3,888
Canadian government	4,944	—	4,944	—
RMBS	1,050	—	1,049	1
ABS	4,005	—	2,908	1,097
CMBS	1,849	—	1,768	81
U.S. government	2,105	1,993	100	12
State and political subdivisions	1,323	—	1,290	33
Other foreign government	7,370	—	7,337	33
Total fixed maturity securities – available-for-sale	60,749	1,993	53,611	5,145
Equity securities	151	101	—	50
Funds withheld at interest – embedded derivatives	104	—	—	104
Funds withheld at interest	83	—	—	83
Cash equivalents	1,138	1,138	—	—
Short-term investments	64	—	36	28
Other invested assets:				
Derivatives	175	—	175	—
Other	52	—	52	—
Total other invested assets ⁽¹⁾	227	—	227	—
Total	\$ 62,516	\$ 3,232	\$ 53,874	\$ 5,410
Liabilities:				
Interest-sensitive contract liabilities – embedded derivatives	\$ 855	\$ —	\$ —	\$ 855
Other liabilities:				
Funds withheld at interest – embedded derivatives	(61)	—	—	(61)
Derivatives	39	—	39	—
Total	\$ 833	\$ —	\$ 39	\$ 794

(1) Other invested assets included in the fair value hierarchy exclude limited partnership interests that are measured at estimated fair value using the NAV per share (or its equivalent) as a practical expedient. As of December 31, 2021, the fair value of such investments was \$581 million.

Quantitative Information Regarding Internally Priced 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, 2022 and December 31, 2021 (dollars in millions):

	Estimated Fair Value		Valuation Technique	Unobservable Inputs	Range (Weighted Average)	
	September 30, 2022	December 31, 2021			September 30, 2022	December 31, 2021
Assets:						
Corporate	\$ 26	\$ 49	Market comparable securities	Liquidity premium	1%	0-1% (1%)
				EBITDA Multiple	5.0x-5.3x (5.2x)	5.2x-7.0x (6.4x)
ABS	196	205	Market comparable securities	Liquidity premium	0-18% (2%)	2-18% (4%)
U.S. government	9	12	Market comparable securities	Liquidity premium	0-1% (1%)	0-1% (1%)
Equity securities	8	5	Market comparable securities	EBITDA Multiple	6.9x-11.2x (9.1x)	6.9x-10.6x (8.0x)
Funds withheld at interest – embedded derivatives	39	182	Total return swap	Mortality	0-100% (3%)	0-100% (3%)
				Lapse	0-35% (12%)	0-35% (18%)
				Withdrawal	0-5% (4%)	0-5% (4%)
				CVA	0-5% (0%)	0-5% (0%)
				Crediting rate	1-4% (2%)	1-4% (2%)
Liabilities:						
Interest-sensitive contract liabilities – embedded derivatives – indexed annuities	550	693	Discounted cash flow	Mortality	0-100% (3%)	0-100% (2%)
				Lapse	0-35% (11%)	0-35% (16%)
				Withdrawal	0-5% (3%)	0-5% (3%)
				Option budget projection	1-4% (2%)	1-4% (2%)
Interest-sensitive contract liabilities – embedded derivatives – variable annuities	139	162	Discounted cash flow	Mortality	0-100% (2%)	0-100% (2%)
				Lapse	0-25% (4%)	0-25% (4%)
				Withdrawal	0-7% (6%)	0-7% (5%)
				CVA	0-5% (1%)	0-5% (1%)
				Long-term volatility	0-27% (13%)	0-27% (14%)

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. Transfers out of Level 3 are 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.

For further information on the Company's valuation processes, see Note 6 – "Fair Value of Assets and Liabilities" in the Notes to Consolidated Financial Statements included in the Company's 2021 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 millions):

For the three months ended September 30, 2022:	Fixed maturity securities – available-for-sale					Equity securities	Short-term investments	Funds withheld at interest – embedded derivatives, net ⁽¹⁾	Funds withheld at interest	Interest- sensitive contract liabilities – embedded derivatives
	Corporate	Foreign govt	Structured securities	U.S. and local govt						
Fair value, beginning of period	\$ 4,238	\$ 36	\$ 1,247	\$ 43	\$ 47	\$ 21	\$ 76	\$ 62	\$ (744)	
Total gains/losses (realized/unrealized)										
Included in earnings, net:										
Net investment income	1	—	—	—	—	—	—	(3)	—	
Investment related gains (losses), net	—	—	—	(1)	10	—	(17)	—	20	
Interest credited	—	—	—	—	—	—	—	—	18	
Included in other comprehensive income (loss)	(164)	(3)	(81)	(1)	—	—	—	(5)	—	
Purchases ⁽²⁾	445	—	60	—	10	6	—	—	1	
Sales ⁽²⁾	(29)	—	(7)	(3)	(3)	—	—	—	—	
Settlements ⁽²⁾	(150)	—	(52)	(1)	—	—	—	(2)	16	
Transfers into Level 3	20	—	67	—	—	—	—	—	—	
Transfers out of Level 3	(75)	—	(46)	—	—	(20)	—	—	—	
Fair value, end of period	\$ 4,286	\$ 33	\$ 1,188	\$ 37	\$ 64	\$ 7	\$ 59	\$ 52	\$ (689)	
Total gains/losses (realized/unrealized) recorded 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:										
Net investment income	\$ 1	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (3)	\$ —	
Investment related gains (losses), net	(4)	—	1	—	8	—	(17)	—	19	
Interest credited	—	—	—	—	—	—	—	—	2	
Included in other comprehensive income (loss)	(158)	(3)	(83)	(1)	—	—	—	(5)	—	

(1) Funds withheld at interest – embedded derivative assets and liabilities are presented net for purposes of the rollforward.

(2) 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 purchased and sold/settled in the same period are excluded from the rollforward. The Company had no issuances during the period.

**For the nine months ended
September 30, 2022:**

	Fixed maturity securities – available-for-sale						Funds withheld at interest – embedded derivatives, net ⁽¹⁾	Funds withheld at interest	Interest-sensitive contract liabilities – embedded derivatives
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments			
Fair value, beginning of period	\$ 3,888	\$ 33	\$ 1,179	\$ 45	\$ 50	\$ 28	\$ 165	\$ 83	\$ (855)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Net investment income	4	—	—	—	—	—	—	(13)	—
Investment related gains (losses), net	(6)	—	(5)	(1)	4	1	(106)	—	22
Interest credited	—	—	—	—	—	—	—	—	98
Included in other comprehensive income (loss)	(465)	(13)	(226)	(5)	—	(1)	—	(12)	—
Purchases ⁽²⁾	1,381	—	362	—	14	27	—	3	(4)
Sales ⁽²⁾	(153)	—	(58)	(4)	(4)	—	—	—	—
Settlements ⁽²⁾	(329)	—	(111)	(4)	—	(28)	—	(9)	50
Transfers into Level 3	77	13	112	10	—	—	—	—	—
Transfers out of Level 3	(111)	—	(65)	(4)	—	(20)	—	—	—
Fair value, end of period	\$ 4,286	\$ 33	\$ 1,188	\$ 37	\$ 64	\$ 7	\$ 59	\$ 52	\$ (689)
Total gains/losses (realized/unrealized) recorded 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:									
Net investment income	\$ 3	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (13)	\$ —
Investment related gains (losses), net	(12)	—	(4)	—	2	—	(106)	—	19
Interest credited	—	—	—	—	—	—	—	—	47
Included in other comprehensive income (loss)	(459)	(13)	(227)	(5)	—	—	—	(12)	—

(1) Funds withheld at interest – embedded derivative assets and liabilities are presented net for purposes of the rollforward.

(2) 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 purchased and sold/settled in the same period are excluded from the rollforward. The Company had no issuances during the period.

**For the three months ended
September 30, 2021:**

	Fixed maturity securities – available-for-sale						Funds withheld at interest – embedded derivatives	Funds withheld at interest and other	Interest-sensitive contract liabilities – embedded derivatives
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments			
Fair value, beginning of period	\$ 3,208	\$ 41	\$ 653	\$ 21	\$ 63	\$ —	\$ 125	\$ 81	\$ (880)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Net investment income	1	—	—	—	—	—	—	2	—
Investment related gains (losses), net	1	—	—	—	8	—	20	—	(37)
Interest credited	—	—	—	—	—	—	—	—	(14)
Included in other comprehensive income (loss)	(1)	(2)	1	—	—	—	—	(2)	—
Purchases ⁽¹⁾	436	—	245	—	8	26	(2)	5	(8)
Sales ⁽¹⁾	(5)	—	(3)	—	(22)	—	—	—	—
Settlements ⁽¹⁾	(75)	—	(51)	—	—	—	—	(1)	21
Transfers into Level 3	—	—	21	—	—	—	—	—	—
Transfers out of Level 3	(8)	—	—	—	—	—	—	—	—
Fair value, end of period	\$ 3,557	\$ 39	\$ 866	\$ 21	\$ 57	\$ 26	\$ 143	\$ 85	\$ (918)
Total gains/losses (realized/unrealized) recorded 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:									
Net investment income	\$ 1	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 2	\$ —
Investment related gains (losses), net	1	—	—	—	4	—	21	—	(39)
Interest credited	—	—	—	—	—	—	—	—	(35)
Included in other comprehensive income (loss)	(1)	(2)	1	—	—	—	—	(2)	—

(1) 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 purchased and sold/settled in the same period are excluded from the rollforward. The Company had no issuances during the period.

**For the nine months ended
September 30, 2021:**

	Fixed maturity securities – available-for-sale						Funds withheld at interest – embedded derivatives	Funds withheld at interest and other	Interest-sensitive contract liabilities – embedded derivatives
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments			
Fair value, beginning of period	\$ 3,029	\$ 17	\$ 254	\$ 23	\$ 53	\$ 15	\$ 58	\$ 56	\$ (907)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Net investment income	4	—	—	—	—	—	—	(4)	—
Investment related gains (losses), net	2	—	—	—	19	—	87	—	(36)
Interest credited	—	—	—	—	—	—	—	—	(13)
Included in other comprehensive income (loss)	(34)	(3)	5	—	—	—	1	(2)	—
Purchases ⁽¹⁾	976	25	673	—	8	26	(2)	37	(25)
Sales ⁽¹⁾	(25)	—	(5)	—	(23)	—	—	—	—
Settlements ⁽¹⁾	(416)	—	(136)	(2)	—	(10)	(1)	(2)	63
Transfers into Level 3	29	—	75	—	—	—	—	—	—
Transfers out of Level 3	(8)	—	—	—	—	(5)	—	—	—
Fair value, end of period	\$ 3,557	\$ 39	\$ 866	\$ 21	\$ 57	\$ 26	\$ 143	\$ 85	\$ (918)
Total gains/losses (realized/unrealized) recorded 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:									
Net investment income	\$ 3	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (4)	\$ —
Investment related gains (losses), net	—	—	—	—	14	—	87	—	(42)
Interest credited	—	—	—	—	—	—	—	—	(76)
Included in other comprehensive income (loss)	(32)	(3)	5	—	—	—	1	(2)	—

(1) 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 purchased and sold/settled in the same period are excluded from the rollforward. The Company had no issuances during the period.

Nonrecurring Fair Value Measurements

The Company has certain assets subject to measurement at fair value on a nonrecurring basis, in periods subsequent to their initial recognition if they are determined to be impaired. During the nine months ended September 30, 2022 and 2021, the Company did not have any material assets that were measured at fair value due to impairment.

Fair Value of Financial Instruments

The following table presents the carrying values 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, 2022 and December 31, 2021 (dollars in millions). For additional information regarding the methods and significant assumptions used by the Company to estimate these fair values, see Note 6 – "Fair Value of Assets and Liabilities" in the Notes to Consolidated Financial Statements included in the Company's 2021 Annual Report. This table excludes any payables or receivables for collateral under repurchase/reverse 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, 2022:

	Carrying Value ⁽¹⁾	Estimated Fair Value	Fair Value Measurement Using:		
			Level 1	Level 2	Level 3
Assets:					
Mortgage loans	\$ 6,558	\$ 5,902	\$ —	\$ —	\$ 5,902
Policy loans	1,202	1,202	—	1,202	—
Funds withheld at interest	6,343	6,051	—	—	6,051
Cash and cash equivalents	1,398	1,398	1,398	—	—
Short-term investments	29	29	29	—	—
Other invested assets	904	671	4	66	601
Accrued investment income	628	628	—	628	—
Liabilities:					
Interest-sensitive contract liabilities	\$ 23,141	\$ 22,450	\$ —	\$ —	\$ 22,450
Other liabilities – funds withheld at interest	1,610	1,383	—	—	1,383
Long-term debt	4,207	3,955	—	—	3,955
Collateral finance and securitization notes	—	—	—	—	—

December 31, 2021:

	Carrying Value ⁽¹⁾	Estimated Fair Value	Fair Value Measurement Using:		
			Level 1	Level 2	Level 3
Assets:					
Mortgage loans	\$ 6,283	\$ 6,580	\$ —	\$ —	\$ 6,580
Policy loans	1,234	1,234	—	1,234	—
Funds withheld at interest	6,747	7,075	—	—	7,075
Cash and cash equivalents	1,810	1,810	1,810	—	—
Short-term investments	23	23	23	—	—
Other invested assets	910	907	6	70	831
Accrued investment income	533	533	—	533	—
Liabilities:					
Interest-sensitive contract liabilities	\$ 18,625	\$ 19,540	\$ —	\$ —	\$ 19,540
Other liabilities – funds withheld at interest	1,658	1,657	—	—	1,657
Long-term debt	3,667	3,886	—	—	3,886
Collateral finance and securitization notes	180	153	—	—	153

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

7. Segment Information

The accounting policies of the segments are the same as those described in Note 2 – “Significant Accounting Policies and Pronouncements” in the Notes to Consolidated Financial Statements included in the Company’s 2021 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 millions).

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Revenues:				
U.S. and Latin America:				
Traditional	\$ 1,867	\$ 1,795	\$ 5,602	\$ 5,248
Financial Solutions	315	374	845	1,125
Total	2,182	2,169	6,447	6,373
Canada:				
Traditional	358	354	1,087	1,063
Financial Solutions	27	25	79	77
Total	385	379	1,166	1,140
Europe, Middle East and Africa:				
Traditional	457	454	1,380	1,370
Financial Solutions	142	174	458	459
Total	599	628	1,838	1,829
Asia Pacific:				
Traditional	705	663	2,079	1,963
Financial Solutions	171	95	235	303
Total	876	758	2,314	2,266
Corporate and Other	24	109	118	691
Total	\$ 4,066	\$ 4,043	\$ 11,883	\$ 12,299

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Income (loss) before income taxes:				
U.S. and Latin America:				
Traditional	\$ 204	\$ (126)	\$ 247	\$ (329)
Financial Solutions	70	128	175	397
Total	274	2	422	68
Canada:				
Traditional	32	44	54	100
Financial Solutions	4	—	21	10
Total	36	44	75	110
Europe, Middle East and Africa:				
Traditional	1	(91)	(3)	(171)
Financial Solutions	31	85	149	228
Total	32	(6)	146	57
Asia Pacific:				
Traditional	118	(96)	227	(67)
Financial Solutions	(2)	6	(124)	65
Total	116	(90)	103	(2)
Corporate and Other	(92)	16	(186)	401
Total	\$ 366	\$ (34)	\$ 560	\$ 634

Assets:	September 30, 2022	December 31, 2021
U.S. and Latin America:		
Traditional	\$ 20,640	\$ 20,572
Financial Solutions	25,598	29,028
Total	46,238	49,600
Canada:		
Traditional	4,994	5,091
Financial Solutions	42	18
Total	5,036	5,109
Europe, Middle East and Africa:		
Traditional	4,341	4,670
Financial Solutions	4,375	7,165
Total	8,716	11,835
Asia Pacific:		
Traditional	9,072	10,048
Financial Solutions	10,023	7,678
Total	19,095	17,726
Corporate and Other	3,620	7,905
Total	\$ 82,705	\$ 92,175

8. Commitments, Contingencies and Guarantees

Commitments

Funding of Investments

The Company's commitments to fund investments as of September 30, 2022 and December 31, 2021 are presented in the following table (dollars in millions):

	September 30, 2022	December 31, 2021
Limited partnership interests and joint ventures	\$ 1,052	\$ 1,031
Mortgage loans	118	152
Bank loans and private placements	744	768
Lifetime mortgages	76	41

The Company anticipates that the majority of its current commitments will be invested over the next five years; however, these commitments could become due any time at the request of the counterparties. Bank loans and private placements are included in fixed maturity securities available-for-sale.

The Company has an immaterial liability, included in other liabilities, for expected credit losses associated with unfunded commitments as of September 30, 2022 and December 31, 2021.

Funding Agreements

Federal Home Loan Bank ("FHLB") of Des Moines

The Company is a member of the FHLB and, through membership, has issued funding agreements to the FHLB in exchange for cash advances. As of September 30, 2022 and December 31, 2021, the Company had \$1.3 billion and \$1.4 billion, respectively, of FHLB funding agreements outstanding. The Company is required to provide collateral in excess of the funding agreement amounts outstanding, considering any discounts to the securities posted and prepayment penalties.

Funding Agreement Backed Notes

The Company's Funding Agreement Backed Notes ("FABN") program allows RGA Global Funding, a special-purpose, unaffiliated statutory trust, to offer its senior secured medium-term notes to investors. RGA Global Funding uses the net proceeds from each sale to purchase one or more funding agreements from the Company. As of September 30, 2022 and December 31, 2021, the Company had \$900 million and \$500 million, respectively, of FABN agreements outstanding and are included within interest-sensitive contract liabilities.

Contingencies

Litigation

The Company is subject to litigation in the normal course of its business; however, the Company currently has no material litigation. A legal reserve is established when the Company is notified of an arbitration demand or litigation or is notified that

an arbitration demand or litigation is imminent, it is probable that the Company will incur a loss as a result and the amount of the probable loss is reasonably capable of being estimated.

Other Contingencies

The Company indemnifies its directors and officers as provided in its charters and by-laws. Since this indemnity generally is not subject to limitation with respect to duration or amount, the Company does not believe that it is possible to determine the maximum potential amount due under this indemnity in the future.

Guarantees

Statutory Reserve Support

Certain RGA subsidiaries have committed to provide statutory reserve support to third parties, in exchange for a fee, by funding loans if certain defined events occur. Such statutory reserves are required under the U.S. Valuation of Life Policies Model Regulation (commonly referred to as Regulation XXX for term life insurance policies and Regulation A-XXX for universal life secondary guarantees).

In addition, certain subsidiaries have also committed to provide capital support to a third party, in exchange for a fee, by agreeing to assume real estate leases in the event of a severe and prolonged decline in the commercial lease market. Upon assumption of a lease, the Company would recognize a right to use asset and lease obligation.

As of September 30, 2022, the Company does not believe that it will be required to provide any funding under these commitments as the occurrence of the defined events is considered remote. The following table presents the maximum potential obligation for these commitments as of September 30, 2022 (dollars in millions):

Commitment Period:	Maximum Potential Obligation
2034	\$ 1,243
2035	2,616
2036	3,599
2037	6,850
2038	2,300
2039	7,350
2046	3,000

Other Guarantees

RGA has issued guarantees to third parties on behalf of its subsidiaries for the payment of amounts due under certain securities borrowing and repurchase arrangements, financing arrangements and office lease obligations, whereby, if a subsidiary fails to meet an obligation, RGA or one of its other subsidiaries will make a payment to fulfill the obligation. Additionally, in limited circumstances, treaty guarantees are granted to ceding companies in order to provide them additional security, particularly in cases where RGA's subsidiary is relatively new, unrated, or not of a significant size, relative to the ceding company. Liabilities supported by the treaty guarantees, before consideration of any legally offsetting amounts due from the guaranteed party are reflected on the Company's condensed consolidated balance sheets in future policy benefits. Potential guaranteed amounts of future payments will vary depending on production levels and underwriting results. Guarantees related to securities borrowing and repurchase arrangements provide additional security to third parties should a subsidiary fail to provide securities when due. RGA's guarantees issued as of September 30, 2022 and December 31, 2021, are reflected in the following table (dollars in millions):

	September 30, 2022	December 31, 2021
Treaty guarantees	\$ 1,732	\$ 2,208
Treaty guarantees, net of assets in trust	1,003	1,281
Securities borrowing and repurchase arrangements	161	134

9. Income Tax

For the three and nine months ended September 30, 2022, the effective tax rate on pre-tax income was 22.3% and 25.0%, respectively. The Company's effective tax rate for the three and nine months ended September 30, 2022, differed from the U.S. statutory rate of 21% primarily due to U.S. Subpart F income on foreign earnings, U.S. Global Intangible low-taxed income ("GILTI"), and income earned in jurisdictions with tax rates greater than the U.S. statutory rate, which were partially offset with adjustments related to tax returns filed during the quarter.

For the three and nine months ended September 30, 2021, the effective tax rate on pre-tax income was 34.3% and 27.3%, respectively. The Company's effective tax rate for both tax periods was higher than the U.S. statutory rate of 21% primarily as

a result of corporate rate changes and income earned in jurisdictions with tax rates higher than the U.S., losses in jurisdictions for which the Company received no benefits and adjustments from tax returns filed.

10. Employee Benefit Plans

The components of net periodic benefit cost, included in other operating expenses on the Company's condensed consolidated statements of income, for the three and nine months ended September 30, 2022 and 2021 were as follows (dollars in millions):

	Pension Benefits				Other Benefits			
	Three months ended September 30,				Three months ended September 30,			
	2022		2021		2022		2021	
Service cost	\$	5	\$	4	\$	1	\$	—
Interest cost		1		1		—		—
Expected return on plan assets		(3)		(3)		—		—
Amortization of prior service cost (credit)		—		—		—		—
Amortization of prior actuarial losses		—		2		—		1
Net periodic benefit cost	\$	3	\$	4	\$	1	\$	1

	Pension Benefits				Other Benefits			
	Nine months ended September 30,				Nine months ended September 30,			
	2022		2021		2022		2021	
Service cost	\$	13	\$	13	\$	2	\$	2
Interest cost		4		3		1		1
Expected return on plan assets		(9)		(8)		—		—
Amortization of prior service cost (credit)		—		—		(1)		(1)
Amortization of prior actuarial losses		2		5		1		2
Net periodic benefit cost	\$	10	\$	13	\$	3	\$	4

11. Reinsurance Ceded Receivables and Other

Retrocession reinsurance treaties do not relieve the Company from its obligations to direct writing companies. Failure of retrocessionaires to honor their obligations could result in losses to the Company. Consequently, allowances would be established for amounts deemed uncollectible. At September 30, 2022 and December 31, 2021, no allowances were deemed necessary. The Company regularly evaluates the financial condition of the insurance companies from which it assumes and to which it cedes reinsurance.

Retrocessions are arranged through the Company's retrocession pools for amounts in excess of the Company's retention limit. As of September 30, 2022 and December 31, 2021, all rated retrocession pool participants followed by the A.M. Best Company were rated "A- (excellent)" or better. The Company verifies retrocession pool participants' ratings on a quarterly basis. For a majority of the retrocessionaires that were not rated, security in the form of letters of credit or trust assets has been posted. In addition, the Company performs annual financial reviews of its retrocessionaires to evaluate financial stability and performance.

The following table presents information for the Company's reinsurance ceded receivable assets, including the respective amount and A.M. Best rating for each reinsurer representing in excess of five percent of the total as of September 30, 2022 or December 31, 2021 (dollars in millions):

Reinsurer	A.M. Best Rating	September 30, 2022		December 31, 2021	
		Amount	% of Total	Amount	% of Total
Reinsurer A	A-	\$ 1,607	65.4 %	\$ 1,626	63.0 %
Reinsurer B	A+	406	16.5	423	16.4
Reinsurer C	A+	194	7.9	212	8.2
Reinsurer D	A	54	2.2	59	2.3
Reinsurer E	A+	40	1.6	44	1.7
Reinsurer F	A++	33	1.3	42	1.6
Other reinsurers		122	5.1	174	6.8
Total		\$ 2,456	100.0 %	\$ 2,580	100.0 %

Included in the total reinsurance ceded receivables and other balance were \$202 million and \$203 million of claims recoverable, of which \$15 million and \$10 million were in excess of 90 days past due, as of September 30, 2022 and December 31, 2021, respectively. Also included in the total reinsurance ceded receivable and other is a deposit asset on reinsurance of \$1,607 million and \$1,626 million as of September 30, 2022 and December 31, 2021, respectively.

12. Policy Claims and Benefits

Rollforward of Claims and Claim Adjustment Expenses

The liability for unpaid claims is reported in future policy benefits and other policy claims and benefits on the Company's condensed consolidated balance sheets. Activity associated with unpaid claims is summarized below (dollars in millions):

	Nine Months Ended September 30,	
	2022	2021
Balance, beginning of period	\$ 8,053	\$ 7,556
Less: reinsurance recoverable	(556)	(641)
Net balance, beginning of period	7,497	6,915
Incurred:		
Current year	10,532	9,948
Prior years	(155)	(159)
Total incurred	10,377	9,789
Payments:		
Current year	(4,545)	(3,712)
Prior years	(5,971)	(5,229)
Total payments	(10,516)	(8,941)
Other changes:		
Interest accretion	23	30
Foreign exchange adjustments	(499)	(135)
Total other changes	(476)	(105)
Net balance, end of period	6,882	7,658
Plus: reinsurance recoverable	456	538
Balance, end of period	\$ 7,338	\$ 8,196

Incurred claims associated with prior periods are primarily due to events, related to long-duration business, which were incurred in prior periods but were reported in the current period, and to a lesser extent, the development of short-duration business claims for prior years being different than were anticipated when the liabilities for unpaid claims were originally estimated. These trends have been considered in establishing the current year liability for unpaid claims.

13. Financing Activities

On September 15, 2022, RGA announced a cash tender offer for any and all of its outstanding 6.20% Fixed-to-Floating Rate Subordinated Debentures due 2042 (the "2042 Debentures") at a price of \$25.20 for each \$25 principal amount of the 2042 Debentures. The tender offer expired on September 22, 2022, and a total of \$151 million, or approximately 38%, of the aggregate principal amount of the 2042 Debentures were tendered. The Company intends to redeem the remaining debentures in accordance with the indenture governing the 2042 Debentures.

On September 23, 2022, RGA issued 7.125% fixed-rate reset subordinated debentures due October 15, 2052, with a face amount of \$700 million. This security has been registered with the Securities and Exchange Commission. The net proceeds were approximately \$690 million and a portion was used in part to pay for the tender offer of the 2042 Debentures. The remaining proceeds will be used for future redemptions of any remaining 2042 Debentures, and general corporate purposes. Capitalized issue costs were approximately \$10 million.

The remaining amount of the \$850 million Series A Floating Rate Insured Notes issued by the Company's subsidiary, Timberlake Financial, LLC, which was approximately \$185 million, were redeemed on August 29, 2022, and are no longer outstanding as of September 30, 2022.

14. New Accounting Standards

Changes to the general accounting principles are established by the Financial Accounting Standards Board ("FASB") in the form of accounting standards updates to the FASB Accounting Standards Codification™. Accounting standards updates not listed below were assessed and determined to be either not applicable or are expected to have minimal impact on the Company's condensed consolidated financial statements.

Standards Adopted

For information on the adoption of recent accounting guidance and their impact, if any, on the Company's results of operations and financial position, see Note 2 – "Significant Accounting Policies and Pronouncements" of the Company's 2021 Annual Report.

Standards Not Yet Adopted

In the first quarter of 2023, the Company will adopt Accounting Standards Update ("ASU"): ASU 2018-12, *Financial Services – Insurance (Topic 944): Targeted Improvements to the Accounting for Long-Duration Contracts ("ASU 2018-12")*. ASU 2018-12 updates certain requirements for the accounting for long-duration insurance contracts.

- *Cash flow assumptions and measuring liability for future policy benefits* – ASU 2018-12 requires the Company to review its cash flow assumptions at least annually and update, when necessary, with the impact recognized in net income in the period of the change.

Upon adoption, there will be an adjustment to retained earnings as a result of capping the net premium ratio at 100% and eliminating negative reserves on certain issue year cohorts.

- *Discount rate* – The discount rate assumption is prescribed by ASU 2018-12 as an upper-medium (low credit risk) fixed-income yield and is required to be updated every quarter. The change in the liability as a result of updating the discount rate assumption is recognized in other comprehensive income (loss) ("OCI").

Upon adoption, there will be an adjustment to accumulated other comprehensive income (loss) as a result of remeasuring in force contract liabilities using current upper-medium grade fixed income instrument yields. The adjustment will largely reflect the difference between discount rates locked-in at contract inception versus current discount rates at transition.

- *Deferred policy acquisition costs and similar balances* – Deferred policy acquisition costs ("DAC") and other capitalized costs such as unearned revenue are amortized on a constant level or straight-line basis over the expected term of the contracts.

Upon adoption, the Company expects an adjustment to accumulated other comprehensive income (loss) for the removal of cumulative adjustments to DAC associated with unrealized gains and losses previously recorded in accumulated other comprehensive income (loss).

- *Market risk benefits* – Market risk benefits, which are contracts or contract features that provide protection to the policyholder from capital market risk and expose the Company to other-than-nominal capital market risk, are measured at fair value. The periodic change in fair value is recognized in net income with the exception of the periodic change in fair value related to the instrument-specific credit risk, which is recognized in OCI.

Upon adoption, the Company expects an impact to (1) accumulated other comprehensive income (loss) for the cumulative effect of changes in the instrument-specific credit risk between contract issue date and transition date and (2) retained earnings for the difference between fair value and carrying value at the transition date, excluding the changes in the instrument-specific credit risk.

The updated guidance for the cash flow assumptions, discount rate and deferred policy acquisition costs will be applied on a modified retrospective method as of the earliest period included in the financial statements; that is, to contracts in force as of January 1, 2021. The guidance for market risk benefits will be applied retrospectively as of January 1, 2021.

The Company estimates the adoption of the new guidance will decrease previously reported retained earnings by approximately \$1.0 billion to \$1.3 billion, net of tax, and accumulated other comprehensive income (loss) by approximately \$5.1 billion to \$7.1 billion, net of tax, as of the transition date of January 1, 2021. In addition, the Company estimates the adoption of the new guidance will decrease previously reported retained earnings by approximately \$0.5 billion to \$0.8 billion, net of tax, and accumulated other comprehensive income (loss) by approximately \$3.2 billion to \$5.2 billion, net of tax, as of December 31, 2021. All amounts assume a tax rate of 24 percent. While the Company has substantially completed the necessary updates to its valuation models and other systems to implement the standard, the Company's implementation of the new guidance is ongoing. The actual impact of adoption, including the actual tax rate, will be updated as the model validation, system testing and parallel runs continue through the remainder of 2022; therefore, the Company's estimates are subject to change.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Cautionary Note Regarding Forward-Looking Statements

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 including, among others, statements relating to projections of the future operations, strategies, earnings, revenues, income or loss, ratios, financial performance and growth potential of the Company. Forward-looking statements often contain words and phrases such as “believe,” “expect,” “anticipate,” “may,” “could,” “intend,” “intent,” “belief,” “estimate,” “project,” “plan,” “predict,” “foresee,” “likely,” “will” and other similar expressions. Forward-looking statements are based on management's current expectations and beliefs concerning future developments and their potential effects on the Company. Forward-looking statements are not a guarantee of future performance and are subject to risks and uncertainties, some of which cannot be predicted or quantified. Future events and actual results, performance, and achievements could differ materially from those set forth in, contemplated by or underlying the forward-looking statements.

The effects of the COVID-19 pandemic and the response thereto on economic conditions, the financial markets and insurance risks, and the resulting effects on the Company's financial results, liquidity, capital resources, financial metrics, investment portfolio and stock price, could cause actual results and events to differ materially from those expressed or implied by forward-looking statements. Additionally, numerous other important factors (whether related to, resulting from or exacerbated by the COVID-19 pandemic or otherwise) could also cause results and events to differ materially from those expressed or implied by forward-looking statements, including, without limitation: (1) adverse changes in mortality, morbidity, lapsation or claims experience, (2) inadequate risk analysis and underwriting, (3) adverse capital and credit market conditions and their impact on the Company's liquidity, access to capital and cost of capital, (4) changes in the Company's financial strength and credit ratings and the effect of such changes on the Company's future results of operations and financial condition, (5) the availability and cost of collateral necessary for regulatory reserves and capital, (6) requirements to post collateral or make payments due to declines in market value of assets subject to the Company's collateral arrangements, (7) action by regulators who have authority over the Company's reinsurance operations in the jurisdictions in which it operates, (8) the effect of the Company parent's status as an insurance holding company and regulatory restrictions on its ability to pay principal of and interest on its debt obligations, (9) general economic conditions or a prolonged economic downturn affecting the demand for insurance and reinsurance in the Company's current and planned markets, (10) the impairment of other financial institutions and its effect on the Company's business, (11) fluctuations in U.S. or foreign currency exchange rates, interest rates, or securities and real estate markets, (12) market or economic conditions that adversely affect the value of the Company's investment securities or result in the impairment of all or a portion of the value of certain of the Company's investment securities, that in turn could affect regulatory capital, (13) market or economic conditions that adversely affect the Company's ability to make timely sales of investment securities, (14) risks inherent in the Company's risk management and investment strategy, including changes in investment portfolio yields due to interest rate or credit quality changes, (15) the fact that the determination of allowances and impairments taken on the Company's investments is highly subjective, (16) the stability of and actions by governments and economies in the markets in which the Company operates, including ongoing uncertainties regarding the amount of U.S. sovereign debt and the credit ratings thereof, (17) the Company's dependence on third parties, including those insurance companies and reinsurers to which the Company cedes some reinsurance, third-party investment managers and others, (18) financial performance of the Company's clients, (19) the threat of natural disasters, catastrophes, terrorist attacks, epidemics or pandemics anywhere in the world where the Company or its clients do business, (20) competitive factors and competitors' responses to the Company's initiatives, (21) development and introduction of new products and distribution opportunities, (22) execution of the Company's entry into new markets, (23) integration of acquired blocks of business and entities, (24) interruption or failure of the Company's telecommunication, information technology or other operational systems, or the Company's failure to maintain adequate security to protect the confidentiality or privacy of personal or sensitive data and intellectual property stored on such systems, (25) adverse litigation or arbitration results, (26) the adequacy of reserves, resources and accurate information relating to settlements, awards and terminated and discontinued lines of business, (27) changes in laws, regulations, and accounting standards applicable to the Company or its business, including Long Duration Targeted Improvement accounting changes, and (28) other risks and uncertainties described in this document and in the Company's other filings with the Securities and Exchange Commission (“SEC”).

Forward-looking statements should be evaluated together with the many risks and uncertainties that affect the Company's business, including those mentioned in this document and described in the periodic reports the Company files with the SEC. These forward-looking statements speak only as of the date on which they are made. The Company does not undertake any obligation to update these forward-looking statements, even though the Company's situation may change in the future. For a discussion of these risks and uncertainties that could cause actual results to differ materially from those contained in the forward-looking statements, you are advised to see Item 1A – “Risk Factors” in the Company's 2021 Annual Report on Form 10-K, as may be supplemented by Item 1A – “Risk Factors” in the Company's subsequent Quarterly Reports on Form 10-Q.

Overview

The Company is among the leading global providers of life reinsurance and financial solutions, with \$3.3 trillion of life reinsurance in force and assets of \$82.7 billion as of September 30, 2022. Traditional reinsurance includes individual and group life and health, disability, and critical illness reinsurance. Financial solutions includes longevity reinsurance, asset-intensive reinsurance, capital solutions, including financial reinsurance, and stable value products. The Company derives revenues primarily from renewal premiums from existing reinsurance treaties, new business premiums from existing or new reinsurance treaties, fee income from financial solutions business and income earned on invested assets.

Historically, the Company's primary business has been traditional life reinsurance, which involves reinsuring life insurance policies that are often in force for the remaining lifetime of the underlying individuals insured, with premiums earned typically over a period of 10 to 30 years. To a lesser extent, the Company also reinsures health business typically reinsured for one to three years. Each year, however, a portion of the business under existing treaties terminates due to, among other things, lapses or voluntary surrenders of underlying policies, deaths of insureds, and the exercise of recapture options by ceding companies. The Company has expanded its financial solutions business, including significant asset-intensive and longevity risk transactions, which allow its clients to take advantage of growth opportunities and manage their capital, longevity and investment risk.

For its traditional life business, the Company's profitability largely depends on the volume and amount of death- and health-related claims incurred and the ability to adequately price the risks it assumes. While death claims are reasonably predictable over a period of many years, claims become less predictable over shorter periods and are subject to significant fluctuation from quarter to quarter and year to year. For longevity business, the Company's profitability depends on the lifespan of the underlying contract holders and the investment performance for certain contracts. Additionally, the Company generates profits on investment spreads associated with the reinsurance of investment type contracts and generates fees from financial reinsurance transactions, which are typically shorter duration than its traditional life reinsurance business. The Company believes its sources of liquidity are sufficient to cover potential claims payments on both a short-term and long-term basis.

As is customary in the reinsurance business, clients continually update, refine, and revise reinsurance information provided to the Company. Such revised information is used by the Company in preparation of its condensed consolidated financial statements and the financial effects resulting from the incorporation of revised data are reflected in the current period.

Segment Presentation

The Company has geographic-based and business-based operational segments. Geographic-based operations are further segmented into traditional and financial solutions businesses. 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 consistent basis upon which capital is deployed. The economic capital model considers the unique and specific nature of the risks inherent in RGA's businesses.

As a result of the economic capital allocation process, a portion of investment income is credited 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. Segment investment performance varies with the composition of investments and the relative allocation of capital to the operating segments.

Segment revenue levels can be significantly influenced by currency fluctuations, large transactions, mix of business and reporting practices of ceding companies, and therefore may fluctuate from period to period. Although reasonably predictable over a period of years, segment claims experience can be volatile over shorter periods. See "Results of Operations by Segment" below for further information about the Company's segments.

Critical Accounting Policies

The preparation of financial statements in conformity with GAAP requires the application of accounting policies that often involve a significant degree of judgment. Management, on an ongoing basis, reviews estimates and assumptions used in the preparation of financial statements. If management determines that modifications in assumptions and estimates are appropriate given current facts and circumstances, results of operations and financial position as reported in the condensed consolidated financial statements could change significantly.

Management believes the critical accounting policies relating to the following areas are most dependent on the application of estimates and assumptions:

- Premiums receivable;
- Deferred acquisition costs;
- Liabilities for future policy benefits and incurred but not reported claims;
- Valuation of investments, allowance for credit losses and impairments to specific investments;
- Valuation of embedded derivatives; and
- Income taxes.

A discussion of each of the critical accounting policies may be found in the Company's 2021 Annual Report under "Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies."

Consolidated Results of Operations

Impacts of the COVID-19 Pandemic

Although global COVID-19 related deaths have begun to decline, the Company continues to experience increased claim costs, primarily in the first quarter of 2022, as a result of the COVID-19 global pandemic. However, the Company cannot reliably predict the future impact the ongoing pandemic will have on its business, results of operations and financial condition as the ultimate amount and timing of claims the Company will experience as a result of the COVID-19 pandemic will depend on many variables and uncertainties. These variables and uncertainties will depend on, the severity of new variants of the virus, vaccination effectiveness, country-specific circumstances, and COVID-19's indirect impact on mortality and morbidity.

To date, general population COVID-19 deaths have been heavily concentrated in individuals aged 70 and older and with pre-existing comorbidities; however, many populations have seen an increase in younger age deaths, particularly in areas where healthcare facilities were unable to provide adequate care. The Company's insured population has lower exposure to older ages than the general population and covers a generally healthier population due to underwriting and socioeconomic factors of those purchasing insurance. In addition, the Company's longevity business may act as a modest offset to excess life insurance claims at older ages.

The Company's COVID-19 projection and financial impact models continue to be updated and refined based on latest external data and the Company's claim experience to date and are subject to the many variables and uncertainties noted above. During the first nine months of 2022, the U.S. continues to be the key driver of mortality claim costs followed by Asia and Canada. For the nine months ended September 30, 2022, the Company estimates it has incurred approximately \$388 million of COVID-19 related life and health claim costs, including amounts incurred but not reported, with approximately \$295 million of that amount being associated with the U.S. and Latin America Traditional segment. During the three months ended September 30, 2022, mortality claims related to COVID-19 continued to decline across all segments; however, the Company experienced an increase in medical hospitalization claims for at-home sickness benefits related to COVID-19 in Japan. Changes to the definition of qualifying at-home sickness benefits at the end of September and a reduction in general population infections in Japan is expected to reduce future at-home benefit expenses in future periods.

The Company has maintained the range of COVID-19 mortality claim cost estimates relative to the level of general population deaths for the U.S., UK and Canada. The Company estimates that every additional 10,000 population deaths in the U.S., UK or Canada as a result of COVID-19 would result in the following corresponding excess mortality claims of approximately

- \$10 million to \$20 million in the U.S.;
- \$4 million to \$8 million in the UK; and
- \$10 million to \$20 million in Canada.

Results from Operations – 2022 compared to 2021

The following table summarizes net income for the periods presented.

	Three months ended September 30,			Nine months ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
(Dollars in millions, except per share data)						
Revenues:						
Net premiums	\$ 3,247	\$ 3,094	\$ 153	\$ 9,632	\$ 9,106	\$ 526
Investment income, net of related expenses	769	796	(27)	2,333	2,367	(34)
Investment related gains (losses), net	(134)	58	(192)	(514)	472	(986)
Other revenues	184	95	89	432	354	78
Total revenues	4,066	4,043	23	11,883	12,299	(416)
Benefits and Expenses:						
Claims and other policy benefits	2,815	3,289	(474)	8,855	9,294	(439)
Interest credited	189	177	12	468	541	(73)
Policy acquisition costs and other insurance expenses	396	338	58	1,144	1,010	134
Other operating expenses	251	229	22	720	683	37
Interest expense	46	41	5	130	129	1
Collateral finance and securitization expense	3	3	—	6	8	(2)
Total benefits and expenses	3,700	4,077	(377)	11,323	11,665	(342)
Income before income taxes	366	(34)	400	560	634	(74)
Provision for income taxes	81	(12)	93	139	173	(34)
Net income	285	(22)	307	421	461	(40)
Net income attributable to noncontrolling interest	\$ 1	\$ —	\$ 1	\$ 2	\$ —	\$ 2
Net income available to RGA, Inc. shareholders	\$ 284	\$ (22)	\$ 306	\$ 419	\$ 461	\$ (42)
Earnings per share:						
Basic earnings per share	\$ 4.24	\$ (0.32)	\$ 4.56	\$ 6.25	\$ 6.78	\$ (0.53)
Diluted earnings per share	\$ 4.19	\$ (0.32)	\$ 4.51	\$ 6.19	\$ 6.74	\$ (0.55)

Three months ended September 30, 2022 compared to three months ended September 30, 2021

The increase in income for the three months ended September 30, 2022, was primarily the result of:

- Decrease in mortality claims in the U.S. and Latin America, EMEA and Asia Pacific traditional segments, due to fewer claims attributable to the COVID-19 pandemic.
- An increase in other revenues primarily attributable to surrender and market value adjustments charges of \$104 million due to higher lapses on a single premium annuity block of business in Asia, which were partially offset by an increase in policy acquisition costs and other reinsurance expenses.
- The decrease in mortality claims was partially offset by:
 - Changes in the fair value of derivative instruments, excluding embedded derivatives, included in investment related gains (losses), net. During the three month period ended September 30, 2022, the fair value of these instruments decreased by \$52 million, compared to a decrease of \$0 million during the three months ended September 30, 2021.
 - Changes in the fair value of embedded derivatives, associated with modco/funds withheld treaties, decreased investment related gains by \$16 million for the three months ended September 30, 2022, compared to an increase of \$21 million for the three month period ended September 30, 2021.
 - \$86 million, pre-tax, of net realized losses, included in investment related gains (losses), net associated with portfolio repositioning, compared to \$36 million of net realized gains recognized in the prior year.
 - The average yield earned on investments, excluding spread related business, was 4.40% and 4.95% for the three month periods ended September 30, 2022 and 2021, respectively. Investment yield decreased for the three months ended September 30, 2022, in comparison to the same period in the prior year, primarily due to decreased variable income from limited partnerships and real estate joint ventures.

Nine months ended September 30, 2022 compared to nine months ended September 30, 2021

The decrease in income for the nine months ended September 30, 2022, was primarily the result of:

- Changes in the fair value of derivative instruments, excluding embedded derivatives, included in investment related gains (losses), net. During the nine months ended September 30, 2022, the fair value of these instruments decreased by \$256 million, compared to a decrease of \$21 million during the nine months ended September 30, 2021.
- Changes in the fair value of embedded derivatives, associated with modco/funds withheld treaties, decreased investment related gains by \$106 million for the nine months ended September 30, 2022, compared to an increase of \$87 million for the nine months ended September 30, 2021.
- \$171 million, pre-tax, of net realized losses, included in investment related gains (losses), net associated with portfolio repositioning, compared to \$213 million of net realized gains recognized in the prior year.
- The prior year benefited from a one-time adjustment of \$162 million, pretax, associated with prior periods that includes \$92 million, pretax, to correct the accounting for equity method limited partnerships to reflect unrealized gains in investment income, net of related expenses that were previously included in accumulated other comprehensive income (loss), and a \$70 million, pretax, correction reflected in other investment related gains (losses), net to adjust the carrying value of certain limited partnerships from cost less impairments to a fair value approach, using the net asset value (“NAV”) per share or its equivalent.
- The decreases in investment income and investment related gains (losses) were partially offset by a decrease in mortality claims in the U.S. and Latin America, EMEA and Asia Pacific traditional segments, as a result of fewer claims attributable to the COVID-19 pandemic.

Foreign currency fluctuations can result in variances in financial statement line items. Foreign currency increased income before taxes for the three and nine month periods ended September 30, 2022, by \$11 million and \$24 million, respectively, primarily due to the impact of the weakening of the Japanese Yen compared to the U.S. Dollar. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Premiums and business growth

The increase in premiums during the three and nine month period ended September 30, 2022, is primarily due to new business production. Consolidated assumed life reinsurance in force decreased from \$3,468.6 billion as of September 30, 2021, to \$3,272.6 billion as of September 30, 2022, due to changes in foreign exchange rates partially offset by new business production. The Company added new business production, measured by face amount of reinsurance in force, of \$316.4 billion and \$305.4 billion during the nine months ended September 30, 2022 and 2021, respectively.

Investment income, net of related expenses and investment related gains (losses), net

The decrease in investment income, net of related expenses is primarily attributable to the aforementioned accounting correction associated with equity method limited partnerships recorded in the first quarter of 2021, partially offset by an increase in the average invested asset base:

- The average invested assets at amortized cost, excluding spread business, was \$34.5 billion for the nine months ended September 30, 2022, compared to \$33.0 billion for the nine months ended September 30, 2021.
- The average yield earned on investments, excluding spread related business, was 4.78% and 5.08% for the nine months ended September 30, 2022 and 2021, respectively. Investment yield decreased for the nine months ended September 30, 2022, in comparison to the same periods in the prior year, primarily due to decreased variable income from limited partnerships and real estate joint ventures.

The average yield will vary from year to year depending on several variables, including the prevailing risk-free interest rate and credit spread environment, prepayment fees and make-whole premiums, changes in the mix of the underlying investments and cash and cash equivalents balances. Variable investment income from joint ventures and limited partnerships, including unrealized gains and losses on certain limited partnerships, will also vary from year to year and can be highly variable based on equity-market performance and the timing of dividends and distributions on certain investments. Investment income is allocated to the operating segments based upon average assets and related capital levels deemed appropriate to support segment operations.

The decrease in investment related gains (losses), net is primarily attributable to the following:

- During the three and nine months ended September 30, 2022, the Company repositioned its portfolio generating net capital losses of \$86 million and \$171 million, respectively, compared to net capital gains of \$36 million and \$213 million during the three and nine months ended September 30, 2021, respectively.

- The Company uses various derivative instruments such as interest rate swaps, credit default swaps and foreign exchange forwards for risk management purposes that either do not qualify or have not been elected for hedge accounting treatment. Changes in the fair value of these instruments are included in investment related gains (losses), net. During the three and nine months periods ended September 30, 2022, the fair value of these instruments decreased by \$52 million and \$256 million, compared to an increase (decrease) of \$0 million and \$(21) million during the three and nine months ended September 30, 2021, respectively. See Note 5 – “Derivative Instruments” in the Notes to Condensed Consolidated Financial Statements for additional information.
- Changes in the fair value of embedded derivatives, associated with modco/funds withheld treaties, decreased investment related gains (losses), net by \$16 million and \$106 million for the three and nine month periods ended September 30, 2022, respectively, compared to an increase of \$21 million and \$87 million for the three and nine month periods ended September 30, 2021.
- The Company incurred \$15 million and \$45 million of impairments and change in allowance for credit losses during the three and nine month periods ended September 30, 2022, respectively, compared to a decrease of \$3 million and \$27 million of impairments and change in allowance for credit losses during the three and nine month periods ended September 30, 2021, respectively.
- Investment related gains (losses), net for the first nine months of 2021, included the adjustment previously discussed to investments in limited partnerships considered to be investment companies, which should have been recognized in prior periods, of \$70 million pre-tax to adjust the carrying value from cost less impairments to the fair value approach, using the net asset value (“NAV”) per share or its equivalent.

The effective tax rate on a consolidated basis was 22.3% and 34.3% for the three months ended September 30, 2022 and 2021, respectively, and 25.0% and 27.3% for the nine months ended September 30, 2022 and 2021, respectively. See Note 9 – “Income Tax” in the Notes to Condensed Consolidated Financial Statements for additional information on the Company’s consolidated effective tax rates.

Impact of certain derivatives

The Company recognizes in consolidated income, any changes in the fair value of embedded derivatives on modco or funds withheld treaties, equity index annuities (“EIAs”) and variable annuities with guaranteed minimum benefit riders. The Company utilizes freestanding derivatives to minimize the income statement volatility due to changes in the fair value of embedded derivatives associated with guaranteed minimum benefit riders. The following table presents the effect of embedded derivatives and related freestanding derivatives on income before income taxes for the periods indicated (dollars in millions):

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Modco/Funds withheld:						
Unrealized gains (losses)	\$ (16)	\$ 21	\$ (37)	\$ (106)	\$ 87	\$ (193)
Deferred acquisition costs/retrocession	10	(8)	18	61	(31)	92
Net effect	(6)	13	(19)	(45)	56	(101)
EIAs:						
Unrealized gains (losses)	10	4	6	54	36	18
Deferred acquisition costs/retrocession	(5)	(2)	(3)	(24)	(18)	(6)
Net effect	5	2	3	30	18	12
Guaranteed minimum benefit riders:						
Unrealized gains (losses)	21	(37)	58	23	(36)	59
Related freestanding derivatives, net of deferred acquisition costs/retrocession	(29)	5	(34)	(56)	(28)	(28)
Net effect	(8)	(32)	24	(33)	(64)	31
Total net effect after freestanding derivatives	\$ (9)	\$ (17)	\$ 8	\$ (48)	\$ 10	\$ (58)

Results of Operations by Segment

U.S. and Latin America Operations

The U.S. and Latin America operations consist of two major segments: Traditional and Financial Solutions. The Traditional segment primarily specializes in the reinsurance of individual mortality risk, health and long-term care and to a lesser extent, group reinsurance. The Financial Solutions segment consists of Asset-Intensive and Capital Solutions. Asset-Intensive within the Financial Solutions segment includes coinsurance of annuities and corporate-owned life insurance policies and to a lesser extent, fee-based synthetic guaranteed investment contracts, which include investment-only, stable value contracts. Capital Solutions within the Financial Solutions segment primarily involves assisting ceding companies in meeting applicable regulatory requirements by enhancing the ceding companies' financial strength and regulatory surplus position through relatively low risk reinsurance and other transactions. Typically, these transactions do not qualify as reinsurance under GAAP, due to the low-risk nature of the transactions, therefore only the related net fees are reflected in other revenues on the condensed consolidated statements of income.

The following table summarizes income before income taxes for the Company's U.S. and Latin America operations for the periods presented:

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 1,653	\$ 1,564	\$ 89	\$ 4,854	\$ 4,589	\$ 265
Investment income, net of related expenses	484	536	(52)	1,512	1,510	2
Investment related gains (losses), net	(14)	7	(21)	(153)	38	(191)
Other revenues	59	62	(3)	234	236	(2)
Total revenues	2,182	2,169	13	6,447	6,373	74
Benefits and expenses:						
Claims and other policy benefits	1,440	1,718	(278)	4,684	4,957	(273)
Interest credited	148	166	(18)	390	497	(107)
Policy acquisition costs and other insurance expenses	261	231	30	778	700	78
Other operating expenses	59	52	7	173	151	22
Total benefits and expenses	1,908	2,167	(259)	6,025	6,305	(280)
Income before income taxes	\$ 274	\$ 2	\$ 272	\$ 422	\$ 68	\$ 354

The increase in income before income taxes in the third quarter of 2022 was primarily driven by favorable claims experience in the individual mortality line of business, as well as an increase of \$42 million due to termination and utilization assumption updates related to individual health disabled life reserves. The increase in income was partially offset by lower investment income, as well as higher investment related losses and a decrease in the fair value of the embedded derivative associated with modco/funds withheld treaties within Financial Solutions. The increase in income before income taxes for the first nine months of 2022 is also attributable primarily to favorable claims experience within the individual mortality line of business as well as the aforementioned individual health disabled life reserve assumption update. Partially offsetting the nine month increases were decreases in investment related gains (losses) as well as a decrease in the fair value of the embedded derivative associated with modco/funds withheld treaties within Financial Solutions.

Traditional Reinsurance

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 1,640	\$ 1,550	\$ 90	\$ 4,812	\$ 4,547	\$ 265
Investment income, net of related expenses	214	245	(31)	727	685	42
Investment related gains (losses), net	8	(5)	13	42	2	40
Other revenues	5	5	—	21	14	7
Total revenues	1,867	1,795	72	5,602	5,248	354
Benefits and expenses:						
Claims and other policy benefits	1,398	1,670	(272)	4,552	4,828	(276)
Interest credited	18	17	1	52	52	—
Policy acquisition costs and other insurance expenses	203	195	8	619	583	36
Other operating expenses	44	39	5	132	114	18
Total benefits and expenses	1,663	1,921	(258)	5,355	5,577	(222)
Income (loss) before income taxes	\$ 204	\$ (126)	\$ 330	\$ 247	\$ (329)	\$ 576
Key metrics:						
Life reinsurance in force				\$1,662.7 billion	\$1,619.9 billion	
Claims and other policy benefits as a percentage of net premiums ("loss ratios")	85.2 %	107.7 %		94.6 %	106.2 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	12.4 %	12.6 %		12.9 %	12.8 %	
Other operating expenses as a percentage of net premiums	2.7 %	2.5 %		2.7 %	2.5 %	

The increase in income before income taxes in the third quarter for the U.S. and Latin America Traditional segment was primarily the result of favorable claims experience within the individual mortality business, as well as the aforementioned assumption update for individual health disabled life reserves, partially offset by less favorable investment income. The increase in income before taxes for the first nine months was primarily the result of favorable claims experience within the individual mortality business, the individual health disabled life reserve adjustment and favorable investment income, partially offset by less favorable claims experience within the U.S. group and Latin American businesses. The impact of COVID-19 claims was significantly less both quarter to date and year to date as compared to the same periods in 2021.

Revenues

- The increase in net premiums for the third quarter was primarily due to organic growth as well as new sales. The increase in net premiums for the nine month period was primarily due to organic growth and new sales of \$184 million, as well as \$45 million in restructuring of a transaction that was previously recognized as a deposit contract in Latin America and \$36 million related to the partial recapture of a large reinsurance transaction in the second quarter of 2021. The segment added new life business production, measured by face amount of reinsurance in force, of \$37.3 billion and \$33.9 billion during the third quarter of 2022 and 2021, respectively, and \$109.5 billion and \$98.1 billion during the first nine months of 2022 and 2021, respectively.
- The decrease in net investment income for the three month period ended September 30, 2022, was primarily due to lower variable investment income. The increase in net investment income for the nine month period was primarily the result of higher yields and asset bases in the current year partially offset by lower variable investment income.

Benefits and expenses

- The decreases in the loss ratio for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to favorable COVID-19 and non-COVID-19 experience, mainly within the Individual Mortality line of business. While the cause of death is not yet available for all claims, the Company estimates that approximately \$295 million of claims for the nine months ended September 30, 2022, were attributable to COVID-19.

Financial Solutions

For the three months ended September 30,

	2022			2021			2022 vs 2021		
	Asset-Intensive	Capital Solutions	Total	Asset-Intensive	Capital Solutions	Total	Asset-Intensive	Capital Solutions	Total
(dollars in millions)									
Revenues:									
Net premiums	\$ 13	\$ —	\$ 13	\$ 14	\$ —	\$ 14	\$ (1)	\$ —	\$ (1)
Investment income, net of related expenses	270	—	270	290	1	291	(20)	(1)	(21)
Investment related gains (losses), net	(22)	—	(22)	12	—	12	(34)	—	(34)
Other revenues	29	25	54	31	26	57	(2)	(1)	(3)
Total revenues	290	25	315	347	27	374	(57)	(2)	(59)
Benefits and expenses:									
Claims and other policy benefits	42	—	42	48	—	48	(6)	—	(6)
Interest credited	130	—	130	149	—	149	(19)	—	(19)
Policy acquisition costs and other insurance expenses	58	—	58	34	2	36	24	(2)	22
Other operating expenses	12	3	15	10	3	13	2	—	2
Total benefits and expenses	242	3	245	241	5	246	1	(2)	(1)
Income before income taxes	\$ 48	\$ 22	\$ 70	\$ 106	\$ 22	\$ 128	\$ (58)	\$ —	\$ (58)

For the nine months ended September 30,

	2022			2021			2022 vs 2021		
	Asset-Intensive	Capital Solutions	Total	Asset-Intensive	Capital Solutions	Total	Asset-Intensive	Capital Solutions	Total
(dollars in millions)									
Revenues:									
Net premiums	\$ 42	\$ —	\$ 42	\$ 42	\$ —	\$ 42	\$ —	\$ —	\$ —
Investment income, net of related expenses	783	2	785	823	2	825	(40)	—	(40)
Investment related gains (losses), net	(195)	—	(195)	36	—	36	(231)	—	(231)
Other revenues	87	126	213	142	80	222	(55)	46	(9)
Total revenues	717	128	845	1,043	82	1,125	(326)	46	(280)
Benefits and expenses:									
Claims and other policy benefits	132	—	132	129	—	129	3	—	3
Interest credited	338	—	338	445	—	445	(107)	—	(107)
Policy acquisition costs and other insurance expenses	157	2	159	113	4	117	44	(2)	42
Other operating expenses	33	8	41	27	10	37	6	(2)	4
Total benefits and expenses	660	10	670	714	14	728	(54)	(4)	(58)
Income before income taxes	\$ 57	\$ 118	\$ 175	\$ 329	\$ 68	\$ 397	\$ (272)	\$ 50	\$ (222)

Asset-Intensive Reinsurance

The decreases in income before income taxes for U.S. and Latin America Financial Solutions' Asset-intensive segment for the three and nine months ended September 30, 2022, were primarily due to the decrease in fair value of the embedded derivatives related to modco/funds withheld treaties and higher investment related losses, net in coinsurance portfolios.

The invested asset base, at amortized cost, supporting this segment decreased to \$24.2 billion as of September 30, 2022, from \$24.6 billion as of September 30, 2021.

- The decrease in the asset base was primarily due to \$1.1 billion of net run off in existing in force transactions, partially offset by \$0.9 billion from new transactions.
- As of September 30, 2022 and 2021, \$4.3 billion and \$4.7 billion, respectively, of the invested assets were funds withheld at interest of which greater than 90% was associated with two clients.

Impact of certain derivatives

Income from the asset-intensive business tends to be volatile due to changes in the fair value of certain derivatives, including embedded derivatives associated with reinsurance treaties structured on a modco or funds withheld basis, as well as embedded derivatives associated with the Company's reinsurance of equity-indexed annuities and variable annuities with guaranteed minimum benefit riders. Fluctuations occur period to period primarily due to changing investment conditions including, but not limited to, interest rate movements (including risk-free rates and credit spreads), implied volatility, the Company's own credit risk and equity market performance, all of which are factors in the calculations of fair value. Therefore, management believes it is helpful to distinguish between the effects of changes in these derivatives, net of related hedging activity, and the primary factors that drive profitability of the underlying treaties, namely investment income, fee income (included in other revenues), and interest credited. These fluctuations are considered unrealized by management and do not affect current cash flows, crediting rates or spread performance on the underlying treaties.

The following table summarizes the asset-intensive results and quantifies the impact of these embedded derivatives for the periods presented. Revenues before certain derivatives, benefits and expenses before certain derivatives, and income before income taxes and certain derivatives, should not be viewed as substitutes for GAAP revenues, GAAP benefits and expenses, and GAAP income before income taxes.

(dollars in millions)

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Revenues:				
Total revenues	\$ 290	\$ 347	\$ 717	\$ 1,043
Less:				
Embedded derivatives – modco/funds withheld treaties	(23)	26	(147)	85
Guaranteed minimum benefit riders and related free standing derivatives	8	(34)	(20)	(99)
Revenues before certain derivatives	305	355	884	1,057
Benefits and expenses:				
Total benefits and expenses	242	241	660	714
Less:				
Embedded derivatives – modco/funds withheld treaties	(10)	8	(61)	31
Guaranteed minimum benefit riders and related free standing derivatives	16	(2)	13	(35)
Equity-indexed annuities	(5)	(2)	(30)	(18)
Benefits and expenses before certain derivatives	241	237	738	736
Income before income taxes:				
Income before income taxes	48	106	57	329
Less:				
Embedded derivatives – modco/funds withheld treaties	(13)	18	(86)	54
Guaranteed minimum benefit riders and related free standing derivatives	(8)	(32)	(33)	(64)
Equity-indexed annuities	5	2	30	18
Income before income taxes and certain derivatives	\$ 64	\$ 118	\$ 146	\$ 321

Embedded Derivatives – Modco/Funds Withheld Treaties – Represents the change in the fair value of embedded derivatives on funds withheld at interest associated with treaties written on a modco or funds withheld basis. The fair value changes of embedded derivatives are reflected in revenues, while the related impact on deferred acquisition expenses is reflected in benefits and expenses. The Company's utilization of a credit valuation adjustment did not have a material effect on the change in fair value of these embedded derivatives for the three and nine months ended September 30, 2022 and 2021.

The change in fair value of the embedded derivatives related to modco/funds withheld treaties, net of deferred acquisition costs increased (decreased) income before income taxes by \$(13) million and \$18 million for the third quarter and \$(86) million and \$54 million for the nine months ended September 30, 2022 and 2021, respectively. The decrease in revenue for the third quarter and nine months ended September 30, 2022, was primarily driven by the impact of higher interest rates of \$(11) million and \$(98) million and the impact of widening credit spreads of \$(12) million and \$(69) million, respectively, on the fair value calculation. The revenue for the third quarter ended September 30, 2021, was primarily due to the impact of lower interest rates of \$26 million. The revenue for the nine months ended September 30, 2021, was primarily driven by tightening credit spreads of \$74 million.

Guaranteed Minimum Benefit Riders – Represents the impact related to guaranteed minimum benefits associated with the Company’s reinsurance of variable annuities. The fair value changes of the guaranteed minimum benefits along with the changes in fair value of the free standing derivatives (interest rate swaps, financial futures and equity options), purchased by the Company to substantially hedge the liability are reflected in revenues, while the related impact on deferred acquisition expenses is reflected in benefits and expenses. Changes in fair values of the embedded derivatives on guaranteed minimum benefits are net of an increase (decrease) in investment related gains (losses), net of \$27 million and \$7 million for the third quarters of 2022 and 2021, respectively, and \$15 million and \$(56) million for the nine months ended September 30, 2022 and 2021, respectively, associated with the Company’s utilization of a credit valuation adjustment.

The change in fair value of the guaranteed minimum benefits, after allowing for changes in the associated free standing derivatives, (decreased) income before income taxes by \$(8) million and \$(32) million for the third quarter and \$(33) million and \$(64) million for the nine months ended September 30, 2022 and 2021, respectively.

- The increase in revenue for the three months ended September 30, 2022, was primarily driven by a \$27 million increase in the credit valuation adjustment, which has the impact of decreasing the fair value of the guaranteed minimum benefit liability, partially offset by assumption updates of \$(19) million, which included a change in the benchmark rate to the secured overnight financing rate. The increase in revenue was offset by the related increase in deferred acquisition expenses of \$16 million.
- The decrease in revenue for the three months ended September 30, 2021, was primarily driven by a \$(37) million impact from the annual update of best estimate actuarial assumptions for future mortality improvement.
- The decrease in income for the nine months ended September 30, 2022, was primarily due to higher interest rates of \$(8) million, net of hedging and the \$(19) million assumption update in the current quarter, partially offset by a \$15 million increase in the credit valuation adjustment which has the impact of decreasing the value of the guaranteed minimum benefit liability.
- The decrease in revenue for the nine months ended September 30, 2021, was primarily driven by a \$(56) million decrease in the credit valuation adjustment which has the impact of increasing the fair value of the guaranteed minimum benefit liability and a \$(37) million impact from the annual update of best estimate actuarial assumptions for future mortality improvement.

Equity-Indexed Annuities – Represents changes in the liability for equity-indexed annuities in excess of changes in account value, after adjustments for related deferred acquisition expenses. The change in fair value of embedded derivative liabilities associated with equity-indexed annuities increased income before income taxes by \$5 million and \$2 million for the third quarters of 2022 and 2021, respectively, and \$30 million and \$18 million for the nine months ended September 30, 2022 and 2021, respectively. The increase in income for the third quarter and first nine months of 2022 was primarily due to an increase in interest rates which has the impact of lowering the fair value of the liability.

The changes in derivatives discussed above are considered unrealized by management and do not affect current cash flows, crediting rates or spread performance on the underlying treaties. Fluctuations occur period to period primarily due to changing investment conditions including, but not limited to, interest rate movements (including benchmark rates and credit spreads), credit valuation adjustments, implied volatility and equity market performance, all of which are factors in the calculations of fair value. Therefore, management believes it is helpful to distinguish between the effects of changes in these derivatives and the primary factors that drive profitability of the underlying treaties, namely investment income, fee income (included in other revenues) and interest credited.

Discussion and analysis before certain derivatives:

- Income before income taxes and certain derivatives decreased by \$54 million and \$175 million for the three and nine months ended September 30, 2022, respectively, as compared to the same periods in 2021. The decrease for the three months ended September 30, 2022, was primarily due to a \$(33) million decrease in investment related gains (losses), net in coinsurance and funds withheld portfolios. Additionally, the prior period included income from a retrocession transaction executed of \$13 million. The decrease for the nine months ended September 30, 2022, was primarily due to \$(121) million lower investment related gains (losses), net in coinsurance and funds withheld portfolios. Additionally, the prior period included a one-time fee of \$34 million associated with a new transaction, \$13 million of income from a retrocession transaction, and favorable prior year policyholder experience including impacts from COVID-19 of \$13 million.

- Revenue before certain derivatives decreased by \$50 million and by \$173 million for the three and nine months ended September 30, 2022, respectively, as compared to the same periods in 2021. The decrease for the three months ended September 30, 2022, was primarily due to a \$(25) million decrease in investment related gains (losses), net in coinsurance and funds withheld portfolios and a \$(31) million changes in the fair value of equity options associated with the reinsurance of EIAs. The decrease for the nine months ended September 30, 2022, was primarily due to \$(102) million change in fair value of equity options associated with the reinsurance of EIAs and \$(84) million lower investment related gains (losses), net in coinsurance and funds withheld portfolios. The effect on investment income related to equity options is substantially offset by a corresponding change in interest credited.
- Benefits and expenses before certain derivatives increased by \$4 million and \$2 million for the three and nine months ended September 30, 2022, as compared to the same period in 2021. The increase in the third quarter of 2022 was primarily due to \$8 million higher amortization of deferred acquisition costs associated with investment related gains (losses), net in coinsurance and funds withheld portfolios and a \$15 million increase in other insurance expenses related to a funds withheld transaction which is retroceded to a third party. These expense increases were partially offset by \$29 million lower interest credited associated with reinsurance of EIAs. The increase in the first nine months of 2022 was due to \$37 million higher amortization of deferred acquisition costs associated with investment related gains (losses), net in coinsurance and funds withheld portfolios and a \$52 million increase related to a funds withheld transaction which is retroceded to a third party. Additionally, the prior period included favorable policyholder experience including impacts from COVID-19 of \$13 million. These increases were offset by \$99 million lower interest credited associated with the reinsurance of EIAs. The effect on interest credited related to equity options is substantially offset by a corresponding increase in investment income.

Capital Solutions

Income before income taxes for the U.S. and Latin America Capital Solutions' business increased \$0 million, and \$50 million, or 73.5%, for the three and nine months ended September 30, 2022, as compared to the same periods in 2021. The increase in the nine month period was primarily due to a recapture fee earned on a terminated transaction. Fees earned from this business can vary significantly depending on the size of the transactions and the timing of their completion and therefore can fluctuate from period to period.

- At September 30, 2022 and 2021, the amount of reinsurance assumed from client companies, as measured by pre-tax statutory surplus, risk based capital and other financial structures was \$25.3 billion and \$22.0 billion, respectively.

Canada Operations

The Company conducts reinsurance business in Canada primarily through RGA Canada, which assists clients with capital management activity and mortality and morbidity risk management. The Canada operations are primarily engaged in Traditional reinsurance, which consists mainly of traditional individual life reinsurance, and to a lesser extent creditor, group life and health, critical illness and disability reinsurance. Creditor insurance covers the outstanding balance on personal, mortgage or commercial loans in the event of death, disability or critical illness and is generally shorter in duration than traditional individual life insurance. The Canada Financial Solutions segment consists of longevity and capital solutions.

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 317	\$ 311	\$ 6	\$ 983	\$ 938	\$ 45
Investment income, net of related expenses	64	65	(1)	177	188	(11)
Investment related gains (losses), net	2	1	1	(3)	3	(6)
Other revenues	2	2	—	9	11	(2)
Total revenues	385	379	6	1,166	1,140	26
Benefits and expenses:						
Claims and other policy benefits	291	278	13	919	860	59
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	47	47	—	140	139	1
Other operating expenses	11	10	1	32	31	1
Total benefits and expenses	349	335	14	1,091	1,030	61
Income before income taxes	\$ 36	\$ 44	\$ (8)	\$ 75	\$ 110	\$ (35)

- The decreases in income before income taxes for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to unfavorable claims experience in the individual mortality and group lines of business and lower investment income, partially offset by favorable longevity experience.

- Foreign currency fluctuations can result in variances in the financial statement line items. Foreign currency fluctuations resulted in a decrease in income before incomes taxes of \$1 million and \$2 million for the three and nine months ended September 30, 2022, respectively. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Traditional Reinsurance

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 293	\$ 289	\$ 4	\$ 911	\$ 870	\$ 41
Investment income, net of related expenses	63	65	(2)	176	188	(12)
Investment related gains (losses), net	2	1	1	(3)	3	(6)
Other revenues	—	(1)	1	3	2	1
Total revenues	358	354	4	1,087	1,063	24
Benefits and expenses:						
Claims and other policy benefits	270	255	15	865	798	67
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	46	46	—	138	137	1
Other operating expenses	10	9	1	30	28	2
Total benefits and expenses	326	310	16	1,033	963	70
Income (loss) before income taxes	\$ 32	\$ 44	\$ (12)	\$ 54	\$ 100	\$ (46)
Key metrics:						
Life reinsurance in force				\$448.7 billion	\$463.1 billion	
Claims and other policy benefits as a percentage of net premiums ("loss ratios")	92.2 %	88.2 %		95.0 %	91.7 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	15.7 %	15.9 %		15.1 %	15.7 %	
Other operating expenses as a percentage of net premiums	3.4 %	3.1 %		3.3 %	3.2 %	

The decreases in income before income taxes for the three and nine months ended September 30, 2022, were primarily due to unfavorable claims experience in the individual mortality and group lines of business and lower investment income.

Revenues

- The segment added new life business production, measured by face amount of reinsurance in force, of \$10.8 billion and \$11.5 billion for the third quarter of 2022 and 2021, respectively, and \$36.3 billion, and \$34.2 billion during the first nine months of 2022 and 2021, respectively.
- The decreases in net investment income for the three and nine months ended September 30, 2022, were primarily due to decreased variable investment income, partially offset by an increase in the invested asset base.

Benefits and expenses

- The increase in the loss ratio for the three months ended September 30, 2022, as compared to the same period in 2021, was primarily due to more unfavorable claims experience in the individual mortality line of business and unfavorable claims experience in the group line of business in 2022. The increase in the loss ratio for the nine months ended September 30, 2022, as compared to the same period in 2021, was primarily due to more unfavorable claims experience in the individual mortality line of business in 2022. While the cause of death is not yet available for all claims, the Company estimates that approximately \$26 million of claims for the nine months ended September 30, 2022, were attributable to COVID-19.

Financial Solutions

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 24	\$ 22	\$ 2	\$ 72	\$ 68	\$ 4
Investment income, net of related expenses	1	—	1	1	—	1
Investment related gains (losses), net	—	—	—	—	—	—
Other revenues	2	3	(1)	6	9	(3)
Total revenues	27	25	2	79	77	2
Benefits and expenses:						
Claims and other policy benefits	21	23	(2)	54	62	(8)
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	1	1	—	2	2	—
Other operating expenses	1	1	—	2	3	(1)
Total benefits and expenses	23	25	(2)	58	67	(9)
Income (loss) before income taxes	\$ 4	\$ —	\$ 4	\$ 21	\$ 10	\$ 11

The increases in income before income taxes for the three and nine months ended September 30, 2022, were primarily a result of slightly favorable mortality experience on longevity business as compared to the same periods in 2021.

Europe, Middle East and Africa Operations

The Europe, Middle East and Africa (“EMEA”) operations include business primarily generated by offices in France, Germany, Ireland, Italy, the Middle East, the Netherlands, Poland, South Africa, Spain and the United Kingdom (“UK”). EMEA consists of two major segments: Traditional and Financial Solutions. The Traditional segment primarily provides reinsurance through yearly renewable term and coinsurance agreements on a variety of life, health and critical illness products. Reinsurance agreements may be facultative or automatic agreements covering primarily individual risks and, in some markets, group risks. The Financial Solutions segment consists of reinsurance and other transactions associated with longevity closed blocks, payout annuities, capital management solutions and financial reinsurance.

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 548	\$ 528	\$ 20	\$ 1,673	\$ 1,562	\$ 111
Investment income, net of related expenses	58	73	(15)	170	215	(45)
Investment related gains (losses), net	(9)	23	(32)	(15)	41	(56)
Other revenues	2	4	(2)	10	11	(1)
Total revenues	599	628	(29)	1,838	1,829	9
Benefits and expenses:						
Claims and other policy benefits	498	559	(61)	1,487	1,559	(72)
Interest credited	(5)	(2)	(3)	(22)	(1)	(21)
Policy acquisition costs and other insurance expenses	33	37	(4)	98	96	2
Other operating expenses	41	40	1	129	118	11
Total benefits and expenses	567	634	(67)	1,692	1,772	(80)
Income before income taxes	\$ 32	\$ (6)	\$ 38	\$ 146	\$ 57	\$ 89

- The increase in income before income taxes for the three months and nine months ended September 30, 2022, was primarily the result of increased net premiums and favorable claims experience, partially offset by decreases in net investment income and investment related gains (losses), net.
- Foreign currency fluctuations can result in variances in the financial statement line items. Foreign currency exchange fluctuations resulted in decreases in income before income taxes of \$5 million and \$12 million for the three and nine months ended September 30, 2022, respectively, as compared to the same periods in 2021. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Traditional Reinsurance

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 436	\$ 432	\$ 4	\$ 1,314	\$ 1,303	\$ 11
Investment income, net of related expenses	21	22	(1)	65	66	(1)
Investment related gains (losses), net	—	—	—	—	—	—
Other revenues	—	—	—	1	1	—
Total revenues	457	454	3	1,380	1,370	10
Benefits and expenses:						
Claims and other policy benefits	394	482	(88)	1,198	1,365	(167)
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	32	35	(3)	94	91	3
Other operating expenses	30	28	2	91	85	6
Total benefits and expenses	456	545	(89)	1,383	1,541	(158)
Income (loss) before income taxes	\$ 1	\$ (91)	\$ 92	\$ (3)	\$ (171)	\$ 168
Key metrics:						
Life reinsurance in force				\$671.3 billion	\$852.8 billion	
Claims and other policy benefits as a percentage of net premiums ("loss ratios")	90.4 %	111.6 %		91.2 %	104.8 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	7.3 %	8.1 %		7.2 %	7.0 %	
Other operating expenses as a percentage of net premiums	6.9 %	6.5 %		6.9 %	6.5 %	

The increase in income before income taxes for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to an improvement in individual life mortality experience and increased net premiums in the first nine months of 2022.

Revenues

- The increases in net premiums for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were due to an increase in business volume on new and existing treaties.
- The segment added new life business production, measured by face amount of reinsurance in force, of \$38.2 billion and \$32.0 billion during the third quarter of 2022 and 2021, respectively, and \$133.8 billion and \$147.4 billion during the nine months ended September 30, 2022 and 2021, respectively.

Benefits and expenses

- The decreases in the loss ratio for the third quarter and first nine months of 2022 were due to improved mortality experience. While the cause of death is not available for all claims, the Company estimates for the nine months ended September 30, 2022, that approximately \$15 million of claims were primarily attributable to COVID-19.

Financial Solutions

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 112	\$ 96	\$ 16	\$ 359	\$ 259	\$ 100
Investment income, net of related expenses	37	51	(14)	105	149	(44)
Investment related gains (losses), net	(9)	23	(32)	(15)	41	(56)
Other revenues	2	4	(2)	9	10	(1)
Total revenues	142	174	(32)	458	459	(1)
Benefits and expenses:						
Claims and other policy benefits	104	77	27	289	194	95
Interest credited	(5)	(2)	(3)	(22)	(1)	(21)
Policy acquisition costs and other insurance expenses	1	2	(1)	4	5	(1)
Other operating expenses	11	12	(1)	38	33	5
Total benefits and expenses	111	89	22	309	231	78
Income (loss) before income taxes	\$ 31	\$ 85	\$ (54)	\$ 149	\$ 228	\$ (79)

The decreases in income before income taxes for the three and nine months ended September 30, 2022, compared to the same periods in 2021, were primarily due to decreases in investment income, net of related expenses, investment related gains (losses), net and unfavorable claims experience, partially offset by increases in net premiums.

Revenues

- The increases in net premiums for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to increased volumes of closed longevity block business.
- The decreases in net investment income for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to lower yield and lower income associated with unit-linked policies which fluctuate with market performance and are offset by a decrease in interest credited related to the unit-linked liabilities.
- The decreases in investment related gains (losses), net for the three and nine month periods were primarily due to fluctuations in the fair market value of CPI swap derivatives due to changes in future inflation expectations and lower investment related gains on fixed-income securities, respectively.

Benefits and expenses

- The increases in claims and other policy benefits for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were the result of increased volumes of closed longevity block business.

Asia Pacific Operations

The Asia Pacific operations include business generated by its offices principally in Australia, China, Hong Kong, India, Japan, Malaysia, New Zealand, Singapore, South Korea and Taiwan. The Traditional segment's principal types of reinsurance include individual and group life and health, critical illness, disability and superannuation. Reinsurance agreements may be facultative or automatic agreements covering primarily individual risks, and in some markets, group risks. Superannuation is the Australian government mandated compulsory retirement savings program. Superannuation funds accumulate retirement funds for employees, and, in addition, typically offer life and disability insurance coverage. The Financial Solutions segment includes financial reinsurance, asset-intensive and certain disability and life blocks.

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 729	\$ 691	\$ 38	\$ 2,122	\$ 2,017	\$ 105
Investment income, net of related expenses	115	70	45	281	196	85
Investment related gains (losses), net	(90)	(15)	(75)	(279)	11	(290)
Other revenues	122	12	110	190	42	148
Total revenues	876	758	118	2,314	2,266	48
Benefits and expenses:						
Claims and other policy benefits	586	734	(148)	1,765	1,918	(153)
Interest credited	38	12	26	80	42	38
Policy acquisition costs and other insurance expenses	80	50	30	203	156	47
Other operating expenses	56	52	4	163	152	11
Total benefits and expenses	760	848	(88)	2,211	2,268	(57)
Income before income taxes	\$ 116	\$ (90)	\$ 206	\$ 103	\$ (2)	\$ 105

- The increases in income before income taxes for the three and nine months ended September 30, 2022, were primarily due to favorable claims experience, increases in net premiums and net investment income, partially offset by unfavorable fluctuations in the fair value of derivatives within the Financial Solutions business.
- Foreign currency fluctuations can result in variances in the financial statement line items. Foreign currency fluctuations resulted in an increase in income before income taxes of \$14 million and \$33 million for the three and nine months ended September 30, 2022, as compared to the same periods in 2021. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Traditional Reinsurance

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 660	\$ 626	\$ 34	\$ 1,950	\$ 1,851	\$ 99
Investment income, net of related expenses	38	33	5	104	100	4
Investment related gains (losses), net	3	—	3	8	(1)	9
Other revenues	4	4	—	17	13	4
Total revenues	705	663	42	2,079	1,963	116
Benefits and expenses:						
Claims and other policy benefits	498	682	(184)	1,577	1,778	(201)
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	37	31	6	126	115	11
Other operating expenses	52	46	6	149	137	12
Total benefits and expenses	587	759	(172)	1,852	2,030	(178)
Income (loss) before income taxes	\$ 118	\$ (96)	\$ 214	\$ 227	\$ (67)	\$ 294
Key metrics:						
Life reinsurance in force				\$479.4 billion	\$526.0 billion	
Claims and other policy benefits as a percentage of net premiums ("loss ratios")	75.5 %	108.9 %		80.9 %	96.1 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	5.6 %	5.0 %		6.5 %	6.2 %	
Other operating expenses as a percentage of net premiums	7.9 %	7.3 %		7.6 %	7.4 %	

The increases in income before income taxes for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily the result of an increase in net premiums and favorable claims experience.

Revenues

- The increases in net premiums for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to continued business growth in the segment.
- The segment added new life business production, measured by face amount of reinsurance in force, of \$14.4 billion and \$7.1 billion during the third quarter of 2022 and 2021, respectively, and \$36.7 billion and \$25.6 billion during the nine months ended September 30, 2022 and 2021, respectively.

Benefits and expenses

- The decreases in the loss ratio for the three and nine months ended September 30, 2022, as compared to the same periods in 2021 were primarily due to favorable claims experience across the segment due to improved COVID-19 experience, primarily in India, and favorable claims experience, primarily in Hong Kong. While the cause of death is not yet available for all claims, the Company estimates for the nine months ended September 30, 2022, that approximately \$19 million of claims were attributable to COVID-19 which includes medical hospitalization claims in Japan for at-home sickness benefits related to COVID-19.

Financial Solutions

(dollars in millions)	Three Months Ended September 30,			Nine Months Ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ 69	\$ 65	\$ 4	\$ 172	\$ 166	\$ 6
Investment income, net of related expenses	77	37	40	177	96	81
Investment related gains (losses), net	(93)	(15)	(78)	(287)	12	(299)
Other revenues	118	8	110	173	29	144
Total revenues	171	95	76	235	303	(68)
Benefits and expenses:						
Claims and other policy benefits	88	52	36	188	140	48
Interest credited	38	12	26	80	42	38
Policy acquisition costs and other insurance expenses	43	19	24	77	41	36
Other operating expenses	4	6	(2)	14	15	(1)
Total benefits and expenses	173	89	84	359	238	121
Income (loss) before income taxes	\$ (2)	\$ 6	\$ (8)	\$ (124)	\$ 65	\$ (189)

The decreases in income before income taxes for the third quarter and first nine months of 2022 were primarily due to unfavorable fluctuations in the fair value of derivatives. The invested asset base supporting asset-intensive transactions increased to \$11.6 billion as of September 30, 2022, from \$8.1 billion as of September 30, 2021. The increase in the asset base compared to 2021 was primarily due to \$3.4 billion from recently executed transactions and net organic growth of \$0.1 billion from existing in force blocks. The amount of reinsurance assumed from client companies, as measured by pre-tax statutory surplus, risk based capital and other financial reinsurance structures was \$1.0 billion and \$1.4 billion for the periods ended September 30, 2022 and 2021, respectively. Fees earned from this business can vary significantly depending on the size, complexity and timing of the transactions and, therefore, can fluctuate from period to period.

- The increase in claims and other policy benefits for the three and nine months ended September 30, 2022, as compared to 2021, was primarily attributable to medical hospitalization claims in Japan for at-home sickness benefits related to COVID-19 of \$21 million and \$26 million, respectively.
- The increases in investment income for the three and nine months ended September 30, 2022, as compared to the same periods in 2021, were primarily due to the increase in the asset base.
- The decreases in investment related gains (losses), net for the third quarter and nine months ended September 30, 2022, were primarily due to the decrease in fair value of derivatives of \$54 million and \$249 million, respectively, due to the weakening of the Japanese yen, higher interest rates and widening credit spreads.
- The increases in other revenues for the third quarter and nine months ended September 30, 2022, were primarily attributable to surrender and market value adjustment charges on a single premium annuity block of business of \$104 million and \$126 million, respectively, due to higher lapses, which was partially offset by an increase in policy acquisition costs and other reinsurance expenses of \$24 million and \$31 million, and a decrease in investment related gains (losses), net of \$(23) million and \$(37) million, respectively.

Corporate and Other

Corporate and Other revenues primarily include investment income from unallocated invested assets, investment related gains and losses and service fees. Corporate and Other expenses consist of the offset to capital charges allocated to the operating segments within the policy acquisition costs and other insurance income line item, unallocated overhead and executive costs, interest expense related to debt, and the investment income and expense associated with the Company's Funding Agreement Backed Notes ("FABN") program, collateral finance and securitization transactions and service business expenses. Additionally, Corporate and Other includes results from certain wholly-owned subsidiaries, such as RGAX, and joint ventures that, among other activities, develop and market technology, and provide consulting and outsourcing solutions for the insurance and reinsurance industries. The Company invests in this area in an effort to both support its clients and accelerate the development of new solutions and services to increase consumer engagement within the life insurance industry and hence generate new future revenue streams.

(dollars in millions)

	Three months ended September 30,			Nine months ended September 30,		
	2022	2021	2022 vs 2021	2022	2021	2022 vs 2021
Revenues:						
Net premiums	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Investment income, net of related expenses	48	52	(4)	193	258	(65)
Investment related gains (losses), net	(23)	42	(65)	(64)	379	(443)
Other revenues	(1)	15	(16)	(11)	54	(65)
Total revenues	24	109	(85)	118	691	(573)
Benefits and expenses:						
Claims and other policy benefits	—	—	—	—	—	—
Interest credited	8	1	7	20	3	17
Policy acquisition costs and other insurance income	(25)	(27)	2	(75)	(81)	6
Other operating expenses	84	75	9	223	231	(8)
Interest expense	46	41	5	130	129	1
Collateral finance and securitization expense	3	3	—	6	8	(2)
Total benefits and expenses	116	93	23	304	290	14
Income (loss) before income taxes	\$ (92)	\$ 16	\$ (108)	\$ (186)	\$ 401	\$ (587)

The decreases in income before income taxes for the three and nine month periods ended September 30, 2022, were primarily due to a decrease in total revenues and higher interest credited.

- Net investment income for the nine months ended September 30, 2021, includes a one-time adjustment of \$92 million of pre-tax unrealized gains on certain limited partnerships, for which the Company uses the equity method of accounting, from AOCI to net investment income. The unrealized gains should have been recognized directly in net investment income in the same prior periods they were reported as earnings by the investees. Excluding this adjustment, the increase in net investment income for the three and nine month periods ended September 30, 2022, is attributable to higher investment income on Corporate invested assets due to a higher asset base. Higher investment income includes income earned on assets associated with the Company's FABN program, which is partially offset by higher interest credited related to the program.
- Investment related gains (losses), net for the first nine months of 2021 includes an adjustment to investments in limited partnerships considered to be investment companies, which should have been recognized in prior periods, of \$70 million to adjust the carrying value from cost less impairments to the fair value approach, using the net asset value ("NAV") per share or its equivalent. The remaining decrease in investment related gains (losses), net for the third quarter and first nine months of 2022 as compared to the prior year is attributable to losses on sales of fixed maturity securities in the current period compared to gains in the prior period, lower unrealized gains on limited partnerships, changes in allowances and impairments on mortgage loans and available-for-sale securities and changes in the fair value of equity securities, partially offset by increases in the fair value of derivatives as a result of fluctuations in foreign exchange rates, interest rates and equity markets.
- The decrease in other revenues was primarily due to a decline in the cash surrender value on corporate-owned life insurance for the nine month period ended September 30, 2022, compared to an increase in value for the prior year, as well as gains on the sales of subsidiaries in the prior period of \$11 million. Further, foreign currency losses reduced other revenues for the three and nine month periods ended September 30, 2022, as compared to the prior period.
- The increase in other operating expenses for the three month period ended September 30, 2022, was attributable to higher incentive compensation and information technology expenditures. The decrease in other operating expenses for the nine month period ended September 30, 2022, was attributable to a decrease in compensation expense.

Liquidity and Capital Resources

Overview

The Company believes that cash flows from the source of funds available to it will provide sufficient cash flows for the next twelve months to satisfy the current liquidity requirements of the Company under various scenarios that include the potential risk of early recapture of reinsurance treaties, market, and economic uncertainties, including interest rates and inflation, and higher than expected claims associated with COVID-19 primarily during the first quarter of 2022. The Company performs periodic liquidity stress testing to ensure its asset portfolio includes sufficient high quality liquid assets that could be utilized to bolster its liquidity position under stress scenarios. These assets could be utilized as collateral for secured borrowing transactions with various third parties or by selling the securities in the open market if needed. The Company's liquidity requirements have been and will continue to be funded through net cash flows from operations. However, in the event of significant unanticipated cash requirements beyond normal liquidity needs, the Company has multiple liquidity alternatives available based on market conditions and the amount and timing of the liquidity need. These alternatives include the sale of invested assets subject to market conditions, borrowings under committed credit facilities, secured borrowings, and if necessary issuing long-term debt, preferred securities or common equity.

Current Market Environment

The Company's average investment yield, excluding spread related business, for the nine months ended September 30, 2022, was 4.78% or 30 basis points lower than the same period in 2021 due to decreased variable income from limited partnerships partially offset by increased variable income from real estate joint ventures. The Company's insurance liabilities, in particular its annuity products, are sensitive to changing market factors. Gross unrealized gains on fixed maturity securities available-for-sale decreased from \$5.3 billion at December 31, 2021, to \$0.7 billion at September 30, 2022, due to increased interest rates. Similarly, gross unrealized losses increased from \$0.3 billion at December 31, 2021, to \$7.8 billion at September 30, 2022.

The Company continues to be in a position to hold any investment security showing an unrealized loss until recovery, provided it remains comfortable with the credit of the issuer. The Company does not rely on short-term funding or commercial paper and to date it has experienced no liquidity pressure, nor does it anticipate such pressure in the foreseeable future.

The Company projects its reserves to be sufficient, and it would not expect to write down deferred acquisition costs or be required to take any actions to augment capital, even if interest rates remain at current levels for the next five years, assuming all other factors remain constant. While interest rates have recently increased, the Company continues to feel the pressures of sustained low interest and volatile equity markets and may continue to do so; however, its underlying business is not overly sensitive to these risks. Mortality and morbidity risks continue to be the most significant risk for the Company. Although

management believes the Company's current capital base is adequate to support its business at current operating levels, it continues to monitor new business opportunities and any associated new capital needs that could arise from the changing financial landscape

The Holding Company

RGA is an insurance holding company whose primary uses of liquidity include, but are not limited to, the immediate capital needs of its operating companies, dividends paid to its shareholders, repurchase of common stock and interest payments on its indebtedness. The primary sources of RGA's liquidity include proceeds from its capital-raising efforts, interest income on undeployed corporate investments, interest income received on surplus notes with RGA Reinsurance Company ("RGA Reinsurance"), RGA Life and Annuity Insurance Company (formerly Reinsurance Company of Missouri, Incorporated) and Rockwood Reinsurance Company ("Rockwood Re") and dividends from operating subsidiaries. The following tables provide comparative information for RGA (dollars in millions):

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Interest and dividend income	\$ 135	\$ 303	\$ 287	\$ 367
Interest expense	45	47	128	150
Capital contributions to subsidiaries	5	5	17	12
Issuance of unaffiliated debt	690	—	690	—
Dividends to shareholders	54	50	152	145
Purchase of treasury stock	25	46	50	48
			September 30, 2022	December 31, 2021
Cash and invested assets			\$ 931	\$ 621

See Item 15, Schedule II – "Condensed Financial Information of the Registrant" in the 2021 Annual Report for additional financial information related to RGA.

The undistributed earnings of substantially all of the Company's foreign subsidiaries have been reinvested indefinitely in those non-U.S. operations, as described in Note 9 – "Income Tax" in the Notes to Consolidated Financial Statements in the 2021 Annual Report. As U.S. Tax Reform generally eliminates U.S. federal income taxes on dividends from foreign subsidiaries, the Company does not expect to incur material income taxes if these funds are repatriated.

RGA endeavors to maintain a capital structure that provides financial and operational flexibility to its subsidiaries, credit ratings that support its competitive position in the financial services marketplace, and shareholder returns. As part of the Company's capital deployment strategy, it has in recent years repurchased shares of RGA common stock and paid dividends to RGA shareholders, as authorized by the board of directors.

On January 24, 2019, RGA's board of directors authorized a share repurchase program for up to \$400 million of RGA's outstanding common stock. During the nine months ended September 30, 2022, RGA repurchased 219,116 shares of common stock under this program for \$25 million.

On February 25, 2022, RGA's board of directors authorized a share repurchase program for up to \$400 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. During the nine months ended September 30, 2022, RGA repurchased 195,234 shares of common stock under this program for \$25 million.

The pace of repurchase activity depends on various factors such as the level of available cash, an evaluation of the costs and benefits associated with alternative uses of excess capital, such as acquisitions and in force reinsurance transactions, and RGA's stock price.

Details underlying dividend and share repurchase program activity were as follows (dollars in millions, except share data):

	Nine months ended September 30,	
	2022	2021
Dividends to shareholders	\$ 152	\$ 145
Purchase of treasury stock ⁽¹⁾	50	46
Total amount paid to shareholders	\$ 202	\$ 191
Number of treasury shares purchased ⁽¹⁾	414	406
Average price per share	\$ 120.67	\$ 113.40

¹Excludes shares utilized to execute and settle certain stock incentive awards.

In October 2022, RGA's board of directors declared a quarterly dividend of \$0.80 per share. All future payments of dividends are at the discretion of RGA's board of directors and will depend on the Company's earnings, capital requirements, insurance regulatory conditions, operating conditions, and other such factors as the board of directors may deem relevant. The amount of dividends that RGA can pay will depend in part on the operations of its reinsurance subsidiaries. See Note 3 – "Equity" in the Notes to Condensed Consolidated Financial Statements for information on the Company's share repurchase program.

Debt

Certain of the Company's debt agreements contain financial covenant restrictions related to, among others, liens, the issuance and disposition of stock of restricted subsidiaries, minimum requirements of consolidated net worth, maximum ratios of debt to capitalization and change of control provisions. The Company is required to maintain a minimum consolidated net worth, as defined in the debt agreements, of \$5.3 billion, calculated as of the last day of each fiscal quarter. Also, consolidated indebtedness, calculated as of the last day of each fiscal quarter, cannot exceed 35% of the sum of the Company's consolidated indebtedness plus adjusted consolidated stockholders' equity. A material ongoing covenant default could require immediate payment of the amount due, including principal, under the various agreements. Additionally, the Company's debt agreements contain cross-acceleration covenants, which would make outstanding borrowings immediately payable in the event of a material uncured covenant default under any of the agreements, including, but not limited to, non-payment of indebtedness when due for an amount in excess of the amounts set forth in those agreements, bankruptcy proceedings, or any other event that results in the acceleration of the maturity of indebtedness.

As of September 30, 2022 and December 31, 2021, the Company had \$4.2 billion and \$3.7 billion, respectively, in outstanding borrowings under its debt agreements and was in compliance with all covenants under those agreements. As of September 30, 2022 and December 31, 2021, the average net interest rate on long-term debt outstanding was 4.89% and 4.42%, respectively. The ability of the Company to make debt principal and interest payments depends on the earnings and surplus of subsidiaries, investment earnings on undeployed capital proceeds, available liquidity at the holding company, and the Company's ability to raise additional funds.

The Company enters into derivative agreements with counterparties that reference either the Company's debt rating or its financial strength rating. If either rating is downgraded in the future, it could trigger certain terms in the Company's derivative agreements, which could negatively affect overall liquidity. For the majority of the Company's derivative agreements, there is a termination event should the long-term senior debt ratings drop below either BBB+ (S&P) or Baa1 (Moody's) or the financial strength ratings drop below either A- (S&P) or A3 (Moody's).

The Company may borrow up to \$850 million in cash and obtain letters of credit in multiple currencies on its revolving credit facility that matures in August 2023. As of September 30, 2022, the Company had no cash borrowings outstanding and \$7 million in issued, but undrawn, letters of credit under this facility.

On December 13, 2021, RGA Reinsurance issued 4.00% Surplus Notes due in 2051 with a face amount of \$500 million. The net proceeds were approximately \$494 million and will be used for general corporate purposes.

On September 15, 2022, RGA announced a cash tender offer for any and all of its outstanding 6.20% Fixed-to-Floating Rate Subordinated Debentures due 2042 (the "2042 Debentures") at a price of \$25.20 for each \$25 principal amount of 2042 Debentures. The tender offer expired on September 22, 2022, and a total of \$151 million or approximately 38%, of the aggregate principal amount of the 2042 Debentures were tendered. The Company intends to redeem the remaining debentures in accordance with the indenture governing the 2042 Debentures.

On September 23, 2022, RGA issued 7.125% fixed-rate reset subordinated debentures due October 15, 2052, with a face amount of \$700 million. This security has been registered with the Securities and Exchange Commission. The net proceeds were approximately \$690 million and a portion was used in part to pay for the tender offer of the 2042 Debentures. The remaining proceeds will be used for future redemptions of the remaining 2042 Debentures in accordance with the indenture governing the 2042 Debentures, and general corporate purposes. Capitalized issue costs were approximately \$10 million.

The remaining amount of the \$850 million Series A Floating Rate Insured Notes issued by the Company's subsidiary, Timberlake Financial, LLC, which was approximately \$185 million, were redeemed on August 29, 2022, and are no longer outstanding as of September 30, 2022.

Based on the historic cash flows and the current financial results of the Company, management believes RGA's cash flows will be sufficient to enable RGA to meet its obligations for at least the next twelve months.

Credit and Committed Facilities

At September 30, 2022, the Company maintained an \$850 million syndicated revolving credit facility and certain committed letter of credit facilities aggregating to \$928 million. See Note 13 – "Debt" in the Notes to Consolidated Financial Statements in the 2021 Annual Report for further information about these facilities.

The Company has obtained bank letters of credit in favor of various affiliated and unaffiliated insurance companies from which the Company assumes business. These letters of credit represent guarantees of performance under the reinsurance agreements and allow ceding companies to take statutory reserve credits. Certain of these letters of credit contain financial covenant restrictions similar to those described in the “Debt” discussion above. At September 30, 2022, there were approximately \$158 million of outstanding bank letters of credit in favor of third parties. Additionally, in accordance with applicable regulations, the Company utilizes letters of credit to secure statutory reserve credits when it retrocedes business to its affiliated subsidiaries. The Company cedes business to its affiliates to help reduce the amount of regulatory capital required in certain jurisdictions, such as the U.S. and the UK. The Company believes the capital required to support the business in the affiliates reflects more realistic expectations than the original jurisdiction of the business, where capital requirements are often considered to be quite conservative. As of September 30, 2022, \$1.5 billion in letters of credit from various banks were outstanding, but undrawn, backing reinsurance between the various subsidiaries of the Company.

Cash Flows

The Company’s principal cash inflows from its reinsurance operations include premiums and deposit funds received from ceding companies. The primary liquidity concerns with respect to these cash flows are early recapture of the reinsurance contract by the ceding company and lapses of annuity products reinsured by the Company. The Company’s principal cash inflows from its invested assets result from investment income and the maturity and sales of invested assets. The primary liquidity concerns with respect to these cash inflows relates to the risk of default by debtors and interest rate volatility. The Company manages these risks very closely. See “Investments” below.

Additional sources of liquidity to meet unexpected cash outflows in excess of operating cash inflows and current cash and equivalents on hand also includes drawing funds under a revolving credit facility, under which the Company had availability of \$843 million as of September 30, 2022. The Company also has \$641 million of funds available through collateralized borrowings from the FHLB as of September 30, 2022. As of September 30, 2022, the Company could have borrowed these additional amounts without violating any of its existing debt covenants.

The Company’s principal cash outflows relate to the payment of claims liabilities, interest credited, operating expenses, income taxes, dividends to shareholders, purchases of treasury stock and principal and interest under debt and other financing obligations. The Company seeks to limit its exposure to loss on any single insured and to recover a portion of benefits paid by ceding reinsurance to other insurance enterprises or reinsurers under excess coverage and coinsurance contracts (See Note 2 – “Significant Accounting Policies and Pronouncements” in the Notes to Consolidated Financial Statements in the 2021 Annual Report). The Company performs annual financial reviews of its retrocessionaires to evaluate financial stability and performance. The Company has never experienced a material default in connection with retrocession arrangements, nor has it experienced any difficulty in collecting claims recoverable from retrocessionaires; however, no assurance can be given as to the future performance of such retrocessionaires nor to the recoverability of future claims. The Company’s management believes its cash and cash equivalents along with its current sources of liquidity are adequate to meet its cash requirements for the next twelve months, despite the uncertainty associated with the pandemic.

Summary of Primary Sources and Uses of Liquidity and Capital

The Company's primary sources and uses of liquidity and capital are summarized as follows:

	For the nine months ended September 30,	
	2022	2021
	(Dollars in millions)	
Sources:		
Net cash provided by operating activities	\$ 1,076	\$ 3,821
Proceeds from long-term debt issuance	700	—
Change in cash collateral for derivative positions and other arrangements	99	29
Change in deposit asset on reinsurance	—	14
Net deposits from investment-type policies and contracts	4,156	—
Issuance of preferred interests by subsidiary	90	—
Total sources	6,121	3,864
Uses:		
Net cash used in investing activities	4,794	3,492
Dividends to stockholders	152	145
Repayment of collateral finance and securitization notes	181	74
Debt issuance costs	10	—
Principal payments of long-term debt	153	402
Purchases of treasury stock	54	48
Change in deposit asset on reinsurance	32	—
Net withdrawals from investment-type policies and contracts	—	51
Distributions to noncontrolling interest	2	—
Effect of exchange rate changes on cash	179	33
Total uses	5,557	4,245
Net change in cash and cash equivalents	\$ 564	\$ (381)

Cash Flows from Operations – The principal cash inflows from the Company's reinsurance activities come from premiums, investment and fee income, annuity considerations and deposit funds. The principal cash outflows relate to the liabilities associated with various life and health insurance, annuity and disability products, operating expenses, income tax payments and interest on outstanding debt obligations. The primary liquidity concern with respect to these cash flows is the risk of shortfalls in premiums and investment income, particularly in periods with abnormally high claims levels.

Cash Flows from Investments – The principal cash inflows from the Company's investment activities come from repayments of principal on invested assets, proceeds from maturities of invested assets, sales of invested assets and settlements of freestanding derivatives. The principal cash outflows relate to purchases of investments, issuances of policy loans and settlements of freestanding derivatives. The Company typically has a net cash outflow from investing activities because cash inflows from insurance operations are reinvested in accordance with its asset/liability management discipline to fund insurance liabilities. The Company closely monitors and manages these risks through its credit risk management process. The primary liquidity concerns with respect to these cash flows are the risk of default by debtors and market disruption, which could make it difficult for the Company to sell investments.

Financing Cash Flows – The principal cash inflows from the Company's financing activities come from issuances of RGA debt and equity securities, and deposit funds associated with universal life and other investment type policies and contracts. The principal cash outflows come from repayments of debt, payments of dividends to stockholders, purchases of treasury stock, and withdrawals associated with universal life and other investment type policies and contracts. A primary liquidity concern with respect to these cash flows is the risk of early contractholder and policyholder withdrawal.

Contractual Obligations

There were no other material changes in the Company's contractual obligations from those reported in the 2021 Annual Report, except for the following:

- The Company's contractual obligations associated with long term debt, including principal and interest, increased from \$7.1 billion at December 31, 2021 to \$9.1 billion at September 30, 2022, primarily due to the issuance of 7.125% fixed-rate reset subordinated debentures due October 15, 2052, with a face amount of \$700 million on September 23, 2022.

- The Company's contractual obligations associated with interest sensitive contract liabilities increased from \$43.4 billion at December 31, 2021 to \$49.8 billion at September 30, 2022, primarily due to large asset intensive transactions completed during the nine months ended September 30, 2022. The majority of these commitments are expected to occur beyond five years.
- The remaining amount of the \$850 million Series A Floating Rate Insured Notes issued by the Company's subsidiary, Timberlake Financial, LLC, which was approximately \$185 million, were redeemed on August 29, 2022, and are no longer outstanding as of September 30, 2022.

Asset / Liability Management

The Company actively manages its cash and invested assets using an approach that is intended to balance quality, diversification, asset/liability matching, liquidity and investment return. The goals of the investment process are to optimize after-tax, risk-adjusted investment income and after-tax, risk-adjusted total return while managing the assets and liabilities on a cash flow and duration basis.

The Company has established target asset portfolios for its operating segments, which represent the investment strategies intended to profitably fund its liabilities within acceptable risk parameters. These strategies include objectives and limits for effective duration, yield curve sensitivity and convexity, liquidity, asset sector concentration and credit quality.

The Company's asset-intensive products are primarily supported by investments in fixed maturity securities reflected on the Company's balance sheet and under funds withheld arrangements with the ceding company. Investment guidelines are established to structure the investment portfolio based upon the type, duration and behavior of products in the liability portfolio so as to achieve targeted levels of profitability. The Company manages the asset-intensive business to provide a targeted spread between the interest rate earned on investments and the interest rate credited to the underlying interest-sensitive contract liabilities. The Company periodically reviews models projecting different interest rate scenarios and their effect on profitability. Certain of these asset-intensive agreements, primarily in the U.S. and Latin America Financial Solutions operating segment, are generally funded by fixed maturity securities that are withheld by the ceding company.

The Company's liquidity position (cash and cash equivalents and short-term investments) was \$3.7 billion and \$3.0 billion at September 30, 2022 and December 31, 2021, respectively. Liquidity needs are determined from valuation analyses conducted by operational units and are driven by product portfolios. Periodic evaluations of demand liabilities and short-term liquid assets are designed to adjust specific portfolios, as well as their durations and maturities, in response to anticipated liquidity needs.

See "Securities Borrowing, Lending and Repurchase/Reverse Repurchase Agreements" in Note 4 - "Investments" in the Notes to Condensed Consolidated Financial Statements for information related to the Company's securities borrowing, lending and repurchase/reverse repurchase agreements. In addition to its security agreements with third parties, certain RGA's subsidiaries have entered into intercompany securities lending agreements to more efficiently source securities for lending to third parties and to provide for more efficient regulatory capital management.

The Company is a member of the FHLB and holds \$66 million of FHLB common stock, which is included in other invested assets on the Company's condensed consolidated balance sheets.

The Company has entered into funding agreements with the FHLB under guaranteed investment contracts whereby the Company has issued the funding agreements in exchange for cash and for which the FHLB has been granted a blanket lien on the Company's commercial and residential mortgage-backed securities and commercial mortgage loans used to collateralize the Company's obligations under the funding agreements. The Company maintains control over these pledged assets, and may use, commingle, encumber or dispose of any portion of the collateral as long as there is no event of default and the remaining qualified collateral is sufficient to satisfy the collateral maintenance level. The funding agreements and the related security agreements represented by this blanket lien provide that upon any event of default by the Company, the FHLB's recovery is limited to the amount of the Company's liability under the outstanding funding agreements. The amount of the Company's liability for the funding agreements with the FHLB under guaranteed investment contracts was \$1.3 billion and \$1.4 billion at September 30, 2022 and December 31, 2021, respectively, which is included in interest-sensitive contract liabilities on the Company's condensed consolidated balance sheets. The advances on these agreements are collateralized primarily by commercial and residential mortgage-backed securities, commercial mortgage loans, and U.S. Treasury and government agency securities. The amount of collateral exceeds the liability and is dependent on the type of assets collateralizing the guaranteed investment contracts.

Investments

Management of Investments

The Company's investment and derivative strategies involve matching the characteristics of its reinsurance products and other obligations. The Company seeks to closely approximate the interest rate sensitivity of the assets with estimated interest rate sensitivity of the reinsurance liabilities. The Company achieves its income objectives through strategic and tactical asset allocations, applying security and derivative strategies within asset/liability and disciplined risk management frameworks. Derivative strategies are employed within the Company's risk management framework to help manage duration, currency, and other risks in assets and/or liabilities and to replicate the credit characteristics of certain assets.

The Company's portfolio management groups work with the Enterprise Risk Management function to develop the investment policies for the assets of the Company's domestic and international investment portfolios. All investments held by the Company, directly or in a funds withheld at interest reinsurance arrangement, are monitored for conformance with the Company's stated investment policy limits as well as any limits prescribed by the applicable jurisdiction's insurance laws and regulations. See Note 4 – "Investments" in the Notes to Condensed Consolidated Financial Statements for additional information regarding the Company's investments.

Portfolio Composition

The Company had total cash and invested assets of \$71.6 billion and \$81.5 billion as of September 30, 2022 and December 31, 2021, respectively, as illustrated below (dollars in millions):

	September 30, 2022	% of Total	December 31, 2021	% of Total
Fixed maturity securities available-for-sale	\$ 50,495	70.6 %	\$ 60,749	74.6 %
Equity securities	137	0.2	151	0.2
Mortgage loans	6,558	9.2	6,283	7.7
Policy loans	1,202	1.7	1,234	1.5
Funds withheld at interest	6,177	8.6	6,954	8.5
Short-term investments	225	0.3	87	0.1
Other invested assets	3,246	4.5	3,070	3.8
Cash and cash equivalents	3,512	4.9	2,948	3.6
Total cash and invested assets	\$ 71,552	100.0 %	\$ 81,476	100.0 %

Investment Yield

The following table presents consolidated average invested assets, at amortized cost, net investment income, investment yield, variable investment income ("VII"), and investment yield excluding VII, which can vary significantly from period to period (dollars in millions). The table excludes spread related business. Spread related business is primarily associated with contracts on which the Company earns an interest rate spread between assets and liabilities. To varying degrees, fluctuations in the yield on other spread related business is generally subject to corresponding adjustments to the interest credited on the liabilities.

	Three months ended September 30,			Nine months ended September 30,		
	2022	2021	Increase/ (Decrease)	2022	2021	Increase/ (Decrease)
Average invested assets at amortized cost	\$ 34,579	\$ 33,361	\$ 1,218	\$ 34,494	\$ 33,021	\$ 1,473
Net investment income	\$ 374	\$ 405	\$ (31)	\$ 1,228	\$ 1,251	\$ (23)
Annualized investment yield (ratio of net investment income to average invested assets at amortized cost)	4.40 %	4.95 %	(55) bps	4.78 %	5.08 %	(30) bps
VII (included in net investment income)	\$ 38	\$ 102	\$ (64)	\$ 249	\$ 342	\$ (93)
Annualized investment yield excluding VII (ratio of net investment income, excluding VII, to average invested assets, excluding assets with only VII, at amortized cost)	4.12 %	3.85 %	27 bps	3.96 %	3.83 %	13 bps

Investment yield decreased for the three months ended September 30, 2022, in comparison to the same period in the prior year, primarily due to decreased variable income from limited partnerships and real estate joint ventures, which are included in other invested assets on the condensed consolidated balance sheets. Investment yield decreased for the nine months ended September 30, 2022, in comparison to the same period in the prior year, primarily due to decreased variable income from limited partnerships partially offset by increased variable income from real estate joint ventures. Investment yield excluding variable investment income increased for the three and nine months ended September 30, 2022, in comparison to the same periods in the prior year, primarily due to the rising interest rate environment.

Fixed Maturity Securities Available-for-Sale

See “Fixed Maturity Securities Available-for-Sale” in Note 4 – “Investments” in the Notes to Condensed Consolidated Financial Statements for tables that provide the amortized cost, allowance for credit losses, unrealized gains and losses and estimated fair value of these securities by type as of September 30, 2022 and December 31, 2021.

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”). RMBS, ABS, and CMBS are collectively “structured securities.” As of September 30, 2022 and December 31, 2021, approximately 93.1% and 94.0%, respectively, of the Company’s consolidated investment portfolio of fixed maturity securities were investment grade.

Important factors in the selection of investments include diversification, quality, yield, call protection and total rate of return potential. The relative importance of these factors is determined by market conditions and the underlying reinsurance liability and existing portfolio characteristics. The Company owns floating rate securities that represent approximately 7.6% and 5.3% of the total fixed maturity securities as of September 30, 2022 and December 31, 2021, respectively. These investments have a higher degree of income variability than the other fixed income holdings in the portfolio due to fluctuations in interest payments. The Company holds floating rate investments to match specific floating rate liabilities primarily reflected in the condensed consolidated balance sheets as collateral finance notes, as well as to enhance asset management strategies.

The largest asset class in which fixed maturity securities were invested was corporate securities, which represented approximately 64.6% and 62.8% of total fixed maturity securities as of September 30, 2022 and December 31, 2021. See “Corporate Fixed Maturity Securities” in Note 4 – “Investments” in the Notes to Condensed Consolidated Financial Statements for tables showing the major sector types, which comprise the corporate fixed maturity holdings as of September 30, 2022 and December 31, 2021.

As of September 30, 2022 and December 31, 2021, the Company’s investments in Canadian government securities represented 7.1% and 8.1%, respectively, of the fair value of total fixed maturity securities. These assets are primarily high quality, long duration provincial strip bonds, the valuation of which is closely linked to the interest rate curve. These assets are longer in duration and held primarily for asset/liability management to meet Canadian regulatory requirements.

The Company references rating agency designations in some of its investments disclosures. These designations are based on the ratings from nationally recognized statistical rating organizations, primarily Moody’s, S&P and Fitch. Structured securities held by the Company’s insurance subsidiaries that maintain the NAIC statutory basis of accounting utilize the NAIC rating methodology. The NAIC assigns designations to publicly traded as well as privately placed securities. The designations assigned by the NAIC range from class 1 to class 6, with designations in classes 1 and 2 generally considered investment grade (BBB or higher rating agency designation). NAIC designations in classes 3 through 6 are generally considered below investment grade (BB or lower rating agency designation). If no rating is available from a rating agency or the NAIC, then an internally developed rating is used.

The quality of the Company's available-for-sale fixed maturity securities portfolio, as measured at fair value and by the percentage of fixed maturity securities invested in various ratings categories, relative to the entire available-for-sale fixed maturity securities portfolio, as of September 30, 2022 and December 31, 2021 was as follows (dollars in millions):

NAIC Designation	Rating Agency Designation	September 30, 2022			December 31, 2021		
		Amortized Cost	Estimated Fair Value	% of Total	Amortized Cost	Estimated Fair Value	% of Total
1	AAA/AA/A	\$ 33,881	\$ 30,062	59.6 %	\$ 33,540	\$ 36,725	60.5 %
2	BBB	19,931	16,924	33.5	18,684	20,379	33.5
3	BB	3,044	2,843	5.6	2,620	2,668	4.4
4	B	625	583	1.2	876	863	1.4
5	CCC and lower	107	62	0.1	96	79	0.1
6	In or near default	42	21	—	57	35	0.1
Total		\$ 57,630	\$ 50,495	100.0 %	\$ 55,873	\$ 60,749	100.0 %

The Company's fixed maturity portfolio includes structured securities. The following table shows the types of structured securities the Company held as of September 30, 2022 and December 31, 2021 (dollars in millions):

	September 30, 2022			December 31, 2021		
	Amortized Cost	Estimated Fair Value	% of Total	Amortized Cost	Estimated Fair Value	% of Total
RMBS:						
Agency	\$ 489	\$ 442	7.0 %	\$ 551	\$ 582	8.4 %
Non-agency	565	511	8.1	469	468	6.8
Total RMBS	1,054	953	15.1	1,020	1,050	15.2
ABS:						
Collateralized loan obligations ("CLOs")	1,788	1,650	26.0	1,761	1,752	25.4
ABS, excluding CLOs	2,377	2,073	32.6	2,263	2,253	32.6
Total ABS	4,165	3,723	58.6	4,024	4,005	58.0
CMBS	1,843	1,670	26.3	1,790	1,849	26.8
Total	\$ 7,062	\$ 6,346	100.0 %	\$ 6,834	\$ 6,904	100.0 %

The Company's RMBS portfolio includes agency-issued pass-through securities and collateralized mortgage obligations. Agency-issued pass-through securities are guaranteed or otherwise supported by the Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, or the Government National Mortgage Association. The principal risks inherent in holding RMBS are prepayment and extension risks, which will affect the timing of when cash will be received and are dependent on the level of mortgage interest rates. Prepayment risk is the unexpected increase in principal payments from the expected, primarily as a result of owner refinancing. Extension risk relates to the unexpected slowdown in principal payments from the expected. In addition, non-agency RMBS face credit risk should the borrower be unable to pay the contractual interest or principal on their obligation. The Company monitors its mortgage-backed securities to mitigate exposure to the cash flow uncertainties associated with these risks.

The Company's ABS portfolio primarily consists of CLOs, aircraft and single-family rentals. The principal risks in holding ABS are structural, credit, capital market and interest rate risks. Structural risks include the securities' cash flow priority in the capital structure and the inherent prepayment sensitivity of the underlying collateral. Credit risks include the adequacy and ability to realize proceeds from the collateral. Credit risks are mitigated by credit enhancements that include excess spread, over-collateralization and subordination. Capital market risks include general level of interest rates and the liquidity for these securities in the marketplace.

The Company's CMBS portfolio primarily consists of large pool securitizations that are diverse by property type, borrower and geographic dispersion. The principal risks in holding CMBS are structural and credit risks. Structural risks include the securities' cash flow priority in the capital structure and the inherent prepayment sensitivity of the underlying collateral. Credit risks include the adequacy and ability to realize proceeds from the collateral. The Company focuses on investment grade rated tranches that provide additional credit support beyond the equity protection in the underlying loans. These assets are viewed as an attractive alternative to other fixed income asset classes.

As of September 30, 2022 and December 31, 2021, the Company had \$7,795 million and \$349 million, respectively, of gross unrealized losses related to its fixed maturity securities. The Company monitors its fixed maturity securities to determine impairments in value and evaluates factors such as financial condition of the issuer, payment performance, compliance with covenants, general market and industry sector conditions, current intent and ability to hold securities, and various other subjective factors. Based on management's judgment an allowance for credit losses in the amount that fair value is less than the amortized cost is recorded for securities determined to have expected credit losses.

Mortgage Loans

The Company's mortgage loan portfolio consists of U.S., Canada and UK based investments primarily in commercial offices, light industrial properties and retail locations. The mortgage loan portfolio is diversified by geographic region and property type as discussed further under "Mortgage Loans" in Note 4 – "Investments" in the Notes to Condensed Consolidated Financial Statements. Most of the mortgage loans in the Company's portfolio range in size up to \$30 million, with the average mortgage loan investment as of September 30, 2022, totaling approximately \$9 million.

As of September 30, 2022 and December 31, 2021, the Company's recorded investment in mortgage loans, gross of unamortized deferred loan origination fees and expenses and allowance for credit losses, were distributed geographically as follows (dollars in millions):

	September 30, 2022		December 31, 2021	
	Recorded Investment	% of Total	Recorded Investment	% of Total
U.S. Region:				
West	\$ 2,377	36.0 %	\$ 2,270	36.0 %
South	2,257	34.1	2,135	33.7
Midwest	1,142	17.3	1,166	18.4
Northeast	479	7.2	419	6.6
Subtotal - U.S.	6,255	94.6	5,990	94.7
Canada	208	3.1	193	3.0
United Kingdom	150	2.3	144	2.3
Other	—	—	2	—
Total	\$ 6,613	100.0 %	\$ 6,329	100.0 %

See "Allowance for Credit Losses and Impairments" in Note 2 – "Significant Accounting Policies and Pronouncements" of the Company's 2021 Annual Report and "Mortgage Loans" in Note 4 – "Investments" in the Notes to Condensed Consolidated Financial Statements for information regarding the Company's policy for allowance for credit losses on mortgage loans.

Allowance for Credit Losses and Impairments

The Company's determination of whether a decline in value necessitates the recording of an allowance for credit losses includes an analysis of 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. See "Allowance for Credit Losses and Impairments" in Note 2 – "Significant Accounting Policies and Pronouncements" of the Company's 2021 Annual Report for additional information. The table below summarizes investment related gains (losses), net related to allowances for credit losses and impairments for the three and nine months ended September 30, 2022 and 2021 (dollars in millions).

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Change in allowance for credit losses on fixed maturity securities	\$ (3)	\$ 1	\$ 21	\$ (2)
Impairments on fixed maturity securities	12	—	15	—
Other impairment losses and changes in provision	1	2	1	—
Change in mortgage loan allowance for credit losses	5	(6)	8	(25)
Total	\$ 15	\$ (3)	\$ 45	\$ (27)

The decrease in allowance for credit losses and increase in impairments on fixed maturity securities for the three months ended September 30, 2022, corresponds to the reversal of previously recorded allowances due to intent to sell primarily related to high-yield securities. The increase in allowance for credit losses on fixed maturity securities for the nine months ended September 30, 2022, was primarily related to high yield securities. The increase in mortgage loan allowance for credit loss three and nine months ended September 30, 2022, reflects the impact of market conditions including occupancy rates.

See “Unrealized Losses for Fixed Maturity Securities Available-for-Sale” in Note 4 – “Investments” in the Notes to Condensed Consolidated Financial Statements for tables that present the estimated fair value and gross unrealized losses for securities that have estimated fair values below amortized cost, by class and grade, as well as the length of time the related estimated fair value has remained below amortized cost as of September 30, 2022 and December 31, 2021.

As of September 30, 2022 and December 31, 2021, the Company classified approximately 11.0% and 8.5%, respectively, of its fixed maturity securities in the Level 3 category (refer to Note 6 – “Fair Value of Assets and Liabilities” in the Notes to Condensed Consolidated Financial Statements for additional information). These securities primarily consist of private placement corporate and asset-backed securities.

See “Securities Borrowing, Lending and Repurchase/Reverse Repurchase Agreements” in Note 4 – “Investments” in the Notes to Condensed Consolidated Financial Statements for information related to the Company’s securities borrowing, lending and repurchase/reverse repurchase agreements.

Funds Withheld at Interest

For reinsurance agreements written on a modified coinsurance basis and certain agreements written on a coinsurance 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 by the ceding company. Interest accrues to the total funds withheld at interest assets at rates defined by the treaty terms. The Company is subject to the investment performance on the withheld assets, although it does not directly control them. These assets are primarily fixed maturity investment securities and pose risks similar to the fixed maturity securities the Company owns. To mitigate this risk, the Company helps set the investment guidelines followed by the ceding company and monitors compliance. Ceding companies with funds withheld at interest had an average financial strength rating of “A” as of September 30, 2022 and December 31, 2021. Certain ceding companies maintain segregated portfolios for the benefit of the Company.

Other Invested Assets

Other invested assets include limited partnership interests, joint ventures (other than operating joint ventures), lifetime mortgages, derivative contracts, FHLB common stock and unit-linked investments. See “Other Invested Assets” in Note 4 – “Investments” in the Notes to Condensed Consolidated Financial Statements for a table that presents the carrying value of the Company’s other invested assets by type as of September 30, 2022 and December 31, 2021.

The Company utilizes derivative financial instruments to protect the Company against possible changes in the fair value of its investment portfolio as a result of interest rate changes, to hedge against risk of changes in the purchase price of securities, to hedge liabilities associated with the reinsurance of variable annuities with guaranteed living benefits and to manage the portfolio’s effective yield, maturity and duration. In addition, the Company utilizes derivative financial instruments to reduce the risk associated with fluctuations in foreign currency exchange rates. The Company uses exchange-traded, centrally cleared, and customized over-the-counter derivative financial instruments.

See Note 5 – “Derivative Instruments” in the Notes to Condensed Consolidated Financial Statements for a table that presents the notional amounts and fair value of investment related derivative instruments held as of September 30, 2022 and December 31, 2021.

The Company may be exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments. Generally, the credit exposure of the Company’s derivative contracts is limited to the fair value and accrued interest of non-collateralized derivative contracts in an asset position at the reporting date. As of September 30, 2022, the Company had credit exposure of \$14 million.

The Company manages its credit risk related to over-the-counter derivatives by entering into transactions with creditworthy counterparties, maintaining collateral arrangements and through the use of master agreements that provide for a single net payment to be made by one counterparty to another at each due date and upon termination. 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. See Note 5 – “Derivative Instruments” in the Notes to Condensed Consolidated Financial Statements for more information regarding the Company’s derivative instruments.

The Company holds \$786 million and \$758 million of beneficial interest in lifetime mortgages in the UK, net of allowance for credit losses as of September 30, 2022 and December 31, 2021, respectively. Investment income includes \$9 million and \$15 million in interest income earned on lifetime mortgages for the three months ended September 30, 2022 and 2021, respectively, and \$28 million and \$41 million in interest income earned on lifetime mortgages for the nine months ended September 30, 2022 and 2021, respectively. Lifetime mortgages represent loans provided to individuals 55 years of age and older secured by the

borrower's residence. Lifetime mortgages are comparable to a home equity loan by allowing the borrower to utilize the equity in their home as collateral. The amount of the loan is dependent on the appraised value of the home at the time of origination, the borrower's age and interest rate. Unlike a home equity loan, no payment of principal or interest is required until the death of the borrower or sale of the home. Lifetime mortgages may also be either fully funded at origination, or the borrower can request periodic funding similar to a line of credit. Lifetime mortgages are subject to risks, including market, credit, interest rate, liquidity, operational, reputational and legal risks.

New Accounting Standards

Changes to the general accounting principles are established by the Financial Accounting Standards Board ("FASB") in the form of accounting standards updates to the FASB Accounting Standards Codification™.

Financial Services – Insurance

In August 2018, the FASB issued amendments that will significantly change the recognition and measurement of long-duration insurance contracts and expand disclosure requirements. The guidance is effective for the Company on January 1, 2023. The Company established a team to support the implementation of the updated guidance, which requires significant changes to policies, reporting and processes. The Company's achievements as of the balance sheet date include, but are not limited to, the following:

- Established preliminary key accounting policies;
- Updated chart of accounts to support enhanced financial statement presentation and disclosures;
- Implemented a data management system and process for grouping treaties into cohorts;
- Established valuation analytics and reporting foundation;
- Established an assumption governance process for assumption review, changes and approvals; and
- Conducted dry runs and end to end system testing.

The Company continues to make progress on the following items (includes, but not limited to):

- Evaluating and finalizing key accounting policies;
- Evaluating the impact to the consolidated financial statements at transition;
- Determining and documenting key risks and appropriate internal controls; and
- Conducting parallel valuation runs.

See Note 14 – "New Accounting Standards" in the Notes to Condensed Consolidated Financial Statements for additional information on new accounting pronouncements and their impact, if any, on the Company's results of operations and financial position.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

Market risk is the risk of fluctuations in the value of financial instruments as a result of absolute or relative changes in interest rates, foreign currency exchange rates, equity prices or commodity prices. To varying degrees, the Company products and services, and the investment activities supporting them, generate exposure to market risk. The market risk incurred, and the Company's strategies for managing this risk, vary by product. As of September 30, 2022, there have been no material changes in the Company's economic exposure to market risk or the Company's Enterprise Risk Management function from December 31, 2021, a description of which may be found in its Annual Report on Form 10-K, for the year ended December 31, 2021, Item 7A, "Quantitative and Qualitative Disclosures about Market Risk," filed with the Securities and Exchange Commission.

ITEM 4. Controls and Procedures

The Chief Executive Officer and the Chief Financial Officer have evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures as defined in Exchange Act Rule 13a-15(e) as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective.

There was no change in the Company's internal control over financial reporting as defined in Exchange Act Rule 13a-15(f) during the quarter ended September 30, 2022, that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II - OTHER INFORMATION**ITEM 1. Legal Proceedings**

The Company is subject to litigation in the normal course of its business. The Company currently has no material litigation. A legal reserve is established when the Company is notified of an arbitration demand or litigation or is notified that an arbitration demand or litigation is imminent, it is probable that the Company will incur a loss as a result and the amount of the probable loss is reasonably capable of being estimated.

ITEM 1A. Risk Factors

There have been no material changes from the risk factors previously disclosed in the Company's 2021 Annual Report.

ITEM 2. Unregistered Sales of Equity Securities and Use of ProceedsIssuer Purchases of Equity Securities

The following table summarizes RGA's repurchase activity of its common stock during the quarter ended September 30, 2022:

	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs ⁽¹⁾	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plan or Program
July 1, 2022 – July 31, 2022	—	\$ —	—	\$ 400,000,000
August 1, 2022 – August 31, 2022	204,103	\$ 128.05	195,234	\$ 375,000,364
September 1, 2022 – September 30, 2022	1,163	\$ 129.55	—	\$ 375,000,364

(1) RGA had 195,234 repurchases of common stock under its share repurchase program in August 2022. The Company net settled – issuing 22,426 and 2,450 shares from treasury and repurchased from recipients 8,869 and 1,163 shares in August and September 2022, respectively, in settlement of income tax withholding requirements incurred by the recipients of equity incentive awards.

On January 24, 2019, RGA's board of directors authorized a share repurchase program for up to \$400 million of RGA's outstanding common stock. During the nine months ended September 30, 2022, RGA repurchased 219,116 shares of common stock under this program for \$25 million.

On February 25, 2022, RGA's board of directors authorized a share repurchase program for up to \$400 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. During the nine months ended September 30, 2022, RGA repurchase 195,234 shares of common stock under this program for \$25 million.

The pace of repurchase activity depends on various factors such as the level of available cash, an evaluation of the costs and benefits associated with alternative uses of excess capital, such as acquisitions and in force reinsurance transactions, and RGA's stock price.

ITEM 6. Exhibits

See index to exhibits.

INDEX TO EXHIBITS

<u>Exhibit Number</u>	<u>Description</u>
3.1	Amended and Restated Articles of Incorporation, effective as of May 21, 2020, incorporated by reference to Exhibit 3.1(i) to Current Report on Form 8-K filed on May 22, 2020.
3.2	Amended and Restated Bylaws, effective as of May 23, 2018, incorporated by reference to Exhibit 3.2 to Current Report on Form 8-K filed on May 24, 2018.
4.1	Seventh Supplemental Indenture, dated as of September 23, 2022, between the Company and the Bank of New York Mellon Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 4.2 of the Company's Form 8-A Registration Statement Filed on September 23, 2022).
4.2	Form of 7.125% Fixed-Rate Reset Subordinated Debenture due 2052 (incorporated by reference from Exhibit A to the Seventh Supplemental Indenture filed as Exhibit A to the Seventh Supplemental Indenture filed as Exhibit 4.2 of the Company 4.2 of the Company's Form 8-A Registration Statement filed on September 23, 2022).
31.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibits 101).

SIGNATURES

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

Reinsurance Group of America, Incorporated

Date: November 4, 2022

By: /s/ Anna Manning
Anna Manning
President & Chief Executive Officer
(Principal Executive Officer)

Date: November 4, 2022

By: /s/ Todd C. Larson
Todd C. Larson
Senior Executive Vice President & Chief Financial Officer
(Principal Financial and Accounting Officer)

CEO CERTIFICATION

I, Anna Manning, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Reinsurance Group of America, Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 4, 2022

/s/ Anna Manning
Anna Manning
President & Chief Executive Officer

CFO CERTIFICATION

I, Todd C. Larson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Reinsurance Group of America, Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 4, 2022

/s/ Todd C. Larson
Todd C. Larson
Senior Executive Vice President
& Chief Financial Officer

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

In connection with the Quarterly Report on Form 10-Q of Reinsurance Group of America, Incorporated and subsidiaries, (the “Company”), for the quarterly period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Anna Manning, Chief Executive Officer of the Company, certifies, to her best knowledge and belief, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 4, 2022

/s/ Anna Manning

Anna Manning

President & Chief Executive Officer

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

In connection with the Quarterly Report on Form 10-Q of Reinsurance Group of America, Incorporated and subsidiaries, (the “Company”), for the quarterly period ended September 30, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Todd C. Larson, Chief Financial Officer of the Company, certifies, to his best knowledge and belief, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 4, 2022

/s/ Todd C. Larson
Todd C. Larson
Chief Financial Officer
& Senior Executive Vice President