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 June 30, 2020
OR
☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)**
OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File Number 1-11848

REINSURANCE GROUP OF AMERICA, INCORPORATED
(Exact name of Registrant as specified in its charter)

Missouri	**43-1627032**
(State or other jurisdiction of incorporation or organization)	**(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 x **No** o

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** o

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 x **Accelerated filer** o **Non-accelerated filer** o
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:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
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

As of July 31, 2020, 67,935,859 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)

	June 30, 2020	December 31, 2019
	(Dollars in millions, except share data)	
Assets		
Fixed maturity securities available-for-sale, at fair value (amortized cost $46,903 and $46,753; allowance for credit losses of $33 at June 30, 2020)	$ 52,346	$ 51,121
Equity securities, at fair value	130	320
Mortgage loans on real estate (net of allowances of $56 and $12)	5,974	5,706
Policy loans	1,310	1,319
Funds withheld at interest	5,250	5,662
Short-term investments	84	64
Other invested assets	2,547	2,363
Total investments	67,641	66,555
Cash and cash equivalents	4,313	1,449
Accrued investment income	494	493
Premiums receivable and other reinsurance balances	2,852	2,940
Reinsurance ceded receivables	945	904
Deferred policy acquisition costs	3,565	3,512
Other assets	919	878
Total assets	$ 80,729	$ 76,731
Liabilities and Stockholders' Equity		
Future policy benefits	$ 29,897	$ 28,672
Interest-sensitive contract liabilities	23,118	22,711
Other policy claims and benefits	6,232	5,711
Other reinsurance balances	510	557
Deferred income taxes	2,856	2,712
Other liabilities	1,557	1,188
Long-term debt	3,573	2,981
Collateral finance and securitization notes	433	598
Total liabilities	68,176	65,130
Commitments and contingent liabilities (See Note 8)		
Stockholders' Equity:		
Preferred stock – par value $.01 per share, 10,000,000 shares authorized, no shares issued or outstanding	—	—
Common stock – par value $.01 per share, 140,000,000 shares authorized, 85,310,598 shares issued at June 30, 2020 and 79,137,758 shares issued at December 31, 2019	1	1
Additional paid-in capital	2,413	1,937
Retained earnings	7,901	7,952
Treasury stock, at cost – 17,374,739 and 16,481,656 shares	(1,563)	(1,426)
Accumulated other comprehensive income	3,801	3,137
Total stockholders' equity	12,553	11,601
Total liabilities and stockholders' equity	$ 80,729	$ 76,731

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 June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Revenues:	(Dollars in millions, except per share data)			
Net premiums	$ 2,790	$ 2,764	$ 5,609	$ 5,502
Investment income, net of related expenses	645	584	1,239	1,164
Investment related gains (losses), net:				
Impairments and change in allowance for credit losses on fixed maturity securities	—	—	(34)	(9)
Other investment related gains (losses), net	81	12	(170)	29
Total investment related gains (losses), net	81	12	(204)	20
Other revenues	90	107	166	201
Total revenues	3,606	3,467	6,810	6,887
Benefits and Expenses:				
Claims and other policy benefits	2,700	2,516	5,364	5,024
Interest credited	187	158	333	291
Policy acquisition costs and other insurance expenses	290	260	538	572
Other operating expenses	188	222	383	424
Interest expense	42	43	83	83
Collateral finance and securitization expense	4	8	10	16
Total benefits and expenses	3,411	3,207	6,711	6,410
Income before income taxes	195	260	99	477
Provision for income taxes	37	58	29	105
Net income	$ 158	$ 202	$ 70	$ 372
Earnings per share:				
Basic earnings per share	$ 2.49	$ 3.23	$ 1.12	$ 5.93
Diluted earnings per share	$ 2.48	$ 3.18	$ 1.11	$ 5.83

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 June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Comprehensive income (loss)	(Dollars in millions)			
Net income	$ 158	$ 202	$ 70	$ 372
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustments	13	25	(118)	46
Net unrealized investment gains (losses)	2,663	851	790	1,960
Defined benefit pension and postretirement plan adjustments	(5)	—	(8)	—
Total other comprehensive income (loss), net of tax	2,671	876	664	2,006
Total comprehensive income (loss)	$ 2,829	$ 1,078	$ 734	$ 2,378

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

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

	Three months ended June 30, 2020 and 2019					
	Common Stock	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income	Total
Balance, March 31, 2020	$ 1	$ 1,942	$ 7,802	$ (1,574)	$ 1,130	9,301
Net income			158			158
Total other comprehensive income (loss)					2,671	2,671
Dividends to stockholders, $0.70 per share			(43)			(43)
Issuance of common stock, net of expenses		481				481
Purchase of treasury stock				(6)		(6)
Reissuance of treasury stock		(10)	(16)	17		(9)
Balance, June 30, 2020	$ 1	$ 2,413	$ 7,901	$ (1,563)	$ 3,801	$ 12,553
Balance, March 31, 2019	$ 1	$ 1,906	$ 7,412	$ (1,415)	$ 1,766	9,670
Net income			202			202
Total other comprehensive income (loss)					876	876
Dividends to stockholders, $0.60 per share			(38)			(38)
Purchase of treasury stock				(19)		(19)
Reissuance of treasury stock		14	(26)	30		18
Balance, June 30, 2019	$ 1	$ 1,920	$ 7,550	$ (1,404)	$ 2,642	$ 10,709

	Six months ended June 30, 2020 and 2019					
	Common Stock	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income	Total
Balance, December 31, 2019	$ 1	$ 1,937	$ 7,952	$ (1,426)	$ 3,137	11,601
Adoption of new accounting standards			(12)			(12)
Net income			70			70
Total other comprehensive income (loss)					664	664
Dividends to stockholders, $1.40 per share			(87)			(87)
Issuance of common stock, net of expenses		481				481
Purchase of treasury stock				(162)		(162)
Reissuance of treasury stock		(5)	(22)	25		(2)
Balance, June 30, 2020	$ 1	$ 2,413	$ 7,901	$ (1,563)	$ 3,801	$ 12,553
Balance, December 31, 2018	$ 1	$ 1,899	$ 7,285	$ (1,371)	$ 636	$ 8,450
Adoption of new accounting standards						—
Net income			372			372
Total other comprehensive income (loss)					2,006	2,006
Dividends to stockholders, $1.20 per share			(75)			(75)
Purchase of treasury stock				(68)		(68)
Reissuance of treasury stock		21	(32)	35		24
Balance, June 30, 2019	$ 1	$ 1,920	$ 7,550	$ (1,404)	$ 2,642	$ 10,709

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

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

	Six months ended June 30,	
	2020	2019
	(Dollars in millions)	
Cash Flows from Operating Activities:		
Net income	$ 70	$ 372
Adjustments to reconcile net income to net cash provided by operating activities:		
Change in operating assets and liabilities:		
Accrued investment income	(9)	(12)
Premiums receivable and other reinsurance balances	24	85
Deferred policy acquisition costs	(107)	(115)
Reinsurance ceded receivable balances	(32)	(109)
Future policy benefits, other policy claims and benefits, and other reinsurance balances	2,360	736
Deferred income taxes	(88)	92
Other assets and other liabilities, net	38	(122)
Amortization of net investment premiums, discounts and other	(24)	(34)
Depreciation and amortization expense	23	22
Investment related (gains) losses, net	204	(20)
Other, net	120	75
Net cash provided by operating activities	2,579	970
Cash Flows from Investing Activities:		
Sales of fixed maturity securities available-for-sale	3,835	5,097
Maturities of fixed maturity securities available-for-sale	406	439
Sales of equity securities	180	—
Principal payments and sales of mortgage loans on real estate	283	166
Principal payments on policy loans	15	44
Purchases of fixed maturity securities available-for-sale	(4,875)	(5,689)
Purchases of equity securities	(21)	(57)
Cash invested in mortgage loans on real estate	(604)	(598)
Cash invested in policy loans	(6)	(5)
Cash invested in funds withheld at interest	(49)	(54)
Purchase of businesses, net of cash acquired of $27	—	4
Purchases of property and equipment	(11)	(18)
Change in short-term investments	(19)	67
Change in other invested assets	(158)	(160)
Net cash used in investing activities	(1,024)	(764)
Cash Flows from Financing Activities:		
Dividends to stockholders	(87)	(75)
Proceeds from issuance of common stock, net	481	—
Repayment of collateral finance and securitization notes	(160)	(53)
Proceeds from long-term debt issuance	598	599
Debt issuance costs	(5)	(5)
Principal payments of long-term debt	(1)	(1)
Purchases of treasury stock	(162)	(68)
Exercise of stock options, net	1	2
Change in cash collateral for derivative positions and other arrangements	93	(80)
Deposits on universal life and other investment type policies and contracts	1,004	256
Withdrawals on universal life and other investment type policies and contracts	(429)	(390)
Net cash provided by financing activities	1,333	185
Effect of exchange rate changes on cash	(24)	7
Change in cash and cash equivalents	2,864	398
Cash and cash equivalents, beginning of period	1,449	1,890
Cash and cash equivalents, end of period	$ 4,313	$ 2,288
Supplemental disclosures of cash flow information:		
Interest paid	$ 80	$ 86
Income taxes (received) paid, net of refunds	$ (12)	$ 23
Non-cash investing activities:		

Transfer of invested assets	$	—	$	3,421
Right-of-use assets acquired through operating leases	$	—	$	1
Purchase of businesses:				
Assets acquired, excluding cash acquired	$	—	$	8
Liabilities assumed		—		(12)
Net cash received on purchase	$	—	$	(4)

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 2019 Annual Report on Form 10-K filed with the SEC on February 27, 2020 (the "2019 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, 2020.

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.

Significant Accounting Policies – Update

The Company's significant accounting policies are discussed in Note 2 – "Significant Accounting Policies and Pronouncements" of the 2019 Annual Report. The significant accounting policies discussed below reflect the impact of the adoption of *Financial Instruments - Credit Losses* on January 1, 2020.

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

Beginning on January 1, 2020, credit losses are recognized through an allowance account. The Company identifies fixed maturity securities that could potentially have an allowance for credit losses by monitoring market events that could impact issuers' credit ratings, business climates, management changes, litigation, government actions and other similar factors. The Company also monitors late payments, pricing levels, rating agency actions, key financial ratios, financial statements, revenue forecasts and cash flow projections as indicators of credit issues.

The Company reviews all securities on a case-by-case basis to determine whether a decline in value exists and whether an allowance for credit losses or impairment for non-credit losses should be recognized. The Company considers relevant facts and circumstances in evaluating whether a security is impaired due to credit or non-credit components. Relevant facts and circumstances considered include: (1) the reasons for the decline in fair value; (2) the issuer's financial position and access to capital; and (3) the Company's intent to sell a security or whether it is more likely than not it will be required to sell the security before the recovery of its amortized cost that, in some cases, may extend to maturity. To the extent the Company determines a security is deemed to be impaired, an allowance is recorded for credit losses and an impairment loss is recognized in accumulated other comprehensive income ("AOCI") for non-credit losses.

Impairment losses on fixed maturity securities recognized in the financial statements are dependent on the facts and circumstances related to the specific security. If the Company intends to sell a security or it is more likely than not that it would be required to sell a security before the recovery of its amortized cost, less any recorded credit loss, it recognizes an impairment loss in investment related gains (losses), net on the condensed consolidated statements of income for the difference between amortized cost and fair value.

The Company estimates the amount of the credit loss component of a fixed maturity security impairment as the difference between amortized cost and the present value of the expected cash flows of the security. The Company excludes accrued interest from the amortized cost and the present value of the expected cash flows of the security. The present value is determined using the best estimate cash flows discounted at the effective interest rate implicit to the security at the date of purchase or the current yield to accrete an asset-backed or floating rate security. The techniques and assumptions for establishing the best estimate cash flows vary depending on the type of security. The asset-backed securities' cash flow estimates are based on security-specific facts and circumstances that may include collateral characteristics, expectations of delinquency and default rates, loss severity and prepayment speeds and structural support, including subordination and guarantees. The corporate fixed maturity security cash flow estimates are derived from scenario-based outcomes of expected corporate restructurings or the disposition of assets using security specific facts and circumstances including timing, security interests and loss severity.

The Company writes off uncollectible fixed maturity securities when (1) it has sufficient information to determine that the issuer of the security is insolvent or (2) it has received notice that the issuer of the security has filed for bankruptcy, and the collectability of the asset is expected to be adversely impacted by the bankruptcy.

In periods after an impairment loss is recognized for non-credit loss components on a fixed maturity security, the Company will report the impaired security as if it had been purchased on the date it was impaired and will continue to estimate the present value of the estimated cash flows of the security. Accordingly, the discount (or reduced premium) based on the new cost basis is accreted into net investment income over the remaining term of the fixed maturity security in a prospective manner based on the amount and timing of estimated future cash flows.

Impairments – Other Invested Assets

The Company considers its cost method investments for impairment when the carrying value of these investments exceeds the net asset value. The Company takes into consideration the severity and duration of this excess when deciding if the cost method investment is impaired. For equity method investments (including real estate joint ventures), the Company considers financial and other information provided by the investee, other known information and inherent risks in the underlying investments, as well as future capital commitments, in determining whether an impairment has occurred.

Mortgage Loans on Real Estate

Mortgage loans on real estate are carried at unpaid principal balances, net of any unamortized premium or discount and valuation allowances. Interest income is accrued on the principal amount of the mortgage loan based on its contractual interest rate. Amortization of premiums and discounts is recorded using the effective yield method. The Company accrues interest on loans until it is probable the Company will not receive interest, or the loan is 90 days past due. Interest income, amortization of premiums, accretion of discounts and prepayment fees are reported in investment income, net of related expenses in the condensed consolidated statements of income.

Valuation allowances on mortgage loans are computed on an expected loss basis using a model that utilizes probability of default and loss given default methods over the lifetime of the loan. Accrued interest is excluded from the calculation of valuation allowances. Within the reasonable and supportable forecast period (i.e. typically two years), valuation allowances for mortgage loans are established based on several pool-level loan assumptions, defaults and loss severity, loss expectations for loans with similar risk characteristics and industry statistics. These evaluations are revised as conditions change and new information becomes available. The model also includes the impact of expected changes in future macro-economic conditions. The Company reverts to historical loss information for periods beyond which it believes it is able to develop or obtain reasonable and supportable forecasts of future economic conditions.

A mortgage loan is considered to be impaired when, based on the current information and events, it is probable the Company will be unable to collect all amounts due according to the contractual terms of the mortgage agreement. Although all available and applicable factors are considered in the Company's analysis, loan-to-value and debt service coverage ratios are the most critical factors in determining impairment. Impairments are based on the excess carrying value of the loan over the present value of expected future cash flows discounted at the loan's original effective interest rate, the value of the loan's collateral if the loan is in the process of foreclosure or is otherwise collateral-dependent, or the loan's market value if the loan is being sold.

Any interest accrued or received on the net carrying amount of the impaired loan will be included in investment income or applied to the principal of the loan, depending on the assessment of the collectability of the loan. Mortgage loans deemed to be uncollectible or that have been foreclosed are charged off against the valuation allowances and subsequent recoveries, if any, are credited to the valuation allowances. Changes in valuation allowances are reported in investment related gains (losses), net on the condensed consolidated statements of income.

The Company evaluates whether a mortgage loan modification represents a troubled debt restructuring. In a troubled debt restructuring, the Company grants concessions related to the borrower's financial difficulties. Generally, the types of concessions include: reduction of the contractual interest rate, extension of the maturity date at an interest rate lower than current market interest rates and/or a reduction of accrued interest. The Company considers the amount, timing and extent of the concession granted in determining any impairment or changes in the specific valuation allowance recorded in connection with the troubled debt restructuring. Through the continuous monitoring process, the Company may have recorded a specific valuation allowance prior to when the mortgage loan is modified in a troubled debt restructuring. Accordingly, the carrying value (after specific valuation allowance) before and after modification through a troubled debt restructuring may not change significantly, or may increase if the expected recovery is higher than the pre-modification recovery assessment.

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 June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Earnings:				
Net income	$ 158	$ 202	$ 70	$ 372
Shares:				
Weighted average outstanding shares	63	63	63	63
Equivalent shares from outstanding stock options	1	1	1	1
Denominator for diluted calculation	64	64	64	64
Earnings per share:				
Basic	$ 2.49	$ 3.23	$ 1.12	$ 5.93
Diluted	$ 2.48	$ 3.18	$ 1.11	$ 5.83

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

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Excluded from common equivalent shares:				
Stock options	1,638	250	1,200	420
Performance contingent shares	96	242	130	171

3. Equity

On June 5, 2020, the Company completed a public offering of 6,172,840 shares of common stock, $0.01 par value per share, at a public offering price of $81.00 per share. The Company received net proceeds of approximately $481 million. The Company granted the Underwriters an option to purchase from the Company, within 30 days after the Underwriting Agreement dated June 2, 2020, up to an additional 925,926 shares of common stock at the offering price of $81.00 per share. The Underwriters' option was not exercised and expired on July 2, 2020. The Company anticipates using the net proceeds of the offering for general corporate purposes.

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, 2019	79,137,758	16,481,656	62,656,102
Issuance of common stock	6,172,840	—	6,172,840
Common stock acquired	—	1,074,413	(1,074,413)
Stock-based compensation (1)	—	(181,330)	181,330
Balance, June 30, 2020	85,310,598	17,374,739	67,935,859

	Issued	Held In Treasury	Outstanding
Balance, December 31, 2018	79,137,758	16,323,390	62,814,368
Common stock acquired	—	344,237	(344,237)
Stock-based compensation (1)	—	(288,360)	288,360
Balance, June 30, 2019	79,137,758	16,379,267	62,758,491

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

Common Stock Held in Treasury

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

In January 2019, RGA's board of directors authorized a 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. During the first six months of 2020, RGA repurchased 1,074,413 shares of common stock under this program for $153 million. During the first six months of 2019, RGA repurchased 344,237 shares of common stock under this program for $50 million. On May 6, 2020, the Company announced that it has suspended stock repurchases until further notice.

Accumulated Other Comprehensive Income (Loss)

The balance of and changes in each component of accumulated other comprehensive income (loss) ("AOCI") for the six months ended June 30, 2020 and 2019 are as follows (dollars in millions):

	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments(1)	Pension and Postretirement Benefits	Total
Balance, December 31, 2019	$ (92)	$ 3,299	$ (70)	$ 3,137
Other comprehensive income (loss) before reclassifications	(116)	1,034	(12)	906
Amounts reclassified to (from) AOCI	—	—	2	2
Deferred income tax benefit (expense)	(2)	(244)	2	(244)
Balance, June 30, 2020	$ (210)	$ 4,089	$ (78)	$ 3,801

	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments(1)	Pension and Postretirement Benefits	Total
Balance, December 31, 2018	$ (169)	$ 856	$ (51)	$ 636
Other comprehensive income (loss) before reclassifications	44	2,617	(3)	2,658
Amounts reclassified to (from) AOCI	—	(98)	3	(95)
Deferred income tax benefit (expense)	2	(559)	—	(557)
Balance, June 30, 2019	$ (123)	$ 2,816	$ (51)	$ 2,642

(1) Includes cash flow hedges of $(74) and $(26) as of June 30, 2020 and December 31, 2019, respectively, and $(15) and $9 as of June 30, 2019 and December 31, 2018, respectively. See Note 5 – "Derivative Instruments" for additional information on cash flow hedges.

The following table presents the amounts of AOCI reclassifications for the three and six months ended June 30, 2020 and 2019 (dollars in millions):

	Amount Reclassified from AOCI				
	Three months ended June 30,		Six months ended June 30,		
Details about AOCI Components	2020	2019	2020	2019	Affected Line Item in Statements of Income
Net unrealized investment gains (losses):					
Net unrealized gains (losses) on available-for-sale securities	$ 11	$ 20	$ (28)	$ 20	Investment related gains (losses), net
Cash flow hedges – Interest rate	(1)	—	(1)	1	(1)
Cash flow hedges – Currency/Interest rate	—	—	—	—	(1)
Deferred policy acquisition costs attributed to unrealized gains and losses	131	63	29	77	(2)
Total	141	83	—	98	
Provision for income taxes	(29)	(17)	(2)	(20)	
Net unrealized gains (losses), net of tax	$ 112	$ 66	$ (2)	$ 78	
Amortization of defined benefit plan items:					
Prior service (cost) credit	$ 1	$ 1	$ 1	$ 1	(3)
Actuarial gains (losses)	(2)	(1)	(3)	(3)	(3)
Total	(1)	—	(2)	(2)	
Provision for income taxes	—	—	—	1	
Amortization of defined benefit plans, net of tax	$ (1)	$ —	$ (2)	$ (1)	
Total reclassifications for the period	$ 111	$ 66	$ (4)	$ 77	

(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 2019 Annual Report for additional details.
(3) This AOCI component is included in the computation of the net periodic benefit cost. See Note 10 – “Employee Benefit Plans” for additional details.

Equity Based Compensation

Equity compensation expense was $(5) million and $21 million in the first six months of 2020 and 2019, respectively. In the first quarter of 2020, the Company granted 456,301 stock appreciation rights at $117.85 weighted average exercise price per share, 175,047 performance contingent units and 30,129 restricted stock units to employees. Additionally, non-employee directors were granted a total of 16,665 shares of common stock. As of June 30, 2020, 1,267,427 share options at a weighted average strike price per share of $87.69 were vested and exercisable, with a remaining weighted average exercise period of 4.4 years. As of June 30, 2020, the total compensation cost of non-vested awards not yet recognized in the condensed consolidated financial statements was $29 million. It is estimated that these costs will vest over a weighted average period of 1.0 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 June 30, 2020 and December 31, 2019 (dollars in millions):

June 30, 2020:	Amortized Cost	Allowance for Credit Losses	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total	Impairments in AOCI
Available-for-sale:							
Corporate	$ 29,785	$ 32	$ 3,071	$ 254	$ 32,570	62.3%	$ —
Canadian government	2,917	—	1,941	—	4,858	9.3	—
RMBS	1,962	—	104	1	2,065	3.9	—
ABS	2,798	—	20	87	2,731	5.2	—
CMBS	1,850	—	42	41	1,851	3.5	—
U.S. government	1,395	—	244	—	1,639	3.1	—
State and political subdivisions	1,056	—	135	7	1,184	2.3	—
Other foreign government	5,140	1	367	58	5,448	10.4	—
Total fixed maturity securities	$ 46,903	$ 33	$ 5,924	$ 448	$ 52,346	100.0%	$ —

December 31, 2019:	Amortized Cost	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total	Impairments in AOCI
Available-for-sale:						
Corporate	$ 29,205	$ 2,269	$ 81	$ 31,393	61.4%	$ —
Canadian government	3,016	1,596	—	4,612	9.0	—
RMBS	2,339	62	3	2,398	4.7	—
ABS	2,973	19	14	2,978	5.8	—
CMBS	1,841	61	3	1,899	3.7	—
U.S. government	2,096	57	1	2,152	4.2	—
State and political subdivisions	1,074	93	3	1,164	2.3	—
Other foreign government	4,209	321	5	4,525	8.9	—
Total fixed maturity securities	$ 46,753	$ 4,478	$ 110	$ 51,121	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 June 30, 2020 and December 31, 2019, 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 June 30, 2020 and December 31, 2019 (dollars in millions):

	June 30, 2020		December 31, 2019	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities pledged as collateral	$ 136	$ 148	$ 113	$ 116
Fixed maturity securities received as collateral	n/a	1,206	n/a	727
Assets in trust held to satisfy collateral requirements	27,353	29,726	27,290	29,239

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 stockholders' equity included securities of the U.S. government and its agencies as well as the securities disclosed below as of June 30, 2020 and December 31, 2019 (dollars in millions).

	June 30, 2020		December 31, 2019	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities guaranteed or issued by:				
Government of Japan	$ 1,566	$ 1,555	$ 813	$ 852
Canadian province of Quebec	1,187	2,332	1,205	2,163
Canadian province of Ontario	980	1,436	1,014	1,379

The amortized cost and estimated fair value of fixed maturity securities classified as available-for-sale as of June 30, 2020, 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	$ 1,453	$ 1,454
Due after one year through five years	8,028	8,412
Due after five years through ten years	10,013	10,979
Due after ten years	20,799	24,854
Structured securities	6,610	6,647
Total	$ 46,903	$ 52,346

Corporate Fixed Maturity Securities

The tables below show the major sectors of the Company's corporate fixed maturity holdings as of June 30, 2020 and December 31, 2019 (dollars in millions):

June 30, 2020:	Amortized Cost	Estimated Fair Value	% of Total
Finance	$ 11,189	$ 12,127	37.2%
Industrial	14,962	16,316	50.1
Utility	3,634	4,127	12.7
Total	$ 29,785	$ 32,570	100.0%

December 31, 2019:	Amortized Cost	Estimated Fair Value	% of Total
Finance	$ 10,896	$ 11,653	37.2%
Industrial	14,692	15,803	50.3
Utility	3,617	3,937	12.5
Total	$ 29,205	$ 31,393	100.0%

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

As discussed in Note 1 – "Business and Basis of Presentation," allowances for credit losses on fixed maturity securities are recognized in investment related gains (losses), net on the condensed consolidated statements of income. For these securities, the net 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 AOCI.

The following table presents the rollforward of the allowance for credit losses in fixed maturity securities by type for the six months ended June 30, 2020 (dollars in millions):

	Corporate	Other Foreign Government	Total
Balance, beginning of period	$ —	$ —	$ —
Credit losses recognized on securities for which credit losses were not previously recorded	40	2	42
Reductions for securities sold during the period	(8)	(1)	(9)
Balance, end of period	$ 32	$ 1	$ 33

Unrealized Losses for Fixed Maturity Securities Available-for-Sale

The following table presents the total gross unrealized losses for the 1,477 and 1,072 fixed maturity securities as of June 30, 2020 and December 31, 2019, where the estimated fair value had declined and remained below amortized cost by the indicated amount (dollars in millions):

	June 30, 2020		December 31, 2019	
	Gross Unrealized Losses	% of Total	Gross Unrealized Losses	% of Total
Less than 20%	$ 348	77.7%	$ 76	69.1%
20% or more for less than six months	91	20.3	20	18.2
20% or more for six months or greater	9	2.0	14	12.7
Total	$ 448	100.0%	$ 110	100.0%

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 values and gross unrealized losses for fixed maturity securities that have estimated fair values below amortized cost as of June 30, 2020 and December 31, 2019 (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 remained below amortized cost.

	Less than 12 months		12 months or greater		Total	
June 30, 2020:	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Investment grade securities:						
Corporate	$ 2,359	$ 125	$ 67	$ 9	$ 2,426	$ 134
RMBS	—	—	28	1	28	1
ABS	1,425	53	558	29	1,983	82
CMBS	690	37	13	1	703	38
U.S. government	—	—	—	—	—	—
State and political subdivisions	59	5	12	2	71	7
Other foreign government	1,073	47	—	—	1,073	47
Total investment grade securities	5,606	267	678	42	6,284	309
Below investment grade securities:						
Corporate	780	114	53	6	833	120
ABS	20	5	—	—	20	5
CMBS	23	3	—	—	23	3
Other foreign government	103	8	12	3	115	11
Total below investment grade securities	926	130	65	9	991	139
Total fixed maturity securities	$ 6,532	$ 397	$ 743	$ 51	$ 7,275	$ 448

	Less than 12 months		12 months or greater		Total	
December 31, 2019:	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Investment grade securities:						
Corporate	$ 1,936	$ 29	$ 293	$ 7	$ 2,229	$ 36
RMBS	367	2	84	1	451	3
ABS	773	5	739	9	1,512	14
CMBS	253	3	—	—	253	3
U.S. government	49	1	—	—	49	1
State and political subdivisions	103	2	12	1	115	3
Other foreign government	278	4	—	—	278	4
Total investment grade securities	3,759	46	1,128	18	4,887	64
Below investment grade securities:						
Corporate	220	38	100	7	320	45
ABS	—	—	—	—	—	—
CMBS	—	—	—	—	—	—
Other foreign government	—	—	10	1	10	1
Total below investment grade securities	220	38	110	8	330	46
Total fixed maturity securities	$ 3,979	$ 84	$ 1,238	$ 26	$ 5,217	$ 110

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

Investment Income, Net of Related Expenses

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

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Fixed maturity securities available-for-sale	$ 474	$ 428	$ 954	$ 843
Equity securities	1	1	3	2
Mortgage loans on real estate	66	61	133	120
Policy loans	14	14	29	29
Funds withheld at interest	69	66	122	128
Short-term investments and cash and cash equivalents	2	7	6	14
Other invested assets	41	32	36	74
Investment income	667	609	1,283	1,210
Investment expense	(22)	(25)	(44)	(46)
Investment income, net of related expenses	$ 645	$ 584	$ 1,239	$ 1,164

Investment Related Gains (Losses), Net

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

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Fixed maturity securities available-for-sale:				
Impairment losses and change in allowance for credit losses	$ —	$ —	$ (34)	$ (9)
Gain on investment activity	46	20	73	48
Loss on investment activity	(46)	(7)	(54)	(26)
Net gains (losses) on equity securities	8	3	(15)	7
Other impairment losses and change in mortgage loan provision	(22)	(6)	(35)	(8)
Derivatives and other, net	95	2	(139)	8
Total investment related gains (losses), net	$ 81	$ 12	$ (204)	$ 20

The impairment losses and change in allowance for credit losses on fixed maturity securities for the six months ended June 30, 2020, includes $1 million in impairment losses on securities the Company intended to sell and an increase of $33 million in the allowance for credit losses related to high-yield securities as result of the uncertainty in the global markets due to the novel coronavirus (“COVID-19”) pandemic. The fixed maturity impairment losses for the six months ended June 30, 2019, were primarily related to a U.S. utility company. The other impairment losses and change in mortgage loan provision for the three and six months ended June 30, 2020, were primarily due to an increase in the mortgage loan valuation allowance due to the current market conditions related to the COVID-19 pandemic. The other impairment losses and change in mortgage loan provision for the three months ended June 30, 2020 and 2019, includes impairments on limited partnerships. The other impairment losses and change in mortgage loan provision for the six months ended June 30, 2019, includes impairments on real estate joint ventures and limited partnerships. The fluctuations in investment related gains (losses) for derivatives and other for the three and six months ended June 30, 2020, compared to the same periods in 2019, were primarily due to the changes in fair value of embedded derivatives related to modified coinsurance and funds withheld treaties as a result of changes in interest rates and credit spreads, both of which are a result of COVID-19.

Securities Borrowing, Lending and Other

The following table includes the amount of borrowed securities, securities loaned and securities collateral received as part of the securities lending program and repurchased/reverse repurchased securities pledged and received as of June 30, 2020 and December 31, 2019 (dollars in millions).

	June 30, 2020		December 31, 2019	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Borrowed securities	$ 270	$ 300	$ 339	$ 369
Securities lending:				
Securities loaned	102	105	98	104
Securities received	n/a	107	n/a	107
Repurchase program/reverse repurchase program:				
Securities pledged	449	481	356	384
Securities received	n/a	372	n/a	370

The Company held cash collateral for repurchase/reverse repurchase programs of $54 million and $1 million as of June 30, 2020 and December 31, 2019, respectively. No cash or securities have been pledged by the Company for its securities borrowing program as of June 30, 2020 and December 31, 2019.

The following tables present information on the Company's securities lending and repurchase/reverse repurchase transactions as of June 30, 2020 and December 31, 2019, respectively (dollars in millions). Collateral associated with certain borrowed securities is not included within the tables, as the collateral pledged to each counterparty is the right to reinsurance treaty cash flows.

	June 30, 2020				
	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 Days	30-90 Days	Greater than 90 Days	Total
Securities lending transactions:					
Corporate	$ —	$ —	$ —	$ 105	$ 105
Total	—	—	—	105	105
Repurchase/reverse repurchase transactions:					
Corporate	—	—	—	353	353
Other foreign government	—	—	—	128	128
Total	—	—	—	481	481
Total transactions	$ —	$ —	$ —	$ 586	$ 586
Gross amount of recognized liabilities for securities lending and repurchase/reverse repurchase transactions in preceding table					$ 533
Amounts related to agreements not included in offsetting disclosure					$ 53

	December 31, 2019				
	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 Days	30-90 Days	Greater than 90 Days	Total
Securities lending transactions:					
Corporate	$ —	$ —	$ —	$ 104	$ 104
Total	—	—	—	104	104
Repurchase/reverse repurchase transactions:					
Corporate	—	—	—	286	286
Other foreign government	—	—	—	98	98
Total	—	—	—	384	384
Total borrowings	$ —	$ —	$ —	$ 488	$ 488
Gross amount of recognized liabilities for securities lending and repurchase/reverse repurchase transactions in preceding table					$ 478
Amounts related to agreements not included in offsetting disclosure					$ 10

The Company has elected to offset amounts recognized as receivables and payables resulting from the repurchase/reverse repurchase programs. After the effect of offsetting, the net amount presented on the condensed consolidated balance sheets was a liability of $3 million and $1 million as of June 30, 2020 and December 31, 2019, respectively. As of June 30, 2020 and December 31, 2019, the Company recognized payables resulting from cash received as collateral associated with a repurchase/reverse repurchase agreements as discussed above. Amounts owed to and due from the counterparties may be settled in cash or offset, in accordance with the agreements.

Mortgage Loans on Real Estate

As of June 30, 2020, mortgage loans are geographically dispersed throughout the U.S. with the largest concentrations in California (15.1%), Texas (14.7%) and Washington (8.6%). In addition, the Company held mortgage loans secured by properties in Canada (3.0%) and United Kingdom (0.9%). The recorded investment in mortgage loans on real estate presented below is gross of unamortized deferred loan origination fees and expenses and valuation allowances.

The distribution of the Company's recorded investment in mortgage loans by property type as of June 30, 2020 and December 31, 2019 (dollars in millions) is as follows:

	June 30, 2020		December 31, 2019	
Property type:	Carrying Value	% of Total	Carrying Value	% of Total
Office	$ 1,773	29.4%	$ 1,771	31.0%
Retail	1,705	28.2	1,686	29.4
Industrial	1,253	20.7	1,169	20.4
Apartment	868	14.4	766	13.4
Other commercial	441	7.3	335	5.8
Recorded investment	6,040	100.0%	5,727	100.0%
Unamortized balance of loan origination fees and expenses	(10)		(9)	
Valuation allowances	(56)		(12)	
Total mortgage loans on real estate	$ 5,974		$ 5,706	

The maturities of the Company's recorded investment in mortgage loans as of June 30, 2020 and December 31, 2019 are as follows (dollars in millions):

	June 30, 2020		December 31, 2019	
	Recorded Investment	% of Total	Recorded Investment	% of Total
Due within five years	$ 2,257	37.3%	$ 1,841	32.2%
Due after five years through ten years	2,854	47.3	2,944	51.4
Due after ten years	929	15.4	942	16.4
Total	$ 6,040	100.0%	$ 5,727	100.0%

The following tables set forth certain key credit quality indicators of the Company's recorded investment in mortgage loans as of June 30, 2020 and December 31, 2019 (dollars in millions):

	Recorded Investment					
	Debt Service Ratios					
	>1.20x	1.00x - 1.20x	<1.00x	Construction Loans	Total	% of Total
June 30, 2020:						
Loan-to-Value Ratio						
0% - 59.99%	$ 3,074	$ 114	$ 9	$ 1	$ 3,198	53.0%
60% - 69.99%	1,923	78	30	—	2,031	33.6
70% - 79.99%	559	60	4	—	623	10.3
80% or greater	101	61	26	—	188	3.1
Total	$ 5,657	$ 313	$ 69	$ 1	$ 6,040	100.0%

	Recorded Investment					
	Debt Service Ratios					
	>1.20x	1.00x - 1.20x	<1.00x	Construction Loans	Total	% of Total
December 31, 2019:						
Loan-to-Value Ratio						
0% - 59.99%	$ 3,025	$ 52	$ 7	$ —	$ 3,084	53.8%
60% - 69.99%	1,841	53	11	—	1,905	33.3
70% - 79.99%	492	13	39	—	544	9.5
80% or greater	96	61	37	—	194	3.4
Total	$ 5,454	$ 179	$ 94	$ —	$ 5,727	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 June 30, 2020 (dollars in millions):

	Recorded Investment						
	Year of Origination						
	2020	2019	2018	2017	2016	Prior	Total
June 30, 2020:							
Internal credit quality grade:							
High investment grade	$ 332	$ 674	$ 622	$ 401	$ 601	$ 1,115	$ 3,745
Investment grade	263	517	317	342	271	409	2,119
Average	—	—	9	25	27	94	155
Watch list	—	—	—	—	—	4	4
In or near default	—	—	—	—	—	17	17
Total	$ 595	$ 1,191	$ 948	$ 768	$ 899	$ 1,639	$ 6,040

The following table presents the current and past due composition of the Company's recorded investment in mortgage loans as of June 30, 2020 and December 31, 2019 (dollars in millions):

	June 30, 2020	December 31, 2019
31-60 days past due	$ 63	$ —
61-90 days past due	9	—
Greater than 90 days	15	—
Total past due	87	—
Current	5,953	5,727
Total	$ 6,040	$ 5,727

The following table presents the recorded investment in mortgage loans, by method of measuring impairment, and the related valuation allowances as of June 30, 2020 and December 31, 2019 (dollars in millions):

	June 30, 2020	December 31, 2019
Mortgage loans:		
Individually measured for impairment	$ 17	$ 17
Collectively measured for impairment	6,023	5,710
Recorded investment	$ 6,040	$ 5,727
Valuation allowances:		
Individually measured for impairment	$ —	$ —
Collectively measured for impairment	56	12
Total valuation allowances	$ 56	$ 12

Information regarding the Company's loan valuation allowances for mortgage loans for the six months ended June 30, 2020 and 2019 is as follows (dollars in millions):

	Six months ended June 30,	
	2020	2019
Balance, beginning of period	$ 12	$ 11
Adoption of new accounting standard, see Note 13	14	—
Provision (release)	30	1
Balance, end of period	$ 56	$ 12

Information regarding the portion of the Company's mortgage loans that were impaired as of June 30, 2020 and December 31, 2019 is as follows (dollars in millions):

	Unpaid Principal Balance	Recorded Investment	Related Allowance	Carrying Value
June 30, 2020:				
Impaired mortgage loans with no valuation allowance recorded	$ 17	$ 17	$ —	$ 17
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	$ 17	$ 17	$ —	$ 17
December 31, 2019:				
Impaired mortgage loans with no valuation allowance recorded	$ 17	$ 17	$ —	$ 17
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	$ 17	$ 17	$ —	$ 17

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

	Three months ended June 30,			
	2020		2019	
	Average Recorded Investment(1)	Interest Income	Average Recorded Investment(1)	Interest Income
Impaired mortgage loans with no valuation allowance recorded	$ 17	$ —	$ 17	$ —
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	$ 17	$ —	$ 17	$ —

	Six months ended June 30,			
	2020		2019	
	Average Recorded Investment(1)	Interest Income	Average Recorded Investment(1)	Interest Income
Impaired mortgage loans with no valuation allowance recorded	$ 17	$ —	$ 22	$ —
Impaired mortgage loans with valuation allowance recorded	—	—	—	—
Total impaired mortgage loans	$ 17	$ —	$ 22	$ —

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

The Company did not acquire any impaired mortgage loans during the six months ended June 30, 2020 and 2019. The Company had $15 million of mortgage loans, gross of valuation allowances, that were on nonaccrual status as of June 30, 2020. The Company had no mortgage loans that were on a nonaccrual status as of December 31, 2019.

As of June 30, 2020, the Company modified the payment terms of approximately 40 loans, with a carrying value of approximately $540 million in response to COVID-19. These loans met the criteria established in the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”), and were not considered a troubled debt restructuring. In accordance with the CARES Act criteria, these loans were not more than 30 days past due at December 31, 2019, and the modifications included deferral or delayed payments of principal or interest on the loan.

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 June 30, 2020, $3.1 billion of the funds withheld at interest balance is associated with one client. For reinsurance agreements written on a modified coinsurance (“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 on the Company’s condensed consolidated balance sheets. In the event of a ceding company’s insolvency, the Company would need to assert a claim on the assets supporting its reserve liabilities. However, the risk of loss to the Company is mitigated by its ability to offset amounts it owes the ceding company for claims or allowances against amounts owed to the Company from the ceding company.

Other Invested Assets

Other invested assets include limited partnership interests, joint ventures (other than operating joint ventures), lifetime mortgages, derivative contracts and fair value option (“FVO”) contractholder-directed unit-linked investments. Other invested assets also includes FHLB common stock, which is included in Other in the table below. The allowance for credit losses for lifetime mortgages as of both June 30, 2020 and December 31, 2019, was $2 million. Carrying values of these assets as of June 30, 2020 and December 31, 2019 are as follows (dollars in millions):

	June 30, 2020	December 31, 2019
Limited partnership interests and real estate joint ventures	$ 1,204	$ 1,134
Lifetime mortgages	787	775
Derivatives	205	117
FVO contractholder-directed unit-linked investments	250	260
Other	101	77
Total other invested assets	$ 2,547	$ 2,363

5. Derivative Instruments

Accounting for Derivative Instruments and Hedging Activities

See Note 2 – “Significant Accounting Policies and Pronouncements” of the Company’s 2019 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, synthetic guaranteed investment contracts (“GICs”), consumer price index (“CPI”) swaps, longevity swaps, mortality swaps and embedded derivatives.

For detailed information on these derivative instruments and the related strategies, see Note 5 – “Derivative Instruments” of the Company’s 2019 Annual Report.

Summary of Derivative Positions

Derivatives, except for embedded derivatives and longevity and mortality swaps, are carried on the Company's condensed consolidated balance sheets in other invested assets or other liabilities, at fair value. Longevity and mortality swaps, which have been discontinued or matured in 2019 are included on the condensed consolidated balance sheets in other 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, 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 June 30, 2020 and December 31, 2019 (dollars in millions):

		June 30, 2020			December 31, 2019		
		Notional	Carrying Value/Fair Value		Notional	Carrying Value/Fair Value	
	Primary Underlying Risk	Amount	Assets	Liabilities	Amount	Assets	Liabilities
Derivatives not designated as hedging instruments:							
Interest rate swaps	Interest rate	$ 1,086	$ 105	$ 3	$ 909	$ 70	$ 3
Financial futures	Equity	342	—	—	307	—	—
Foreign currency swaps	Foreign currency	150	—	21	150	—	9
Foreign currency forwards	Foreign currency	252	1	—	175	1	—
CPI swaps	CPI	569	9	52	441	—	28
Credit default swaps	Credit	1,327	3	1	1,306	5	—
Equity options	Equity	366	38	—	364	15	—
Synthetic GICs	Interest rate	14,888	—	—	13,823	—	—
Embedded derivatives in:							
Modco or funds withheld arrangements		—	—	108	—	121	—
Indexed annuity products		—	—	746	—	—	767
Variable annuity products		—	—	184	—	—	163
Total non-hedging derivatives		18,980	156	1,115	17,475	212	970
Derivatives designated as hedging instruments:							
Interest rate swaps	Foreign currency/Interest rate	489	1	41	535	1	29
Foreign currency swaps	Foreign currency	302	23	10	342	17	2
Foreign currency forwards	Foreign currency	1,092	68	—	1,094	28	2
Total hedging derivatives		1,883	92	51	1,971	46	33
Total derivatives		$ 20,863	$ 248	$ 1,166	$ 19,446	$ 258	$ 1,003

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 June 30, 2020 and 2019 were (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 June 30, 2020:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	$ 15	$ (13)
For the three months ended June 30, 2019:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	$ (4)	$ 1
For the six months ended June 30, 2020:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	$ (8)	$ 2
For the six months ended June 30, 2019:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	$ (4)	$ —

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; and (ii) certain interest rate swaps, in which the cash flows of assets are denominated in different currencies, commonly referred to as cross-currency swaps.

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 six months ended June 30, 2020 and 2019 (dollars in millions):

	Three months ended June 30,	
	2020	2019
Balance, beginning of period	$ (87)	$ (2)
Gains (losses) deferred in other comprehensive income (loss)	12	(13)
Amounts reclassified to investment income	—	—
Amounts reclassified to interest expense	1	—
Balance, end of period	$ (74)	$ (15)

	Six months ended June 30,	
	2020	2019
Balance, beginning of period	$ (26)	$ 9
Gains (losses) deferred in other comprehensive income (loss)	(49)	(23)
Amounts reclassified to investment income	—	—
Amounts reclassified to interest expense	1	(1)
Balance, end of period	$ (74)	$ (15)

As of June 30, 2020, an immaterial amount and approximately $(6) million of before-tax deferred net gains (losses) on derivative instruments recorded in AOCI are expected to be reclassified to investment income and interest expense, respectively, 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 six months ended June 30, 2020 and 2019 (dollars in millions):

Derivative Type	Gain (Loss) Deferred in AOCI	Gain (Loss) Reclassified into Income from AOCI	
		Investment Income	Interest Expense
For the three months ended June 30, 2020:			
Interest rate	$ (1)	$ —	$ (1)
Currency/Interest rate	13	—	—
Total	$ 12	$ —	$ (1)
For the three months ended June 30, 2019:			
Interest rate	$ (10)	$ —	$ —
Currency/Interest rate	(3)	—	—
Total	$ (13)	$ —	$ —
For the six months ended June 30, 2020:			
Interest rate	$ (36)	$ —	$ (1)
Currency/Interest rate	(13)	—	—
Total	$ (49)	$ —	$ (1)
For the six months ended June 30, 2019:			
Interest rate	$ (22)	$ —	$ 1
Currency/Interest rate	(1)	—	—
Total	$ (23)	$ —	$ 1

Hedges of Net Investments in Foreign Operations

The Company uses foreign currency swaps and foreign currency forwards to hedge a portion of its net investment in certain foreign operations against adverse movements in exchange rates. The following table illustrates the Company's net investments in foreign operations ("NIFO") hedges for the three and six months ended June 30, 2020 and 2019 (dollars in millions):

	Derivative Gains (Losses) Deferred in AOCI			
	For the three months ended June 30,		For the six months ended June 30,	
Type of NIFO Hedge	2020	2019	2020	2019
Foreign currency swaps	$ (6)	$ (2)	$ 9	$ (10)
Foreign currency forwards	(34)	(6)	46	(24)
Total	$ (40)	$ (8)	$ 55	$ (34)

The cumulative foreign currency translation gain recorded in AOCI related to these hedges was $223 million and $168 million at June 30, 2020 and December 31, 2019, 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 accumulated other comprehensive income (loss) 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 qualified for hedge accounting treatment. The gain or loss related to the change in fair value for these derivative instruments is recognized in investment related gains (losses), net in the condensed consolidated statements of income, except where otherwise noted.

A summary of the effect of non-hedging derivatives, including embedded derivatives, on the Company's condensed consolidated statements of income for the three and six months ended June 30, 2020 and 2019 is as follows (dollars in millions):

		Gain (Loss) for the three months ended June 30,	
Type of Non-hedging Derivative	Income Statement Location of Gain (Loss)	2020	2019
Interest rate swaps	Investment related gains (losses), net	$ 3	$ 34
Financial futures	Investment related gains (losses), net	(48)	(8)
Foreign currency swaps	Investment related gains (losses), net	3	(6)
Foreign currency forwards	Investment related gains (losses), net	1	—
CPI swaps	Investment related gains (losses), net	26	(7)
Credit default swaps	Investment related gains (losses), net	17	5
Equity options	Investment related gains (losses), net	(25)	(5)
Longevity swaps	Other revenues	—	2
Mortality swaps	Other revenues	—	(1)
Subtotal		(23)	14
Embedded derivatives in:			
Modco or funds withheld arrangements	Investment related gains (losses), net	1	5
Indexed annuity products	Interest credited	(7)	(8)
Variable annuity products	Investment related gains (losses), net	107	(18)
Total non-hedging derivatives		$ 78	$ (7)

		Gain (Loss) for the six months ended June 30,	
Type of Non-hedging Derivative	Income Statement Location of Gain (Loss)	2020	2019
Interest rate swaps	Investment related gains (losses), net	$ 109	$ 58
Financial futures	Investment related gains (losses), net	(4)	(30)
Foreign currency swaps	Investment related gains (losses), net	(10)	(5)
Foreign currency forwards	Investment related gains (losses), net	(2)	—
CPI swaps	Investment related gains (losses), net	(14)	(16)
Credit default swaps	Investment related gains (losses), net	(7)	20
Equity options	Investment related gains (losses), net	28	(28)
Longevity swaps	Other revenues	—	4
Mortality swaps	Other revenues	—	—
Subtotal		100	3
Embedded derivatives in:			
Modco or funds withheld arrangements	Investment related gains (losses), net	(229)	3
Indexed annuity products	Interest credited	(1)	(5)
Variable annuity products	Investment related gains (losses), net	(21)	—
Total non-hedging derivatives		$ (151)	$ 1

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 June 30, 2020 and December 31, 2019 (dollars in millions):

	June 30, 2020			December 31, 2019		
Rating Agency Designation of Referenced Credit Obligations(1)	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	$ 1	$ 87	1.7	$ 2	$ 142	1.7
Subtotal	1	87	1.7	2	142	1.7
BBB+/BBB/BBB-						
Single name credit default swaps	—	252	1.8	3	291	1.9
Credit default swaps referencing indices	1	988	4.4	—	873	4.7
Subtotal	1	1,240	3.9	3	1,164	4.0
Total	$ 2	$ 1,327	3.7	$ 5	$ 1,306	3.7

(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

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 programs.

The following table provides information relating to the Company’s derivative instruments as of June 30, 2020 and December 31, 2019 (dollars in millions):

				Gross Amounts Not Offset in the Balance Sheet		
	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Financial Instruments (1)	Cash Collateral Pledged/ Received	Net Amount
June 30, 2020:						
Derivative assets	$ 248	$ (43)	$ 205	$ —	$ (205)	$ —
Derivative liabilities	128	(43)	85	(128)	(89)	(132)
December 31, 2019:						
Derivative assets	$ 137	$ (20)	$ 117	$ —	$ (119)	$ (2)
Derivative liabilities	73	(20)	53	(92)	(52)	(91)

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

Credit Risk

The Company had $4 million and no credit exposure related to its derivative contracts, as of June 30, 2020 and December 31, 2019, respectively. The Company may be exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments with a positive fair value. Generally, the credit exposure of the Company’s derivative contracts is limited to the fair value at the reporting date plus or minus any collateral posted or held by the Company.

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 fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value and describes three levels of inputs that may be used to measure fair value:

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

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

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

For a discussion of the Company's valuation methodologies for assets and liabilities measured at fair value and the fair value hierarchy, see Note 6 – "Fair Value of Assets and Liabilities" in the Notes to Consolidated Financial Statements included in the Company's 2019 Annual Report.

Assets and Liabilities by Hierarchy Level

Assets and liabilities measured at fair value on a recurring basis as of June 30, 2020 and December 31, 2019 are summarized below (dollars in millions):

June 30, 2020:		Fair Value Measurements Using:		
	Total	Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	$ 32,570	$ —	$ 30,262	$ 2,308
Canadian government	4,858	—	4,858	—
RMBS	2,065	—	2,061	4
ABS	2,731	—	2,623	108
CMBS	1,851	—	1,810	41
U.S. government	1,639	1,528	96	15
State and political subdivisions	1,184	—	1,175	9
Other foreign government	5,448	—	5,431	17
Total fixed maturity securities – available-for-sale	52,346	1,528	48,316	2,502
Equity securities	130	68	—	62
Funds withheld at interest – embedded derivatives	(108)	—	—	(108)
Cash equivalents	2,945	2,945	—	—
Short-term investments	35	17	13	5
Other invested assets:				
Derivatives	205	—	205	—
FVO contractholder-directed unit-linked investments	250	192	58	—
Other	2	—	2	—
Total other invested assets	457	192	265	—
Total	$ 55,805	$ 4,750	$ 48,594	$ 2,461
Liabilities:				
Interest-sensitive contract liabilities – embedded derivatives	$ 930	$ —	$ —	$ 930
Other liabilities:				
Derivatives	85	—	85	—
Total	$ 1,015	$ —	$ 85	$ 930

December 31, 2019:		Fair Value Measurements Using:		
	Total	Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	$ 31,393	$ —	$ 29,207	$ 2,186
Canadian government	4,612	—	3,908	704
RMBS	2,398	—	2,349	49
ABS	2,978	—	2,865	113
CMBS	1,899	—	1,853	46
U.S. government	2,152	2,030	106	16
State and political subdivisions	1,164	—	1,155	9
Other foreign government	4,525	—	4,509	16
Total fixed maturity securities – available-for-sale	51,121	2,030	45,952	3,139
Equity securities	320	243	—	77
Funds withheld at interest – embedded derivatives	121	—	—	121
Cash equivalents	274	274	—	—
Short-term investments	32	4	26	2
Other invested assets:				
Derivatives	117	—	117	—
FVO contractholder-directed unit-linked investments	260	207	53	—
Other	—	—	—	—
Total other invested assets	377	207	170	—
Total	$ 52,245	$ 2,758	$ 46,148	$ 3,339
Liabilities:				
Interest-sensitive contract liabilities – embedded derivatives	$ 930	$ —	$ —	$ 930
Other liabilities:				
Derivatives	53	—	53	—
Total	$ 983	$ —	$ 53	$ 930

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 June 30, 2020 and December 31, 2019 (dollars in millions):

	Estimated Fair Value				Range (Weighted Average)	
	June 30, 2020	December 31, 2019	Valuation Technique	Unobservable Inputs	June 30, 2020	December 31, 2019
Assets:						
Corporate	$ 1,155	$ 1,070	Market comparable securities	Liquidity premium	0-2% (1%)	0-2% (1%)
				EBITDA Multiple	5.2x-8.0x (6.9x)	5.2x-7.1x (6.5x)
ABS	88	101	Market comparable securities	Liquidity premium	1-18% (3%)	0-4% (1%)
U.S. government	15	16	Market comparable securities	Liquidity premium	0-1% (1%)	0-1% (1%)
Other foreign government	17	16	Market comparable securities	Liquidity premium	0-1% (1%)	0-1% (1%)
Equity securities	32	32	Market comparable securities	Liquidity premium	4%	4%
				EBITDA Multiple	6.9x-10.6x (8.0x)	6.9x-9.3x (7.8x)
Funds withheld at interest – embedded derivatives	(108)	121	Total return swap	Mortality	0-100% (2%)	0-100% (2%)
				Lapse	0-35% (14%)	0-35% (13%)
				Withdrawal	0-5% (3%)	0-5% (3%)
				CVA	0-5% (2%)	0-5% (1%)
				Crediting rate	2-4% (2%)	2-4% (2%)
Liabilities:						
Interest-sensitive contract liabilities – embedded derivatives – indexed annuities	746	768	Discounted cash flow	Mortality	0-100% (2%)	0-100% (2%)
				Lapse	0-35% (14%)	0-35% (10%)
				Withdrawal	0-5% (3%)	0-5% (3%)
				Option budget projection	2-4% (2%)	2-4% (2%)
Interest-sensitive contract liabilities – embedded derivatives – variable annuities	184	163	Discounted cash flow	Mortality	0-100% (2%)	0-100% (1%)
				Lapse	0-25% (5%)	0-25% (5%)
				Withdrawal	0-7% (5%)	0-7% (5%)
				CVA	0-5% (2%)	0-5% (1%)
				Long-term volatility	0-27% (12%)	0-27% (12%)

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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 2019 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 June 30, 2020:	Fixed maturity securities - available-for-sale								
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments	Funds withheld at interest – embedded derivatives	Other assets and liabilities, net – longevity and mortality swaps	Interest-sensitive contract liabilities – embedded derivatives
Fair value, beginning of period	$ 2,197	$ 15	$ 144	$ 25	$ 56	$ 1	$ (109)	$ —	$ (1,042)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Investment income, net of related expenses	—	—	—	—	—	—	—	—	—
Investment related gains (losses), net	(14)	—	—	—	3	—	1	—	106
Interest credited	—	—	—	—	—	—	—	—	(7)
Included in other comprehensive income	112	2	17	—	—	—	—	—	—
Other revenues	—	—	—	—	—	—	—	—	—
Purchases[(1)]	79	—	15	—	3	5	—	—	(8)
Sales[(1)]	(18)	—	(3)	—	—	—	—	—	—
Settlements[(1)]	(44)	—	(18)	(1)	—	(1)	—	—	21
Transfers into Level 3	—	—	—	—	—	—	—	—	—
Transfers out of Level 3	(4)	—	(2)	—	—	—	—	—	—
Fair value, end of period	$ 2,308	$ 17	$ 153	$ 24	$ 62	$ 5	$ (108)	$ —	$ (930)
Unrealized gains and losses 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:									
Investment income, net of related expenses	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Investment related gains (losses), net	(15)	—	—	—	3	—	1	—	103
Other revenues	—	—	—	—	—	—	—	—	—
Interest credited	—	—	—	—	—	—	—	—	(27)
Included in other comprehensive income	111	2	16	—	—	—	—	—	—

For the six months ended June 30, 2020:	Fixed maturity securities - available-for-sale								
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments	Funds withheld at interest – embedded derivatives	Other assets and liabilities, net – longevity and mortality swaps	Interest-sensitive contract liabilities – embedded derivatives
Fair value, beginning of period	$ 2,186	$ 720	$ 208	$ 25	$ 77	$ 2	$ 121	$ —	$ (930)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Investment income, net of related expenses	1	—	—	—	—	—	—	—	—
Investment related gains (losses), net	(25)	—	—	—	(4)	—	(229)	—	(22)
Interest credited	—	—	—	—	—	—	—	—	(1)
Included in other comprehensive income	(3)	1	(10)	1	—	—	—	—	—
Other revenues	—	—	—	—	—	—	—	—	—
Purchases[1]	310	—	24	—	3	5	—	—	(19)
Sales[1]	(62)	—	(4)	—	—	—	—	—	—
Settlements[1]	(96)	—	(31)	(2)	—	(1)	—	—	42
Transfers into Level 3	1	—	21	—	—	—	—	—	—
Transfers out of Level 3	(4)	(704)	(55)	—	(14)	(1)	—	—	—
Fair value, end of period	$ 2,308	$ 17	$ 153	$ 24	$ 62	$ 5	$ (108)	$ —	$ (930)
Unrealized gains and losses 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:									
Investment income, net of related expenses	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Investment related gains (losses), net	(26)	—	—	—	(4)	—	(229)	—	(27)
Other revenues	—	—	—	—	—	—	—	—	—
Claims & other policy benefits	—	—	—	—	—	—	—	—	—
Interest credited	—	—	—	—	—	—	—	—	(43)
Included in other comprehensive income	(29)	1	(11)	1	—	—	—	—	—

For the three months ended June 30, 2019:	Fixed maturity securities - available-for-sale								
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments	Funds withheld at interest – embedded derivatives	Other assets and liabilities, net – longevity and mortality swaps	Interest-sensitive contract liabilities – embedded derivatives
Fair value, beginning of period	$ 1,531	$ 613	$ 120	$ 27	$ 40	$ 29	$ 108	$ 49	$ (904)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Investment income, net of related expenses	—	3	—	—	—	—	—	—	—
Investment related gains (losses), net	—	—	—	—	2	—	5	—	(18)
Interest credited	—	—	—	—	—	—	—	—	(8)
Included in other comprehensive income	17	61	1	1	—	—	—	1	—
Other revenues	—	—	—	—	—	—	—	1	3
Purchases[1]	176	10	12	—	3	1	—	—	—
Sales[1]	(14)	—	—	—	—	(1)	—	—	—
Settlements[1]	(81)	—	(14)	(1)	—	(1)	—	—	19
Transfers into Level 3	16	—	7	—	—	—	—	—	—
Transfers out of Level 3	(1)	—	—	—	—	—	—	—	—
Fair value, end of period	$ 1,644	$ 687	$ 126	$ 27	$ 45	$ 28	$ 113	$ 51	$ (908)
Unrealized gains and losses 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:									
Investment income, net of related expenses	$ —	$ 4	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Investment related gains (losses), net	—	—	—	—	2	—	5	—	(20)
Other revenues	—	—	—	—	—	—	—	1	—
Interest credited	—	—	—	—	—	—	—	—	(28)

For the six months ended June 30, 2019:	Fixed maturity securities - available-for-sale								
	Corporate	Foreign govt	Structured securities	U.S. and local govt	Equity securities	Short-term investments	Funds withheld at interest – embedded derivatives	Other assets and liabilities, net – longevity and mortality swaps	Interest-sensitive contract liabilities – embedded derivatives
Fair value, beginning of period	$ 1,331	$ 533	$ 103	$ 28	$ 33	$ 2	$ 110	$ 47	$ (945)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Investment income, net of related expenses	—	7	—	—	—	—	—	—	—
Investment related gains (losses), net	—	—	—	—	6	—	3	—	—
Interest credited	—	—	—	—	—	—	—	—	(5)
Included in other comprehensive income	36	137	2	1	—	—	—	—	—
Other revenues	—	—	—	—	—	—	—	4	—
Purchases(1)	391	10	43	—	6	28	—	—	4
Sales(1)	(25)	—	—	—	—	(1)	—	—	—
Settlements(1)	(104)	—	(29)	(2)	—	(1)	—	—	38
Transfers into Level 3	16	—	7	—	—	—	—	—	—
Transfers out of Level 3	(1)	—	—	—	—	—	—	—	—
Fair value, end of period	$ 1,644	$ 687	$ 126	$ 27	$ 45	$ 28	$ 113	$ 51	$ (908)
Unrealized gains and losses 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:									
Investment income, net of related expenses	$ —	$ 7	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Investment related gains (losses), net	—	—	—	—	6	—	3	—	(3)
Other revenues	—	—	—	—	—	—	—	4	—
Interest credited	—	—	—	—	—	—	—	—	(3)

(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 which measurement at fair value in periods subsequent to their initial recognition is applicable if they are determined to be impaired. During the six months ended June 30, 2020 and 2019, 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 amounts and estimated fair values of the Company's financial instruments, which were not measured at fair value on a recurring basis, as of June 30, 2020 and December 31, 2019 (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 2019 Annual Report. This table excludes any payables or receivables for collateral under repurchase agreements and other transactions. The estimated fair value of the excluded amount approximates carrying value as they equal the amount of cash collateral received/paid.

June 30, 2020:	Carrying Value (1)	Estimated Fair Value	Fair Value Measurement Using: Level 1	Level 2	Level 3	NAV
Assets:						
Mortgage loans on real estate	$ 5,974	$ 6,225	$ —	$ —	$ 6,225	$ —
Policy loans	1,310	1,310	—	1,310	—	—
Funds withheld at interest	5,344	5,605	—	—	5,605	—
Cash and cash equivalents	1,368	1,368	1,368	—	—	—
Short-term investments	49	49	49	—	—	—
Other invested assets	1,300	1,385	4	91	896	394
Accrued investment income	494	494	—	494	—	—
Liabilities:						
Interest-sensitive contract liabilities	$ 17,945	$ 18,659	$ —	$ —	$ 18,659	$ —
Long-term debt	3,573	3,661	—	—	3,661	—
Collateral finance and securitization notes	433	391	—	—	391	—

December 31, 2019:	Carrying Value (1)	Estimated Fair Value	Fair Value Measurement Using: Level 1	Level 2	Level 3	NAV
Assets:						
Mortgage loans on real estate	$ 5,706	$ 5,935	$ —	$ —	$ 5,935	$ —
Policy loans	1,319	1,319	—	1,319	—	—
Funds withheld at interest	5,526	5,870	—	—	5,870	—
Cash and cash equivalents	1,175	1,175	1,175	—	—	—
Short-term investments	32	32	32	—	—	—
Other invested assets	1,259	1,278	5	68	803	402
Accrued investment income	493	493	—	493	—	—
Liabilities:						
Interest-sensitive contract liabilities	$ 19,163	$ 21,542	$ —	$ —	$ 21,542	$ —
Long-term debt	2,981	3,179	—	—	3,179	—
Collateral finance and securitization notes	598	551	—	—	551	—

(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 the Significant Accounting Policies and Pronouncements in Note 2 of the consolidated financial statements accompanying the 2019 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 June 30,		Six months ended June 30,	
Revenues:	2020	2019	2020	2019
U.S. and Latin America:				
Traditional	$ 1,642	$ 1,584	$ 3,175	$ 3,125
Financial Solutions	323	302	462	556
Total	1,965	1,886	3,637	3,681
Canada:				
Traditional	311	318	607	630
Financial Solutions	22	24	46	48
Total	333	342	653	678
Europe, Middle East and Africa:				
Traditional	371	370	778	754
Financial Solutions	136	114	214	223
Total	507	484	992	977
Asia Pacific:				
Traditional	636	634	1,303	1,307
Financial Solutions	75	59	143	114
Total	711	693	1,446	1,421
Corporate and Other	90	62	82	130
Total	$ 3,606	$ 3,467	$ 6,810	$ 6,887

	Three months ended June 30,		Six months ended June 30,	
Income (loss) before income taxes:	2020	2019	2020	2019
U.S. and Latin America:				
Traditional	$ (158)	$ 55	$ (220)	$ 67
Financial Solutions	117	92	102	175
Total	(41)	147	(118)	242
Canada:				
Traditional	44	46	67	97
Financial Solutions	4	4	7	5
Total	48	50	74	102
Europe, Middle East and Africa:				
Traditional	16	16	33	32
Financial Solutions	98	52	128	90
Total	114	68	161	122
Asia Pacific:				
Traditional	47	34	71	71
Financial Solutions	26	2	1	8
Total	73	36	72	79
Corporate and Other	1	(41)	(90)	(68)
Total	$ 195	$ 260	$ 99	$ 477

Assets:	June 30, 2020	December 31, 2019
U.S. and Latin America:		
Traditional	$ 19,867	$ 19,353
Financial Solutions	24,832	25,117
Total	44,699	44,470
Canada:		
Traditional	4,282	4,361
Financial Solutions	19	64
Total	4,301	4,425
Europe, Middle East and Africa:		
Traditional	4,087	4,032
Financial Solutions	6,449	6,502
Total	10,536	10,534
Asia Pacific:		
Traditional	7,559	6,800
Financial Solutions	3,829	2,557
Total	11,388	9,357
Corporate and Other	9,805	7,945
Total	$ 80,729	$ 76,731

8. Commitments, Contingencies and Guarantees

Commitments

Funding of Investments

The Company’s commitments to fund investments as of June 30, 2020 and December 31, 2019 are presented in the following table (dollars in millions):

	June 30, 2020	December 31, 2019
Limited partnership interests and joint ventures	$ 656	$ 685
Commercial mortgage loans	70	243
Bank loans and private placements	141	181
Lifetime mortgages	69	87

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 a liability for expected credit losses, included in other liabilities on the Company’s condensed consolidated balance sheets, associated with unfunded commitments of approximately $1 million as of June 30, 2020.

Contingencies

Litigation

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.

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

RGA, through wholly-owned subsidiaries, has 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, RGA has 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, RGA would recognize a right-of-use asset and lease obligation. As of June 30, 2020, 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 June 30, 2020 (dollars in millions):

Commitment Period:	Maximum Potential Obligation
2035	2,627
2036	3,408
2037	2,850
2038	2,300
2039	11,350

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 June 30, 2020 and December 31, 2019 are reflected in the following table (dollars in millions):

	June 30, 2020	December 31, 2019
Treaty guarantees	$ 1,719	$ 1,821
Treaty guarantees, net of assets in trust	829	891
Securities borrowing and repurchase arrangements	271	275
Financing arrangements	24	42

9. Income Tax

The provision for income tax expense differed from the amounts computed by applying the U.S. federal income tax statutory rate of 21.0% to pre-tax income as a result of the following for the three and six months ended June 30, 2020 and 2019, respectively (dollars in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Tax provision at U.S. statutory rate	$ 41	$ 55	$ 21	$ 100
Increase (decrease) in income taxes resulting from:				
Tax rate differences on income in other jurisdictions	8	1	13	1
Differences in tax bases in foreign jurisdictions	(17)	(6)	(13)	(21)
Deferred tax valuation allowance	8	5	3	23
Amounts related to uncertain tax positions	1	2	7	3
Corporate rate changes	—	—	—	(2)
Equity based compensation	1	(4)	—	(5)
Return to provision adjustments	(2)	3	(1)	4
Accrued Expenses	(4)	1	(1)	1
Other, net	1	1	—	1
Total provision for income taxes	$ 37	$ 58	$ 29	$ 105
Effective tax rate	18.9%	22.1%	28.6%	21.9%

The effective tax rate for the second quarter and first six months of 2020 differed from the U.S. Statutory rate of 21.0% primarily as a result of benefits from differences in bases in foreign jurisdictions, increases to the valuation allowance, return to provision adjustments, and accruals related to uncertain tax positions.

The effective tax rate for the second quarter and first six months of 2019 were higher than the U.S. Statutory rate of 21.0% primarily as a result of valuation allowances established on losses in foreign jurisdictions, accrual of uncertain tax positions, and return to provision adjustments. These expenses were partially offset by benefits from differences in bases in foreign jurisdictions and excess tax benefits related to equity compensation.

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 six months ended June 30, 2020 and 2019 were as follows (dollars in millions):

	Pension Benefits		Other Benefits	
	Three months ended June 30,		Three months ended June 30,	
	2020	2019	2020	2019
Service cost	$ 4	$ 3	$ 1	$ 1
Interest cost	1	2	1	1
Expected return on plan assets	(3)	(1)	—	—
Amortization of prior service cost (credit)	—	—	(1)	(1)
Amortization of prior actuarial losses	1	1	1	—
Net periodic benefit cost	$ 3	$ 5	$ 2	$ 1

	Pension Benefits		Other Benefits	
	Six months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Service cost	$ 7	$ 6	$ 1	$ 2
Interest cost	3	3	2	1
Expected return on plan assets	(5)	(3)	—	—
Amortization of prior service cost (credit)	—	—	(1)	(1)
Amortization of prior actuarial losses	2	2	1	1
Net periodic benefit cost	$ 7	$ 8	$ 3	$ 3

11. Reinsurance

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 June 30, 2020 and December 31, 2019, 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 June 30, 2020 and December 31, 2019, 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 June 30, 2020 or December 31, 2019 (dollars in millions):

		June 30, 2020		December 31, 2019	
Reinsurer	A.M. Best Rating	Amount	% of Total	Amount	% of Total
Reinsurer A	A+	$ 400	42.3%	$ 367	40.6%
Reinsurer B	A+	201	21.3	208	23.0
Reinsurer C	A	70	7.4	84	9.3
Reinsurer D	A++	49	5.2	53	5.9
Reinsurer E	A+	46	4.9	43	4.8
Other reinsurers		179	18.9	149	16.4
Total		$ 945	100.0%	$ 904	100.0%

Included in the total reinsurance ceded receivables balance were $274 million and $223 million of claims recoverable, of which $15 million and $15 million were in excess of 90 days past due, as of June 30, 2020 and December 31, 2019, respectively.

12. Policy Claims and Benefits

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):

	Six months ended June 30,	
	2020	2019
Balance at beginning of year	$ 6,786	$ 6,585
Less: reinsurance recoverable	(564)	(433)
Net balance at beginning of year	6,222	6,152
Incurred:		
Current year	5,740	5,457
Prior years	59	58
Total incurred	5,799	5,515
Payments:		
Current year	(1,332)	(1,063)
Prior years	(3,903)	(3,979)
Total payments	(5,235)	(5,042)
Other changes:		
Interest accretion	18	13
Foreign exchange adjustments	(142)	3
Total other changes	(124)	16
Net balance at end the period	6,662	6,641
Plus: reinsurance recoverable	633	525
Balance at end of the period	$ 7,295	$ 7,166

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 June 9, 2020, RGA issued 3.15% Senior Notes due June 15, 2030, with a face amount of $600 million. This security has been registered with the Securities and Exchange Commission. The net proceeds were approximately $593 million and will be used in part to repay the Company’s $400 million 5.000% Senior Notes due in 2021, and the remainder will be used for general corporate purposes. Capitalized issue costs were approximately $5 million.

On May 15, 2019, RGA issued 3.9% Senior Notes due May 15, 2029, with a face amount of $600 million. The net proceeds were approximately $594 million and were used in part to repay upon maturity the Company’s $400 million 6.45% Senior Notes that matured in November 2019. The remainder were used for general corporate purposes. Capitalized issue costs were approximately $5 million.

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.

Description	Date of Adoption	Effect on the Consolidated Financial Statements
Standards adopted:		
Leases This new standard, based on the principle that entities should recognize assets and liabilities arising from leases, does not significantly change the lessees' recognition, measurement and presentation of expenses and cash flows from the previous accounting standard. Leases are classified as finance or operating. The new standard's primary change is the requirement for entities to recognize a lease liability for payments and a right of use asset representing the right to use the leased asset during the term of operating lease arrangements. Lessees are permitted to make an accounting policy election to not recognize the asset and liability for leases with a term of twelve months or less. Lessors' accounting is largely unchanged from the previous accounting standard. In addition, the new standard expands the disclosure requirements of lease arrangements. Early adoption is permitted.	January 1, 2019	This guidance was adopted by applying the optional transition method. The adoption of the standard did not have a material impact on the Company's results of operations or financial position. The adoption of the updated guidance resulted in the Company recognizing a right-to-use asset and lease liability of $55 million included in other assets and other liabilities, respectively, in the condensed consolidated balance sheets.
Derivatives and Hedging This updated guidance improves the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements and make certain targeted improvements to simplify the application of the hedge accounting in current GAAP related to the assessment of hedge effectiveness. Early adoption is permitted.	January 1, 2019	This guidance was adopted by applying a modified retrospective approach to existing hedging relationships as of the date of adoption. The adoption of the new standard did not have a material impact on the Company's results of operations or financial position. Upon adoption of the guidance, the Company recorded an immaterial adjustment to retained earnings as of the beginning of the first reporting period in which the guidance was effective and modified some disclosures.
Financial Instruments – Credit Losses This guidance adds to U.S. GAAP an impairment model, known as current expected credit loss ("CECL") model that is based on expected losses rather than incurred losses. For traditional and other receivables, held-to-maturity debt securities, loans and other instruments entities will be required to use the new forward-looking "expected loss" model that generally will result in earlier recognition of allowance for losses. For available-for-sale debt securities with unrealized losses, entities will measure credit losses similar to what they do today, except the losses will be recognized through an allowance for credit losses and adjusted each period for changes in credit risks. Early adoption is permitted.	January 1, 2020	For asset classes within the scope of the CECL model, this guidance was adopted through a cumulative-effect adjustment to retained earnings (that is, a modified-retrospective approach). For available-for-sale debt securities, this guidance was applied prospectively. The allowance for credit losses increased when this guidance was adopted to include expected losses over the lifetime of commercial mortgages and other loans, including reasonable and supportable forecasts and expected changes in future economic conditions. The overall impact was an approximate $15 million increase in the allowance for credit losses. This increase was reflected as a decrease to opening retained earnings, net of income taxes, as of January 1, 2020. See Note 1 – "Business and Basis of Presentation" for more information.
Fair Value Measurement This guidance is part of the FASB's disclosure framework project and eliminates certain disclosure requirements for fair value measurement, requires entities to disclose new information and modifies existing disclosure requirements. Early adoption is permitted.	January 1, 2020	Certain disclosure changes in the new guidance were applied prospectively in the year of adoption. The remaining changes in the new guidance were applied retrospectively to all periods presented in the year of adoption. As of December 31, 2019, the Company early adopted the guidance that removed the requirements relating to transfers between fair value hierarchy levels and certain disclosures about valuation processes for Level 3 fair value measurements. The Company adopted the remainder of the guidance on January 1, 2020. The adoption of the new guidance was not material to the Company's financial position.
Reference Rate Reform On July 27, 2017, the Financial Conduct Authority (the "FCA") announced that it intends to stop persuading or compelling banks to submit London Interbank Offered Rates ("LIBOR") after December 31, 2021. In addition, separate workstreams are underway in Europe and the U.S. to reform existing reference rates and provide a fall back rate upon discontinuation of LIBOR. During 2019, the Alternative Rates Committee of the Federal Reserve Board proposed the Secured Overnight Financing Rate ("SOFR") as an alternative rate to replace U.S. Dollar LIBOR, and the European Central Bank recommended the Euro Short-term Rate ("ESTER") as the new risk-free rate. Other jurisdictions are conducting similar exercises as well. This new guidance eases the potential burden in accounting for, or recognizing the effects of, reference rate reform on financial reporting. The ASU provides optional expedients and exceptions for applying GAAP modification to contracts and hedge accounting relationships affected by reference rate reform on financial reporting. Under the new guidance, a change in the reference rate for a contract that meets certain criteria will be accounted for as a continuation of that contract rather than the creation of a new contract. The new guidance applies to debt, insurance contracts, leases, derivative contracts and other arrangements.	January 1, 2020	This guidance does not have any accounting consequences. The Company has put together a team that is currently assessing the effects of the discontinuation of LIBOR on existing contracts that extend beyond 2021, by analyzing contractual fallback provisions, evaluating alternative rate ramifications, and assessing the effects on current hedging strategies.

Description	Anticipated Date of Adoption	Effect on the Consolidated Financial Statements
Standards not yet adopted:		
Financial Services – Insurance This guidance significantly changes how insurers account for long-duration insurance contracts. The new guidance also significantly expands the disclosure requirements of long-duration insurance contracts. The new guidance is currently effective for annual and interim reporting periods beginning January 1, 2022. The FASB has tentatively agreed to defer the effective date by one year. Upon issuance of a final standard, the new guidance will be effective for annual and interim periods beginning January 1, 2023. Below are the most significant areas of change:	January 1, 2023	See each significant area of change below for the method of adoption and expected impact to the Company's results of operations and financial position.
Cash flow assumptions for measuring liability for future policy benefits The new guidance requires insurers to review, and if necessary, update the cash flow assumptions used to measure liabilities for future policy benefits periodically. The change in the liability estimate as a result of updating cash flow assumptions will be recognized in net income.		Cash flow assumptions for measuring liability for future policy benefits The Company will likely adopt this guidance on a modified retrospective basis as of the earliest period presented in the year of adoption. The Company is currently evaluating the impact of this amendment on its results of operations and financial position but anticipates the updated guidance will likely have a material impact.
Discount rate assumption for measuring liability for future policy benefits The new guidance requires insurers to update the discount rate assumption used to measure liabilities for future policy benefits at each reporting period, and the discount rate utilized must be based on an upper-medium grade fixed income instrument yield. The change in the liability estimate as a result of updating the discount rate assumption will be recognized in other comprehensive income.		Discount rate assumption for measuring liability for future policy benefits The Company will likely adopt this guidance on a modified retrospective basis as of the earliest period presented in the year of adoption. The Company is currently evaluating the impact of this amendment on its results of operations and financial position but anticipates the updated guidance will likely have a material impact.
Market risk benefits The new guidance created a new category of benefit features called market risk benefits that will be measured at fair value with changes in fair value attributable to a change in the instrument-specific credit risk recognized in other comprehensive income.		Market risk benefits The Company will adopt this guidance on a retrospective basis as of the earliest period presented in the year of adoption. The Company is currently evaluating the impact of this amendment on its results of operations and financial position but anticipates the updated guidance will likely have a material impact.
Amortization of deferred acquisition costs ("DAC") and other balances The new guidance requires DAC and other balances to be amortized on a constant level basis over the expected term of the related contracts.		Amortization of deferred acquisition costs ("DAC") and other balances The Company will likely adopt this guidance on a modified retrospective basis as of the earliest period presented in the year of adoption. The Company is currently evaluating the impact of this amendment on its results of operations and financial position but anticipates the updated guidance will likely have a material impact.

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 “intend,” “expect,” “project,” “estimate,” “predict,” “anticipate,” “should,” “believe” 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 ongoing novel coronavirus (“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. Further, any estimates, projections, illustrative scenarios or frameworks used to plan for potential effects of the pandemic are dependent on numerous underlying assumptions and estimates that may not materialize. Additionally, numerous other important factors (whether related to, resulting from or exacerbated by the COVID-19 pandemic or otherwise) could also cause actual 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, (28) the effects of the Tax Cuts and Jobs Act of 2017 may be different than expected and (29) 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 2019 Annual Report, 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 $3.5 trillion of life reinsurance in force and assets of $80.7 billion as of June 30, 2020. 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. 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 business, the Company’s long-term 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 capital solutions transactions, such as financial reinsurance, 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.

The COVID-19 Pandemic Impact and Update

The ongoing COVID-19 global pandemic and the response to it has caused, and will continue to cause, increases in mortality, morbidity and other insurance risks, as well as significant disruption in the international and U.S. economies and financial markets. The extent to which the Company’s future results continue to be affected by COVID-19 will largely depend on, among other factors, country-specific circumstances, measures by public and private institutions, COVID-19’s impact on all other causes of death and the timing of effective treatments and/or a vaccine for COVID-19. Given these many variables, the Company cannot reliably predict the future impact of the pandemic on its business, results of operations and financial condition. In addition, clients’ ability to write new business in this environment may result in a slowdown in the Company’s new business temporarily, however, much of the Company’s premiums and other revenues are contractually recurring for many years to come.

One of the Company’s priorities continues to be the safety and well-being of its employees and clients, as such its business continuity plans are still activated and the actions taken to protect both employees and clients, such as working from home, restricting travel, conducting meetings remotely, and reinforcing the importance of face coverings, good hygiene and social distancing, also continue. The Company’s offices worldwide are at a minimum adhering to local government mandates and guidelines regarding occupancy levels, however in certain situations the Company’s guidelines are more restrictive than those of local governments.

The Company has not currently experienced any significant disruptions to its daily operations, despite most of its workforce continuing to work remotely. Expenses incurred to implement its business continuity plans, including work from home arrangements, are not material and have been more than offset by reduced travel and other expenses during the three and six months ended June 30, 2020. However, COVID-19 may create operational risks and related impacts, which may include a reduction in new business volumes from slower sales, impacts to the Company’s workforce productivity due to travel restrictions, temporary office closures and increased remote working situations, and potential client delays in paying premiums and reporting claims. The Company is heavily reliant on timely reporting from its clients and other third parties. While operational risks, including privacy and cybersecurity risks, are heightened during remote working situations the Company has implemented increased communication related to these risks to all its workforce and continues to monitor its programs, processes and procedures designed to manage these risks.

Given the many variables and uncertainties in the amounts and timing of claims, the Company is unable to reliably predict the ultimate claims it will experience as a result of the pandemic, however an infectious pandemic will negatively impact the profitability of the Company’s life and health business due to increased claims. The variables and uncertainties include age, gender, comorbidities, other insured versus general population characteristics, geography-specific institutional and individual mitigating actions, medical capacity, and other factors. To date, general population COVID-19 deaths have been heavily concentrated in individuals aged 70 and older and with pre-existing comorbidities. 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.

Following revisions to the Company's model, based on updated external data and the Company's claim experience to date, which revised models are subject to the many variables and uncertainties noted above, the financial impact of COVID-19 on the Company is projected to be lower than previous estimates for the same level of general population deaths. The U.S. is expected to continue being the key driver of mortality claim costs, followed by the UK and Canada. Utilizing the Company's updated model and assuming, beginning in the third quarter, an additional 200,000 U.S future general population deaths, 50,000 future general population deaths in the UK, 10,000 future general population deaths in Canada as well as representative amounts in the Company's other global markets, the resulting impact on the Company is estimated to be an additional $400 million to $600 million of pre-tax mortality claim costs beginning in the third quarter. These estimates assume that all COVID-19 claims are marginal extra claims and not accelerations of claims. In addition, the Company's longevity business is expected to act as a modest offset to excess life reinsurance claims and has not been netted from the estimates above. For the three months ended June 30, 2020, the Company estimates it has incurred $300 million of COVID-19 related life and health claim costs, including amounts incurred but not reported, with approximately $240 million of that amount being associated with U.S. Individual Mortality. However, as is normally the case, a more in depth review of claims will occur as clients provide additional information regarding cause of death in subsequent months. In some cases, cause of death may not specifically be identified as COVID-19 related even though such may be the case. The Company did experience a higher incidence of older age death claims in the U.S. during the three and six months ended June 30, 2020, and the highest mortality ratios were in states with the highest general population COVID-19 deaths. Additional analysis and information from clients will allow the Company to refine the impact of COVID-19 on current quarter and year to date results.

The global financial markets continue to be in a state of uncertainty due to COVID-19 mandated economic shutdowns and historically large and rapid central bank and fiscal policies meant to offset the economic impact of the pandemic. The economic weakness and uncertainty caused by these events may also adversely affect the Company's financial performance. 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. The current market environment may result in certain investments being downgraded which can affect conformance with these limits. The Company expects to incur a higher-than-normal level of investment impairments during the remainder of 2020, however it is unable to predict the amount of such impairments. The level of such impairments will depend on broad economic conditions and the pace at which global economies recover from the effects of COVID-19. The Company recognized $34 million of impairment losses and changes in the credit allowance for its available-for-sale fixed maturities for the six months ended June 30, 2020. The net impact to the credit allowance for available-for-sale fixed maturity securities was immaterial for the second quarter as new allowances were offset by sales and improved fair values on previously impaired securities. The valuation allowance on mortgage loans increased by $17 million and $30 million for the three and six month ended June 30, 2020, respectively. During the second quarter the Company recognized $5 million of impairments on limited partnerships. In addition, the Company may experience a short-term decrease in cash flows from its commercial mortgage loan portfolio as it assists borrowers that are affected by the current economic environment. See "Investments" for more information.

The Company's liquidity is monitored and managed on a daily basis to ensure all current and future liquidity demands can be met, and that it maintains access to liquidity resources to meet even extreme tail risk liquidity needs. In addition, RGA maintains a number of arm's length arrangements for mobilizing liquidity throughout the group. Like many companies, liquidity is being enhanced by holding more cash received in the course of its normal operating and investing activities. The Company also suspended common stock repurchases until further notice.

Key liquidity resources available to the group include:

- Holdings of cash and cash equivalents of $4.3 billion as of June 30, 2020,
- Cash flows from investments, which is approximately $2 billion per year,
- Access to $850 million of cash through the Company's committed syndicated credit facility, and
- Access to over $500 million of cash through the membership in the Federal Home Loan Bank of Des Moines.

In order to further enhance its capital and liquidity position, the Company executed two capital market transactions during the quarter. On June 5, 2020, the Company completed an offering of its common stock and received net proceeds of approximately $481 million. On June 9, 2020, the Company completed the offering of $600 million aggregate principal amount of its 3.150% Senior Notes due 2030 (the "Senior Notes"), which will be used to repay the $400 million 5.000% senior notes due 2021 and for general corporate purposes. The public offering price of the Senior Notes was 99.472% of the principal amount, and the Company received net proceeds of approximately $593 million.

Additional sources of liquidity for RGA's operating subsidiaries include near-term reinsurance cash flows, sales of invested assets, and potentially other forms of borrowing.

RGA's operating subsidiaries continue to be well capitalized and the Company continues to monitor its solvency position under multiple capital regimes on a regular basis while considering both its developing experience and economic conditions. In addition, the Company utilizes its internal capital model to assess its ability to meet its long-term obligations under a range of stress scenarios on a consolidated basis. This internal capital model is also used as the capital basis for RGA's consolidated Own Risk and Solvency Assessment.

The Company's primary insurance subsidiaries' financial strength ratings are strong, with all having an S&P rating of AA-, and some of those also having a Moody's rating of A1, and an A.M. Best rating of A+. In addition, even though the insurance subsidiaries' various capital ratios and solvency measures may be somewhat weakened due to the COVID-19 pandemic and the economic environment, RGA believes its various subsidiaries would remain financially solvent under such a pandemic scenario. Reinsurance treaties, whether facultative or automatic, generally provide recapture provisions. Most U.S. based reinsurance treaties include a recapture right for ceding companies, generally after 10 years. Outside of the U.S., treaties primarily include a mutually agreed-upon recapture provision. Recapture rights permit the ceding company to reassume all or a portion of the risk formerly ceded to the reinsurer. In some situations, the Company has the right to place assets in trust for the benefit of the ceding company in lieu of recapture. Additionally, certain treaties may grant recapture rights to ceding companies in the event of a significant decrease in RGA Reinsurance Company's NAIC risk based capital ratio or financial strength rating. The RBC ratio trigger varies by treaty, with the majority between 125% and 225% of the NAIC's company action level. Financial strength rating triggers vary by reinsurance treaty with the majority of the triggers reached if the specific legal entity's financial strength rating falls five notches from its current rating of "AA-" to the "BBB" level on the S&P scale. Similar solvency and ratings based on recapture rights exist on treaties with other operating companies. Recapture of business previously ceded does not affect premiums ceded prior to the recapture of such business, but would reduce premiums and insurance liabilities in subsequent periods. Upon recapture, the Company would reflect a net gain or loss on the settlement of the assets and liabilities associated with the reinsurance treaty. In some cases, the ceding company is required to pay the Company a recapture fee.

Globally, regulators are closely monitoring the COVID-19 pandemic and its possible impact on the insurance industry. Various regulators and other authorities have been requiring regulated entities to review their business continuity plans and to address potential pandemic risk in their contingency plans. In addition, some regulators have adopted or are considering adopting measures to provide temporary relief in respect to certain regulatory requirements and also to policyholders. These regulatory initiatives have accompanied a range of measures by governments and central banks, such as interest rate cuts and other measures, in a number of jurisdictions to support and stimulate the economy. The Company expects that regulators and other authorities will continue monitoring the spread and effects of COVID-19 closely over the next few months and adapt their guidance and additional requirements as the situation develops.

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 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 2019 Annual Report under "Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies.

Consolidated Results of Operations

The following table summarizes net income for the periods presented.

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Revenues:	(Dollars in millions, except per share data)			
Net premiums	$ 2,790	$ 2,764	$ 5,609	$ 5,502
Investment income, net of related expenses	645	584	1,239	1,164
Investment related gains (losses), net:				
Impairments and change in allowance for credit losses on fixed maturity securities	—	—	(34)	(9)
Other investment related gains (losses), net	81	12	(170)	29
Investment related gains (losses), net	81	12	(204)	20
Other revenues	90	107	166	201
Total revenues	3,606	3,467	6,810	6,887
Benefits and Expenses:				
Claims and other policy benefits	2,700	2,516	5,364	5,024
Interest credited	187	158	333	291
Policy acquisition costs and other insurance expenses	290	260	538	572
Other operating expenses	188	222	383	424
Interest expense	42	43	83	83
Collateral finance and securitization expense	4	8	10	16
Total benefits and expenses	3,411	3,207	6,711	6,410
Income before income taxes	195	260	99	477
Provision for income taxes	37	58	29	105
Net income	$ 158	$ 202	$ 70	$ 372
Earnings per share:				
Basic earnings per share	$ 2.49	$ 3.23	$ 1.12	$ 5.93
Diluted earnings per share	$ 2.48	$ 3.18	$ 1.11	$ 5.83

Consolidated income before income taxes decreased $65 million, and $378 million, for the three and six months ended June 30, 2020, respectively, as compared to the same periods in 2019. The decrease in income for the second quarter of 2020 was primarily due to increased mortality claims in the U.S. and Latin America Traditional segment, some of which are attributable to the COVID-19 pandemic. The unfavorable mortality claims in the U.S. were partially offset by favorable morbidity results across all segments and an increase in income before taxes in the Company's Financial Solutions business. In addition to increased mortality claims in the U.S. and Latin America Traditional segment, income for the first six months of 2020 reflects unfavorable changes in investment related gain (losses) resulting from changes in the fair value of embedded derivatives on modco or funds withheld treaties within the U.S. segment due to changes in interest rates and credit spreads primarily attributable to the recent disruption in the global financial markets caused by COVID-19. The effect of the change in fair value of these embedded derivatives on income is discussed below. As discussed in "The COVID-19 Impact and Update" above, the Company estimates it has incurred $300 million of COVID-19 related life and health claim costs, including amounts incurred but not reported, with approximately $240 million of that amount being associated with U.S. Individual Mortality. The Company did experience a higher incidence of older age death claims in the U.S. during the three months ended June 30, 2020, while the cause of death information is not yet available for all claims, the Company's analysis attributes excess claim costs to COVID-19 or COVID-19 related factors and therefore additional analysis and information from clients will allow the Company to refine the impact of COVID-19 on current quarter and year to date results. Foreign currency fluctuations relative to the prior year decreased income before income taxes by $6 million in the second quarter and decreased income by $2 million in the first six months of 2020, as compared to the same periods in 2019.

Consolidated net premiums increased $26 million, or 1%, and 107 million, or 1.9%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019, primarily due to growth in life reinsurance in force. Foreign currency fluctuations decreased net premiums by $45 million and $78 million in the second quarter and the first six months of 2020, as compared to the same periods in 2019. Consolidated assumed life insurance in force increased to $3,457.8 billion as of June 30, 2020, from $3,377.2 billion as of June 30, 2019, due to new business production and in force transactions. The Company added new business production, measured by face amount of insurance in force, of $116.1 billion and $70.4 billion during the second quarter of 2020 and 2019, respectively, and $210.9 billion and $149.7 billion during the first six months of 2020 and 2019, respectively.

Consolidated investment income, net of related expenses, increased $61 million, or 10.4%, and $75 million, or 6.4%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases are primarily attributable to an increase in the average invested asset base. Investment income is affected by changes in the fair value of the Company's funds withheld at interest assets associated with the reinsurance of certain EIA products. The re-measurement of these funds withheld assets decreased investment income by $7 million in the second quarter and decreased investment income by $19 million in the first six months of 2020. The effect on investment income of the EIA's market value changes is substantially offset by a corresponding change in interest credited to policyholder account balances resulting in an insignificant effect on net income.

Average invested assets at amortized cost, excluding spread related business, for the six months ended June 30, 2020, were $30 billion, a 6.4% increase over June 30, 2019. The average yield earned on investments, excluding spread related business, was 4.07% and 4.38% for the second quarter of 2020 and 2019, respectively, and 4.07% and 4.43% for the six months ended June 30, 2020 and 2019, respectively. The average yield will vary from quarter to quarter and year to year depending on a number of variables, including the prevailing interest rate and credit spread environment, prepayment fees, make-whole premiums and changes in the mix of the underlying investments and cash balances, and the timing of dividends and distributions on certain investments. A continued low interest rate environment is expected to put downward pressure on this yield in future reporting periods.

Total investment related gains (losses), net were $81 million and $12 million for the second quarter of 2020 and 2019, respectively, and $(204) million and $20 million for the first six months of 2020 and 2019, respectively. A portion of the increase in investment related gains (losses) was offset by changes in the value of embedded derivatives related to reinsurance treaties written on a modco or funds withheld basis, reflecting the impact of changes in interest rates and credit spreads on the calculation of fair value, which fluctuated significantly during the year as a result of the economic uncertainty and market disruptions caused by the COVID-19 pandemic. Changes in the fair value of these embedded derivatives increased (decreased) investment related gains by $1 million and $5 million for the second quarter of 2020 and 2019, respectively, and $(229) million and $3 million for the first six months of 2020 and 2019, respectively. The Company recognized $34 million of impairment losses and changes in the credit allowance for its available-for-sale fixed maturities for the six months ended June 30, 2020, The net impact to the credit allowance for available-for-sale fixed maturity securities was immaterial for the second quarter as new allowances were offset by sales and improved fair values on previously impaired securities. The valuation allowance on mortgage loans increased by $17 million and $30 million for the three and six month ended June 30, 2020, respectively. The increase in both the credit allowance for available-for-sale fixed maturity securities and the valuation allowance on mortgage loans is primarily attributable to the economic uncertainty caused by COVID-19. See the Investment section within Management Discussion and Analysis, Note 4 – "Investments" and Note 5 – "Derivative Instruments" in the Notes to Condensed Consolidated Financial Statements for additional information on the impairment losses and derivatives.

The effective tax rate on a consolidated basis was 18.9% and 22.1% for the second quarter 2020 and 2019, respectively, and 28.6% and 21.9% for the first six months of 2020 and 2019, 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.

The Company recognizes in consolidated income, any changes in the fair value of embedded derivatives on modco or funds withheld treaties, equity-indexed annuity treaties (“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 June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Modco/Funds withheld:				
Unrealized gains (losses)	$ 1	$ 5	$ (229)	$ 3
Deferred acquisition costs/retrocession	2	(5)	115	(8)
Net effect	3	—	(114)	(5)
EIAs:				
Unrealized gains (losses)	(7)	(19)	(19)	(20)
Deferred acquisition costs/retrocession	2	10	10	10
Net effect	(5)	(9)	(9)	(10)
Guaranteed minimum benefit riders:				
Unrealized gains (losses)	107	(18)	(21)	—
Related freestanding derivatives, net of deferred acquisition costs/retrocession	(70)	21	94	2
Net effect	37	3	73	2
Total net effect after freestanding derivatives	$ 35	$ (6)	$ (50)	$ (13)

Results of Operations by Segment

U.S. and Latin America Operations

The U.S. and Latin America operations include business generated by its offices in the U.S., Mexico and Brazil. The offices in Mexico and Brazil provide services to clients in other Latin American countries. 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 and other longevity type products. Capital Solutions 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 transactions. Typically these transactions do not qualify as reinsurance under GAAP, due to their low-risk nature, as such only the related net fees are reflected in other revenues on the condensed consolidated statements of income.

For the three months ended June 30, 2020:		Financial Solutions		
(dollars in millions)	Traditional	Asset-Intensive	Capital Solutions	Total U.S. and Latin America
Revenues:				
Net premiums	$ 1,454	$ 15	$ —	$ 1,469
Investment income, net of related expenses	177	241	2	420
Investment related gains (losses), net	7	15	—	22
Other revenues	4	24	26	54
Total revenues	1,642	295	28	1,965
Benefits and expenses:				
Claims and other policy benefits	1,558	49	—	1,607
Interest credited	18	139	—	157
Policy acquisition costs and other insurance expenses	195	7	2	204
Other operating expenses	29	7	2	38
Total benefits and expenses	1,800	202	4	2,006
Income before income taxes	$ (158)	$ 93	$ 24	$ (41)

For the three months ended June 30, 2019:		Financial Solutions		
(dollars in millions)	Traditional	Asset-Intensive	Capital Solutions	Total U.S. and Latin America
Revenues:				
Net premiums	$ 1,410	$ 9	$ —	$ 1,419
Investment income, net of related expenses	173	204	1	378
Investment related gains (losses), net	(4)	17	—	13
Other revenues	5	50	21	76
Total revenues	1,584	280	22	1,886
Benefits and expenses:				
Claims and other policy benefits	1,293	49	—	1,342
Interest credited	19	124	—	143
Policy acquisition costs and other insurance expenses	180	25	(1)	204
Other operating expenses	37	10	3	50
Total benefits and expenses	1,529	208	2	1,739
Income before income taxes	$ 55	$ 72	$ 20	$ 147

For the six months ended June 30, 2020:		Financial Solutions		
(dollars in millions)	Traditional	Asset-Intensive	Capital Solutions	Total U.S. and Latin America
Revenues:				
Net premiums	$ 2,827	$ 27	$ —	$ 2,854
Investment income, net of related expenses	338	474	3	815
Investment related gains (losses), net	—	(145)	—	(145)
Other revenues	10	52	51	113
Total revenues	3,175	408	54	3,637
Benefits and expenses:				
Claims and other policy benefits	2,925	102	—	3,027
Interest credited	37	268	—	305
Policy acquisition costs and other insurance expenses	370	(31)	2	341
Other operating expenses	63	14	5	82
Total benefits and expenses	3,395	353	7	3,755
Income before income taxes	$ (220)	$ 55	$ 47	$ (118)

For the six months ended June 30, 2019:		Financial Solutions		
(dollars in millions)	Traditional	Asset-Intensive	Capital Solutions	Total U.S. and Latin America
Revenues:				
Net premiums	$ 2,767	$ 16	$ —	$ 2,783
Investment income, net of related expenses	359	401	2	762
Investment related gains (losses), net	(10)	18	—	8
Other revenues	9	73	46	128
Total revenues	3,125	508	48	3,681
Benefits and expenses:				
Claims and other policy benefits	2,593	97	—	2,690
Interest credited	39	213	—	252
Policy acquisition costs and other insurance expenses	356	44	5	405
Other operating expenses	70	17	5	92
Total benefits and expenses	3,058	371	10	3,439
Income before income taxes	$ 67	$ 137	$ 38	$ 242

Income before income taxes decreased by $188 million, and $360 million, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in income before income taxes was primarily related to a significant increase in claim frequency within the individual mortality business. While the cause of death is not yet available for all claims, the Company believes the excess claim costs are attributable to COVID-19 or COVID-19 related factors as the Company did experience a higher incidence of older age death claims in the U.S. during the three months ended June 30, 2020, and the highest mortality ratios were in states with the highest general population COVID-19 deaths. Also, contributing to the six month variance were changes in the value of the embedded derivatives associated with reinsurance treaties structured on a modco or funds withheld basis. The volatility in the financial markets as a result of the COVID-19 pandemic, was the primary driver of this change.

Traditional Reinsurance

Income before income taxes for the U.S. and Latin America Traditional segment decreased by $213 million, and $287 million, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decreases were primarily related to unfavorable individual mortality experience from a higher than expected count of claims. While the cause of death is not yet available for all claims, the Company believes the excess claims are attributable to COVID-19 or COVID-19 related factors. In addition, the segment reported lower variable investment income year over year.

Net premiums increased $44 million, or 3.1%, and $60 million, or 2.2%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases in net premiums in the second quarter and first six months were due to organic growth as well as new sales. The segment added new individual life business production, measured by face amount of insurance in force of $25.3 billion and $24.7 billion for the second quarter and $59.3 billion and $53.5 billion for the first six months of 2020 and 2019, respectively.

Net investment income increased $4 million, or 2.3%, and decreased $21 million, or 5.8%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in the second quarter was primarily due to a higher asset base offset somewhat by lower variable investment income. The decrease in the first six months was primarily related to less variable investment income. Investment related gains (losses), net increased $11 million and $10 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019 as result of changes in the fair value of embedded derivatives related to modified coinsurance and funds withheld treaties as a result of changes in interest rates and credit spreads.

Claims and other policy benefits as a percentage of net premiums (“loss ratios”) were 107.2% and 91.7% for the second quarter and 103.5% and 93.7%, for the six months ended June 30, 2020 and 2019, respectively. The increase in the loss ratio for the second quarter was primarily due to a high frequency of claims in the individual mortality line of business. As explained above, while the cause of death is not yet available for all claims, the Company believes the excess claims are attributable to COVID-19 or COVID-19 related factors.

Interest credited expense decreased $1 million, or 5.3%, and $2 million, or 5.1%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. Interest credited in this segment relates to amounts credited on cash value products which also have a significant mortality component. Income before income taxes is affected by the spread between the investment income and the interest credited on the underlying products.

Policy acquisition costs and other insurance expenses as a percentage of net premiums were 13.4% and 12.8% for the second quarter and 13.1% and 12.9% for the six months ended June 30, 2020 and 2019, respectively. While these ratios are expected to remain in a predictable range, they may fluctuate from period to period due to varying allowance levels within coinsurance-type arrangements. In addition, the amortization pattern of previously capitalized amounts, which are subject to the form of the reinsurance agreement and the underlying insurance policies, may vary. Also, the mix of first year coinsurance business versus yearly renewable term business can cause the percentage to fluctuate from period to period.

Other operating expenses decreased $8 million, or 21.6%, and $7 million, or 10%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in the second quarter and first six months was primarily due to lower salaries and fringe costs related to of incentive-based compensation accruals. Other operating expenses, as a percentage of net premiums were 2.0% and 2.6% for the second quarter and 2.2% and 2.5% first six months of 2020 and 2019, respectively. The expense ratio tends to fluctuate only slightly from period to period due to the maturity and scale of this segment.

Financial Solutions – Asset-Intensive Reinsurance

Asset-Intensive reinsurance within the U.S. and Latin America Financial Solutions segment primarily involves assuming investment risk within underlying annuities and corporate-owned life insurance policies. Most of these agreements are coinsurance, coinsurance with funds withheld or modco. The Company recognizes profits or losses primarily from the spread between the investment income earned and the interest credited on the underlying deposit liabilities, income associated with longevity risk, and fees associated with variable annuity account values and guaranteed investment contracts.

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 June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Revenues:				
Total revenues	$ 295	$ 280	$ 408	$ 508
Less:				
Embedded derivatives – modco/funds withheld treaties	(7)	9	(230)	14
Guaranteed minimum benefit riders and related free standing derivatives	39	4	113	1
Revenues before certain derivatives	263	267	525	493
Benefits and expenses:				
Total benefits and expenses	202	208	353	371
Less:				
Embedded derivatives – modco/funds withheld treaties	(2)	6	(115)	8
Guaranteed minimum benefit riders and related free standing derivatives	2	1	40	(1)
Equity-indexed annuities	5	9	9	10
Benefits and expenses before certain derivatives	197	192	419	354
Income before income taxes:				
Income before income taxes	93	72	55	137
Less:				
Embedded derivatives – modco/funds withheld treaties	(5)	3	(115)	6
Guaranteed minimum benefit riders and related free standing derivatives	37	3	73	2
Equity-indexed annuities	(5)	(9)	(9)	(10)
Income before income taxes and certain derivatives	$ 66	$ 75	$ 106	$ 139

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 on funds withheld at interest associated with treaties written on a modco or funds withheld basis 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 six months ended June 30, 2020 and 2019.

The change in fair value of the embedded derivatives - modco/funds withheld treaties increased (decreased) income before income taxes by $(5) million and $3 million for the second quarter and $(115) million and $6 million for the six months ended June 30, 2020 and 2019, respectively. The decrease in income for the second quarter was primarily due to updated client reporting, partially offset by tightening credit spread. The decrease in income for the first six months of 2020 was primarily due to widening credit spreads, partially offset by lower interest rates, both of which were primarily attributable to the recent disruption in the global financial markets caused by the COVID-19 pandemic.

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. 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 six months ended June 30, 2020 and 2019.

The change in fair value of the guaranteed minimum benefits, after allowing for changes in the associated free standing derivatives, increased income before income taxes by $37 million and $3 million for the second quarter and $73 million and $2 million for the six months ended June 30, 2020 and 2019, respectively. The increase in income for the three and six months ended June 30, 2020, was due to the change in credit valuation adjustment, which was primarily attributable to the recent disruption in the global financial markets caused by the COVID-19 pandemic.

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 decreased income before income taxes by $5 million and $9 million for the second quarter and $9 million and $10 million for the six months ended June 30, 2020 and 2019, respectively. The decreases in income for the second quarter and first six months of 2020 were primarily due to declining interest rates.

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 $9 million and $33 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease for the three months ended June 30, 2020, was primarily due to favorable investment spreads in the prior year. The decrease for the six months ended June 30. 2020 was primarily due to the impact from negative equity market performance, favorable investment spreads in the prior year, and lower investment related gains (losses), net in coinsurance and funds withheld portfolios. Funds withheld capital gains (losses) are reported in investment income.

Revenue before certain derivatives decreased by $5 million and increased by $32 million for the three and six months ended June 30, 2020, respectively, as compared to the same periods in 2019. The decrease in the second quarter was primarily due to lower investment related gains (losses), net due to increased allowances for commercial mortgage loans, partially offset by asset-intensive transactions executed in the second half of 2019. The increase in the first six months of 2020 was primarily due to asset-intensive transactions executed in the second half of 2019, partially offset by lower investment related gains (losses), net due to increased allowances for commercial mortgage loans.

Benefits and expenses before certain derivatives increased by $5 million and $65 million for the three and six months ended June 30, 2020, as compared to the same period in 2019. The increases in the second quarter and first six months were primarily due to asset-intensive transactions executed in 2019.

The invested asset base supporting this segment increased to $23.5 billion as of June 30, 2020 from $22.1 billion as of June 30, 2019. As of June 30, 2020, $3.1 billion of the invested assets were funds withheld at interest, of which greater than 90% is associated with one client.

Financial Solutions – Capital Solutions

Capital Solutions within the U.S. and Latin America Financial Solutions segment income before income taxes consists primarily of net fees earned on financial reinsurance transactions. Additionally, a portion of the business is brokered business in which the Company does not participate in the assumption of risk. The fees earned from financial reinsurance contracts and brokered business are reflected in other revenues, and the fees paid to retrocessionaires are reflected in policy acquisition costs and other insurance expenses.

Income before income taxes increased $4 million, or 20.0%, and $9 million, or 23.7%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases were primarily due to the growth from new transactions and organic growth on existing transactions.

At June 30, 2020 and 2019, the amount of reinsurance assumed from client companies, as measured by pre-tax statutory surplus, risk based capital and other financial structures was $19.4 billion and $15.8 billion, respectively. The increase was primarily due to a number of new transactions offsetting the termination of certain agreements, as well as organic growth on existing transactions. 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.

Canada Operations

The Company conducts reinsurance business in Canada primarily through RGA Canada. 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 financial reinsurance.

(dollars in millions)	Three months ended June 30,					
	2020			2019		
Revenues:	Traditional	Financial Solutions	Total Canada	Traditional	Financial Solutions	Total Canada
Net premiums	$ 254	$ 20	$ 274	$ 264	$ 23	$ 287
Investment income, net of related expenses	50	—	50	51	—	51
Investment related gains (losses), net	6	—	6	3	—	3
Other revenues	1	2	3	—	1	1
Total revenues	311	22	333	318	24	342
Benefits and expenses:						
Claims and other policy benefits	216	17	233	206	20	226
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	42	1	43	57	1	58
Other operating expenses	9	—	9	9	(1)	8
Total benefits and expenses	267	18	285	272	20	292
Income before income taxes	$ 44	$ 4	$ 48	$ 46	$ 4	$ 50

(dollars in millions)	Six months ended June 30,					
	2020			2019		
Revenues:	Traditional	Financial Solutions	Total Canada	Traditional	Financial Solutions	Total Canada
Net premiums	$ 514	$ 41	$ 555	$ 519	$ 45	$ 564
Investment income, net of related expenses	99	1	100	100	1	101
Investment related gains (losses), net	(6)	—	(6)	10	—	10
Other revenues	—	4	4	1	2	3
Total revenues	607	46	653	630	48	678
Benefits and expenses:						
Claims and other policy benefits	436	37	473	406	41	447
Interest credited	—	—	—	—	—	—
Policy acquisition costs and other insurance expenses	87	1	88	111	1	112
Other operating expenses	17	1	18	16	1	17
Total benefits and expenses	540	39	579	533	43	576
Income before income taxes	$ 67	$ 7	$ 74	$ 97	$ 5	$ 102

Income before income taxes decreased by $2 million, or 4.0%, and $28 million, or 27.5%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in income before income taxes for the second quarter was primarily due to less favorable individual life mortality experience compared to the same period in 2019 partially offset by higher investment related gains associated with the changes in the fair value of credit default swap derivatives. Foreign currency exchange fluctuations in the Canadian dollar resulted in a decrease in income before income taxes of $2 million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Traditional Reinsurance

Income before income taxes for the Canada Traditional segment decreased by $2 million, or 4.3%, and $30 million, or 30.9%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in income before income taxes for the second quarter was primarily due to less favorable individual life mortality experience compared to the same period in 2019 partially offset by higher investment related gains associated with the changes in the fair value of credit default swap derivatives. The decrease in income for the first six months of 2020 was primarily due to less favorable individual life mortality experience compared to the same period in 2019 and investment related losses due to changes in the fair value of credit default swap derivatives. See “The COVID-19 Impact and Update” above for more information regarding the impact of COVID-19. Foreign currency exchange fluctuations in the Canadian dollar resulted in a decrease in income before income taxes of $1 million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net premiums decreased by $10 million, or 3.8%, and $5 million, or 1.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decreases in net premiums in 2020 were primarily due to foreign currency losses and an anticipated reduction in the base of the offshore creditors business, offset by an increase in the inforce business as well as new inforce block transaction effective January 1, 2020. Foreign currency exchange fluctuations in the Canadian dollar resulted in a decrease in net premiums of $9 million and $12 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net investment income decreased $1 million, or 2.0%, and $1 million, or 1.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. Foreign currency exchange fluctuation in the Canadian dollar resulted in a decrease in net investment income of $2 million and $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Other revenues increased by $1 million and decreased by $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. These variances were primarily due to gains and losses related to foreign currency transactions.

Loss ratios for this segment were 85.0% and 78.1% for the second quarter and 84.8% and 78.2% for the six months ended June 30, 2020 and 2019, respectively. The increases in the loss ratios were due to less favorable individual life mortality experience as compared to the same periods in 2019. Approximately $8 million of claims for the three months ended June 30, 2020, were identified as COVID-19 related and contributed to the higher loss ratios in 2020.

Policy acquisition costs and other insurance expenses as a percentage of net premiums were 16.5% and 21.6% for the second quarter and 16.9% and 21.4% for the six months ended June 30, 2020 and 2019, respectively. Overall, while these ratios are expected to remain in a predictable range, they may fluctuate from period to period due to varying allowance levels and product mix. The decreases in the policy acquisition and other insurance expenses as percentage of net premiums was the result of a reduction in creditor business which has higher commission than other businesses. In addition, the amortization patterns of previously capitalized amounts, which are subject to the form of the reinsurance agreement and the underlying insurance policies, may vary.

Other operating expenses were unchanged and increased $1 million, or 6.3%, for the three and six months ended June 30, 2020, respectively, as compared to the same periods in 2019. Other operating expenses as a percentage of net premiums were 3.5% and 3.2% for the second quarter and 3.3% and 3.2% for the six month periods ended June 30, 2020 and 2019, respectively.

Financial Solutions Reinsurance

Income before income taxes was unchanged for the three month period ended June 30, 2020, as compared to the same period in 2019 and increased by $2 million, or 40.0%, for the six months ended June 30, 2020, as compared to the same periods in 2019. The increase in income for the first six months was primarily due to a new transaction completed at the end of 2019.

Net premiums decreased $3 million, or 13.0%, and $4 million, or 8.9%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decreases were primarily due to decreases of in force longevity premiums and foreign currency impacts. Foreign currency exchange fluctuations in the Canadian dollar resulted in a decrease in net premiums of $1 million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net investment income for the three and six months ended June 30, 2020, was consistent with the comparable periods in 2019.

Claims and other policy benefits decreased $3 million, or 15.0%, and $4 million, or 9.8%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decreases for the second quarter and first six months were primarily a result of more favorable claims experience in the longevity block of business compared to the same period last year.

Europe, Middle East and Africa Operations

The Europe, Middle East and Africa (“EMEA”) operations include business generated by its offices principally 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 June 30,					
	2020			2019		
Revenues:	Traditional	Financial Solutions	Total EMEA	Traditional	Financial Solutions	Total EMEA
Net premiums	$ 352	$ 57	$ 409	$ 351	$ 57	$ 408
Investment income, net of related expenses	18	61	79	18	47	65
Investment related gains (losses), net	—	16	16	—	3	3
Other revenues	1	2	3	1	7	8
Total revenues	371	136	507	370	114	484
Benefits and expenses:						
Claims and other policy benefits	301	13	314	296	47	343
Interest credited	—	16	16	—	3	3
Policy acquisition costs and other insurance expenses	32	1	33	28	1	29
Other operating expenses	22	8	30	30	11	41
Total benefits and expenses	355	38	393	354	62	416
Income before income taxes	$ 16	$ 98	$ 114	$ 16	$ 52	$ 68

(dollars in millions)	Six months ended June 30,					
	2020			2019		
Revenues:	Traditional	Financial Solutions	Total EMEA	Traditional	Financial Solutions	Total EMEA
Net premiums	$ 742	$ 110	$ 852	$ 715	$ 109	$ 824
Investment income, net of related expenses	37	89	126	37	95	132
Investment related gains (losses), net	—	10	10	—	6	6
Other revenues	(1)	5	4	2	13	15
Total revenues	778	214	992	754	223	977
Benefits and expenses:						
Claims and other policy benefits	635	66	701	608	96	704
Interest credited	—	(1)	(1)	—	15	15
Policy acquisition costs and other insurance expenses	62	2	64	57	2	59
Other operating expenses	48	19	67	57	20	77
Total benefits and expenses	745	86	831	722	133	855
Income before income taxes	$ 33	$ 128	$ 161	$ 32	$ 90	$ 122

Income before income taxes increased by $46 million, or 67.6%, and $39 million, or 32.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases in income before income taxes were primarily due to favorable performance on closed block longevity business. Foreign currency exchange fluctuations resulted in a decrease in income before income taxes of $4 million and $4 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Traditional Reinsurance

Income before income taxes for the three and six months ended June 30, 2020, was consistent with the comparable periods in 2019. Poor mortality experience, primarily due to the impact of COVID-19, was offset by an improvement in morbidity experience and a decrease in general expenses. The increase in income for the first six months was primarily due to an improvement in mortality experience and lower general expenses partly offset by a worsening of morbidity experience. See “The COVID-19 Impact and Update” above for more information regarding the impact of COVID-19. Foreign currency exchange fluctuations resulted in a decrease in income before income taxes of $1 million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net premiums increased $1 million, or 0.3%, and $27 million, or 3.8%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in net premiums for the three and six months were primarily due to an increase in business volume on new and existing treaties. Foreign currency exchange fluctuations decreased net premiums by $20 million and $33 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

A portion of the net premiums for the segment, in each period presented, relates to reinsurance of critical illness coverage (morbidity risk), primarily in the UK. This coverage provides a benefit in the event of the diagnosis of a pre-defined critical illness. Net premiums earned from this coverage totaled $40 million and $43 million for the second quarter and $82 million and $88 million for the first six months of 2020 and 2019, respectively.

Net investment income was consistent for the three and six months ended June 30, 2020, as compared to the same periods in 2019, with an increase in the invested asset base from business growth offset by a decrease in investment yields. Foreign currency exchange fluctuations resulted in a decrease in net investment income of $1 million and $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Loss ratios for this segment were 85.5% and 84.3% for the second quarter and 85.6% and 85.0% for the first six months ended June 30, 2020 and 2019, respectively. The increases in loss ratios were due to normal claims variability and the impact of approximately $19 million of COVID-19 related claims reported during the second quarter of 2020.

Policy acquisition costs and other insurance expenses as a percentage of net premiums were 9.1% and 7.9% for the second quarter and 8.4% and 8.1% for the first six months ended June 30, 2020 and 2019, respectively. The increases in the percentages are due primarily to variations in the mixture of business.

Other operating expenses decreased $8 million, or 26.7%, and $9 million, or 15.8%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The current periods have benefited from reduced incentive-based compensation and travel expenses primarily attributable to COVID-19. Foreign currency fluctuations resulted in a decrease in operating expenses of $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. Other operating expenses as a percentage of net premiums totaled 6.3% and 8.6% for the second quarter and 6.5% and 7.9% for the first six months ended June 30, 2020 and 2019, respectively.

Financial Solutions Reinsurance

Income before income taxes increased by $46 million, or 88.5%, and $38 million, or 42.2%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases were primarily due to favorable termination experience on closed longevity blocks. Foreign currency exchange fluctuations resulted in a decrease in income before income taxes of $3 million and $3 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net premiums were flat and increased by $1 million, or 0.9%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in net premiums was due to higher new business volumes of closed longevity business. Foreign currency exchange fluctuations decreased net premiums by $2 million and $3 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net investment income increased by $14 million, or 29.8%, and decreased by $6 million, or 6.3%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in investment income for the three months was primarily due to an increased invested asset base resulting from business growth and an increase in investment income associated with unit-linked policies which fluctuate with market performance. The decrease in investment income for the six months was primarily due to a decrease in investment income associated with unit-linked policies which fluctuate with market performance partly offset by an increase in the invested asset base from business growth. The effect on investment income related to unit-linked products is substantially offset by a corresponding change in interest credited. Foreign currency exchange fluctuations resulted in a decrease in net investment income of $2 million and $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Investment related gains (losses) net, increased by $13 million and $4 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases were primarily due to increases in the fair market value of derivative hedging instruments. Foreign currency exchange fluctuations resulted in a decrease in investment related gains (losses) of $1 million for the three months ended June 30, 2020, as compared to the same period in 2019.

Other revenues decreased by $5 million, or 71.4%, and $8 million, or 61.5%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decreases relate to a one-time fees received related to a new payout annuity transaction completed in the second quarter of 2019 and fees on a treaty that terminated in the fourth quarter of 2019. Foreign currency exchange fluctuations resulted in a decrease in other revenues of $1 million for the six months ended June 30, 2020, as compared to the same period in 2019.

Claims and other policy benefits decreased $34 million, or 72.3%, and $30 million, or 31.3%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in the second quarter and the first six months was primarily due to favorable termination experience on closed block longevity business. Foreign currency exchange fluctuations resulted in a decrease in claims and other policy benefits of $1 million and $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Interest credited expense increased by $13 million and decreased by $16 million or the three and six months ended June 30, 2020, as compared to the same periods in 2019. Interest credited in this segment relates to amounts credited to the contractholders of unit-linked products. The effect on interest credited related to unit-linked products is substantially offset by a corresponding change in investment income.

Other operating expenses decreased $3 million, or 27.3%, and $1 million, or 5.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The current periods have benefited from reduced incentive-based compensation and travel expenses primarily attributable to COVID-19. Foreign currency exchange fluctuations resulted in a decrease in operating expenses of $1 million for the six months ended June 30, 2020, as compared to the same period in 2019.

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. 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 and asset-intensive transactions including certain disability, life and health blocks with significant investment risk. Reinsurance agreements may be facultative or automatic agreements covering primarily individual risks and in some markets, group risks.

(dollars in millions)	Three months ended June 30,					
	2020			2019		
Revenues:	Traditional	Financial Solutions	Total Asia Pacific	Traditional	Financial Solutions	Total Asia Pacific
Net premiums	$ 607	$ 31	$ 638	$ 606	$ 44	$ 650
Investment income, net of related expenses	27	21	48	24	11	35
Investment related gains (losses), net	—	15	15	—	(1)	(1)
Other revenues	2	8	10	4	5	9
Total revenues	636	75	711	634	59	693
Benefits and expenses:						
Claims and other policy benefits	514	32	546	568	37	605
Interest credited	—	11	11	—	6	6
Policy acquisition costs and other insurance expenses	34	5	39	(12)	10	(2)
Other operating expenses	41	1	42	44	4	48
Total benefits and expenses	589	49	638	600	57	657
Income (loss) before income taxes	$ 47	$ 26	$ 73	$ 34	$ 2	$ 36

(dollars in millions)	Six months ended June 30,					
	2020			2019		
Revenues:	Traditional	Financial Solutions	Total Asia Pacific	Traditional	Financial Solutions	Total Asia Pacific
Net premiums	$ 1,243	$ 105	$ 1,348	$ 1,253	$ 78	$ 1,331
Investment income, net of related expenses	54	38	92	50	21	71
Investment related gains (losses), net	—	(18)	(18)	—	3	3
Other revenues	6	18	24	4	12	16
Total revenues	1,303	143	1,446	1,307	114	1,421
Benefits and expenses:						
Claims and other policy benefits	1,069	94	1,163	1,114	69	1,183
Interest credited	—	24	24	—	13	13
Policy acquisition costs and other insurance expenses	83	19	102	39	15	54
Other operating expenses	80	5	85	83	9	92
Total benefits and expenses	1,232	142	1,374	1,236	106	1,342
Income before income taxes	$ 71	$ 1	$ 72	$ 71	$ 8	$ 79

Income before income taxes increased by $37 million, or 102.8%, and decreased by $7 million, or 8.9%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in income before income taxes for the three months ended June 30, 2020, was primarily due to continued growth of Financial Solutions Reinsurance in Asia, increases in the market value of derivatives and more favorable experience, mainly in Australia across most product lines. The decrease in income before income taxes for the first six months is primarily attributable to declines in the fair value of derivatives hedging inflation risk, foreign exchange and credit risk, and unfavorable claims experience in Asia in the first three months, partially offset by more favorable experience in Australia. Foreign currency exchange fluctuations resulted in an increase in income before income taxes of $1 million and $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Traditional Reinsurance

Income before income taxes increased by $13 million, or 38.2%, and for the three months ended June 30, 2020 as compared to the same period in 2019 and was consistent for the six months ended June 30, 2020, as compared to the same period in 2019. The increase in income before income taxes for the three months ended June 30, 2020, was the result of net favorable experience across the segment, mainly in Australia across most product lines, as compared to the same period in 2019. Income before income taxes for the six months ended June 30, 2020, was flat as compared to the same period in 2019 due to unfavorable claims experience in Asia in the first three months of 2020, offset by favorable experience in Australia for the year across most product lines. Foreign currency exchange fluctuations resulted in an increase in income before income taxes of $2 million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net premiums increased by $1 million, or 0.2%, and decreased by $10 million, or 0.8%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. Premiums for the six months ended June 30, 2020, are reflective of premium reductions in Australia group business as a result of new legislation effective July 2019 and April 2020 as well as unfavorable foreign currency exchange fluctuations, partially offset by new business growth in Asia. Foreign currency exchange fluctuations resulted in a decrease in net premiums of $12 million and $28 million for the three and six months of 2020, as compared to the same periods in 2019.

Net premiums earned from the reinsurance of critical illness (morbidity risk) in the segment, which is offered primarily in South Korea, Australia, China and Hong Kong, totaled $246 million and $243 million for the second quarter and $502 million and $495 million for the first six months ended June 30, 2020 and 2019, respectively. Critical illness coverage provides a benefit in the event of the diagnosis of a pre-defined critical illness.

Net investment income increased by $3 million, or 12.5%, and $4 million, or 8.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increases were due to an increase in the invested asset base, partially offset by a lower investment yield and foreign currency exchange fluctuations. Foreign currency exchange fluctuations resulted in a decrease in net investment income of $1 million and $2 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Other revenues decreased by $2 million, or 50.0%, and increased by $2 million, or 50.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. Fluctuations in other revenues are driven by foreign currency gains and losses in each period. Foreign currency exchange fluctuations had a negligible effect in other revenues for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Loss ratios for this segment were 84.7% and 93.7% for the second quarter and 86.0% and 88.9% for the six months ended June 30, 2020 and 2019, respectively. The decrease in the loss ratio for the second quarter was primarily due to unfavorable experience adjustments in Asia in the second quarter of 2019 as well as favorable experience in Australia in the current year, as compared to the same period in 2019. Based on client reporting received to date, the impact of COVID-19 claims was not material to the segment during the second quarter of 2020. The decrease in the loss ratio for the six months ended June 30, 2020, as compared to the same period in 2019 was primarily due to unfavorable experience adjustments in Asia in the second quarter of 2019 as well as favorable experience in Australia in the current year, partially offset by unfavorable claims experience on a large treaty in Asia in the first three months of 2020.

Policy acquisition costs and other insurance expenses as a percentage of net premiums were 5.6% and (1.9%) for the second quarter and 6.7% and 3.1% for the six months ended June 30, 2020 and 2019, respectively. The ratio of policy acquisition costs and other insurance expenses as a percentage of net premiums fluctuates periodically due to timing of client company reporting and variations in the mixture of business.

Other operating expenses decreased $3 million, or 6.8%, and $3 million, or 3.6%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019, with the current periods benefiting from lower travel expenses primarily attributable to COVID-19 as well as lower incentive-based compensation expense. Other operating expenses as a percentage of net premiums totaled 6.8% and 7.0% for the second quarter and 6.4% and 6.5% for the first six months ended June 30, 2020 and 2019, respectively. The timing of premium flows and the level of costs associated with the entrance into and development of new markets within the segment may cause other operating expenses as a percentage of net premiums to fluctuate over periods of time.

Financial Solutions Reinsurance

Income before income taxes increased by $24 million and decreased by $7 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in income before income taxes for the second quarter was primarily due to new business growth in the segment and increases in the market value of derivatives. The decrease in the first six months was primarily due to declines in the market value of derivatives, partially offset by higher income from business growth in the segment. Foreign currency exchange fluctuations resulted in an increase (decrease) in income before income taxes of $(1) million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net premiums decreased $13 million and increased by $27 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease for the second quarter was primarily due to slowed new business. The increase in the first six months of 2020 was attributable to new asset-intensive transactions in Asia. Foreign currency exchange fluctuations increased net premiums by $1 million and $1 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Net investment income increased $10 million, or 90.9%, and $17 million, or 81.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019 primarily due to an increase in invested asset base, partially offset by a lower investment yield. Foreign currency exchange fluctuations had a negligible impact on net investment income for the three and six months ended June 30, 2020, as compared to the same periods in 2019.

Other revenues, which primarily represents fees earned on financial reinsurance transactions, increased by $3 million, or 60.0%, and $6 million, or 50.0%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. At June 30, 2020 and 2019, the amount of reinsurance assumed from client companies, as measured by pre-tax statutory surplus, risk based capital and other financial reinsurance structures was $3.2 billion and $3.1 billion, respectively. 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.

Claims and other policy benefits decreased by $5 million and increased by $25 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in the second quarter was primarily due to slowed new business. The increase in the first six months of 2020 was attributable to new asset-intensive transactions in Asia.

Other operating expenses decreased by $3 million, or 75.0%, and $4 million, or 44.4%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019, respectively, with the current periods benefiting from lower travel expenses primarily attributable to COVID-19 as well as lower incentive-based compensation expense. The timing of transactions and the level of costs associated with the entrance into and development of new markets and new transactions within the segment may cause other operating expenses to fluctuate over periods of time.

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 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. In the past two years, the Company has increased its investment and expenditures 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.

(dollars in millions)	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Revenues:				
Net premiums	$ —	$ —	$ —	$ —
Investment income, net of related expenses	48	55	106	98
Investment related gains (losses), net	22	(6)	(45)	(7)
Other revenues	20	13	21	39
Total revenues	90	62	82	130
Benefits and expenses:				
Claims and other policy benefits	—	—	—	—
Interest credited	3	6	5	11
Policy acquisition costs and other insurance income	(29)	(29)	(57)	(58)
Other operating expenses	69	75	131	146
Interest expense	42	43	83	83
Collateral finance and securitization expense	4	8	10	16
Total benefits and expenses	89	103	172	198
Income (loss) before income taxes	$ 1	$ (41)	$ (90)	$ (68)

Income (loss) before income taxes increased by $42 million and decreased by $22 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in income (loss) before income taxes for the second quarter was primarily due to increases in investment related gains and other revenues, and a decrease in other operating expenses, partially offset by lower investment income. The decrease in income (loss) before income taxes for the first six months was primarily due to an increase in investment related losses and a decrease in other revenue, partially offset by increased investment income and lower other operating expenses.

Net investment income decreased by $7 million, or 12.7%, and increased by $8 million, or 8.2%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in the second quarter was largely attributable to lower yield on unallocated invested assets. The increase in the first six months was largely attributable to a higher volume of unallocated invested assets.

Net investment related gains (losses) increased by $28 million and decreased by $38 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in the second quarter gains was primarily due to an increase in net gains on the sale of fixed maturity securities available-for-sale and other investments of $2 million and an increase in the fair value of equity securities and derivatives hedging interest of $28 million, partially offset by an increase in the valuation allowance on mortgage loans of $7 million which is primarily attributed to the economic uncertainty caused by COVID-19. Decrease in the first six months of 2020 was primarily due to an increase in the allowance for credit losses on fixed maturity securities available-for-sale of $23 million, an increase in the valuation allowance on mortgage loans of $12 million, primarily attributable to the economic uncertainty caused by COVID-19, and decreases in the fair value of fixed maturity securities available-for-sale and derivatives hedging interest rate risk of $21 million, which were offset by $14 million in net gains on the sale of fixed maturity securities and other investments.

Other revenues increased by $7 million and decreased by $18 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The increase in the second quarter was primarily due to favorable foreign exchange rate fluctuation and an increase in the cash surrender value of corporate owned life insurance policies of $5 million. The decrease in the first six months of 2020 was mainly due to a $7 million decrease in the cash surrender value of corporate owned life insurance policies. Additionally, prior year results included a recapture of a collateral finance transaction, which resulted in a $13 million fee paid to the Company. The Company's RGAx operations contributed $9 million and $16 million to other revenues for the three and six months ended June 30, 2020.

Policy acquisition costs and other insurance expense for the three months ended June 30, 2020, was consistent with the same period in 2019. Policy acquisition costs and other insurance expense increased $1 million, or 1.7%, for the six months ended June 30, 2020, as compared to the same period in 2019. Fluctuations period over period were attributable to the offset to capital charges allocated to the operating segments.

Other operating expenses decreased by $6 million, or 8.0%, and $15 million, or 10.3%, for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in other operating expenses for both periods presented was primarily due to lower incentive-based compensation expense as well as lower travel expenses, consulting fees and contract labor expenses.

Interest expense decreased by $1 million, or 2.3%, and was flat for the three and six months ended June 30, 2020, as compared to the same periods in 2019. The decrease in interest expense was primarily due to the variability in tax-related interest 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 events and higher than expected claims associated with the pandemic. Given the uncertainty associated with COVID-19 and the related volatility in the financial markets, the Company increased its cash and cash equivalents to $4.3 billion as of June 30, 2020, compared to $1.4 billion as of December 31, 2019, an increase of $2.9 billion. 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, the Company has multiple liquidity alternatives available based on market conditions and the amount and timing of the liquidity need. These alternatives include borrowings under committed credit facilities, secured borrowings, the ability to issue long-term debt, preferred securities or common equity, and the sale of invested assets subject to market conditions.
In order to enhance the Company's strong capital and liquidity position, the Company executed two capital market transactions during the quarter. On June 5, 2020, the Company completed an offering of its common stock and received net proceeds of $481 million, and on June 9, 2020, completed a senior debt offering and received net proceeds of $593 million.

Current Market Environment

The current low interest rate environment in select markets, primarily the U.S., Canada and Europe, continues to put downward pressure on the Company's investment yield. The Company's average investment yield, excluding spread business, for the six months ended June 30, 2020, was 4.07%, 31 basis points below the same period in 2019 due to lower income from limited partnerships. 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 increased from $4.5 billion at December 31, 2019 to $5.9 billion at June 30, 2020. Similarly, gross unrealized losses decreased from $110 million at December 31, 2019 to $448 million at June 30, 2020.

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. As indicated above, gross unrealized gains on fixed maturity securities of $5.9 billion remain well in excess of gross unrealized losses of $448 million as of June 30, 2020. 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 the Company has felt the pressures of sustained low interest rates and volatile equity markets and may continue to do so, its business operations are not overly sensitive to these risks. 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, RCM and Rockwood Re and dividends from operating subsidiaries. Total interest and dividend income increased by $147 million and $342 million for the three and six months ended June 30, 2020, as compared to the same periods in 2019 primarily due to cash dividends received from operating subsidiaries. As the Company continues its growth efforts, RGA will continue to be dependent upon these sources of liquidity. The following tables provide comparative information for RGA (dollars in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Interest and dividend income	$ 183	$ 36	$ 408	$ 66
Interest expense	50	52	100	100
Capital contributions to subsidiaries	18	18	33	39
Issuance of unaffiliated debt	598	599	598	599
Dividends to shareholders	43	38	87	75
Issuance of common stock, net of expenses	481	—	481	—
Repurchases of treasury stock	—	—	153	50

	June 30, 2020	December 31, 2019
Cash and invested assets	$ 1,513	$ 554

See Item 15, Schedule II – “Condensed Financial Information of the Registrant” in the 2019 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 2019 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. RGA’s current share repurchase program, which was approved by the board of directors in January 2019, authorizes the repurchase of up to $400 million of common stock. On May 6, 2020, the Company announced that is has suspended stock repurchases until further notice. 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 (in millions, except share data):

	Six months ended June 30,	
	2020	2019
Dividends to shareholders	$ 87	$ 75
Repurchases of treasury stock	153	50
Total amount paid to shareholders	$ 240	$ 125
Number of shares repurchased	1,074,413	344,237
Average price per share	$ 142.05	$ 145.25

On June 5, 2020, the Company completed a public offering of 6,172,840 shares of common stock, $0.01 par value per share, at a public offering price of $81.00 per share. The Company received net proceeds of approximately $481 million. The Company granted the Underwriters an option to purchase from the Company, within 30 days after the Underwriting Agreement dated June 2, 2020, up to an additional 925,926 shares of common stock at the offering price of $81.00 per share. The Underwriters’ option was not exercised and expired on July 2, 2020. The Company anticipates using the net proceeds of the offering for general corporate purposes.

In July 2020, RGA’s board of directors declared a quarterly dividend of $0.70 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 non-payment of certain other indebtedness when demanded, and any other event which results in the acceleration of the maturity of such other indebtedness.

As of June 30, 2020 and December 31, 2019, the Company had $3.6 billion and $3.0 billion, respectively, in outstanding borrowings under its debt agreements and was in compliance with all covenants under those agreements. As of June 30, 2020 and December 31, 2019, the average net interest rate on long-term debt outstanding was 4.54% and 4.82%, 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.

On June 9, 2020, RGA issued 3.15% Senior Notes due June 15, 2030, with a face amount of $600 million. This security has been registered with the Securities and Exchange Commission. The net proceeds were approximately $593 million and will be used in part to repay the Company's $400 million 5.000% senior notes due in 2021, and the remainder will be used for general corporate purposes. Capitalized issue costs were approximately $5 million.

On May 15, 2019, RGA issued 3.9% Senior Notes due May 15, 2029, with a face amount of $600 million. This security has been registered with the Securities and Exchange Commission. The net proceeds were approximately $594 million and were used in part to repay upon maturity the Company's $400 million 6.45% Senior Notes that mature in November 2019. The remainder will be used for general corporate purposes. Capitalized issue costs were approximately $5 million.

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, at the Company's option, 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 June 30, 2020, the Company had no cash borrowings outstanding and $20 million in issued, but undrawn, letters of credit under this facility.

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 12 months.

Credit and Committed Facilities

At June 30, 2020, the Company maintained an $850 million syndicated revolving credit facility and certain committed letter of credit facilities aggregating to $879 million. See Note 13 – "Debt" in the Notes to Consolidated Financial Statements in the 2019 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 June 30, 2020, there were approximately $51 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 June 30, 2020, $1.4 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” and “Interest Rate Risk” below.

Additional sources of liquidity to meet unexpected cash outflows in excess of operating cash inflows and current cash and equivalents on hand include selling short-term investments or fixed maturity securities and drawing funds under a revolving credit facility, under which the Company had availability of $830 million as of June 30, 2020. The Company also has $500 million of funds available through collateralized borrowings from the FHLB as of June 30, 2020. As of June 30, 2020, 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 2019 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 current sources of liquidity are adequate to meet its cash requirements for the next 12 months.

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 six months ended June 30,	
	2020	2019
	(Dollars in millions)	
Sources:		
Net cash provided by operating activities	$ 2,579	$ 970
Proceeds from issuance of common stock, net	481	—
Proceeds from long-term debt issuance	598	599
Exercise of stock options, net	1	2
Change in cash collateral for derivative positions and other arrangements	93	—
Cash provided by changes in universal life and other investment type policies and contracts	575	—
Effect of exchange rate changes on cash	—	7
Total sources	4,327	1,578
Uses:		
Net cash used in investing activities	1,024	764
Dividends to stockholders	87	75
Repayment of collateral finance and securitization notes	160	53
Debt issuance costs	5	5
Principal payments of long-term debt	1	1
Purchases of treasury stock	162	68
Change in cash collateral for derivatives and other arrangements	—	80
Cash used for changes in universal life and other investment type policies and contracts	—	134
Effect of exchange rate changes on cash	24	—
Total uses	1,463	1,180
Net change in cash and cash equivalents	$ 2,864	$ 398

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

The Company's obligation for long-term debt, including interest, increased by $522 million since December 31, 2019, primarily related to the June 2020 issuance of senior notes as previously discussed. The Company's obligation for collateral financing decreased by $193 million since December 31, 2019, as a result of a repayment during 2020. The Company's obligation for other investment related commitments decreased by $181 million since December 31, 2019, primarily related to a decrease in the Company's commitment to fund investments of commercial mortgage loans as well as bank loans and private placements. There were no other material changes in the Company's contractual obligations from those reported in the 2019 Annual Report.

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) was $4.3 billion and $1.4 billion at June 30, 2020 and December 31, 2019, 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 Other" 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 programs. 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 $91 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 $1.9 billion and $1.4 billion at June 30, 2020 and December 31, 2019, 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 and to seek 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, security and derivative strategies within an asset/liability management and disciplined risk management framework. 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. For a discussion of the Company's risk management process see "Market and Credit Risk" in the "Enterprise Risk Management" section below.

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.

Effects of COVID-19

The Company's investment portfolios have been, and may continue to be, adversely affected by the recent disruption in the global financial markets caused by COVID-19 and uncertainty regarding its outcome. Changes in interest rates, increased market volatility or a continued slowdown in U.S. or global economic conditions may also adversely affect the values and cash flows of these assets in future periods. The Company's corporate fixed income portfolio may be adversely impacted by ratings downgrades, increased bankruptcies and credit spread widening in distressed industries. The Company has exposure to some of the asset classes and industries most affected by the COVID-19 pandemic such as commercial mortgage loans, emerging market debt, energy, and airlines; however, the Company's primary exposure in these asset classes is of high quality assets. The Company had $34 million of impairment losses and changes in the credit allowance for its available-for-sale fixed maturities primarily related to high-yield energy, emerging market, and mezzanine debt securities for the six months ended June 30, 2020. For the six months ended June 30, 2020, the Company also increased its valuation allowance on its commercial mortgage loan portfolio by approximately $30 million to $56 million as result of the negative impact the COVID-19 pandemic has had on the Company's borrowers. The Company continues to monitor and evaluate the impact of the COVID-19 pandemic on its investment portfolio and is working closely with its borrowers to evaluate any short-term cash flow issues.

Portfolio Composition

The Company had total cash and invested assets of $72.0 billion and $68.0 billion as of June 30, 2020 and December 31, 2019, respectively, as illustrated below (dollars in millions):

	June 30, 2020	% of Total	December 31, 2019	% of Total
Fixed maturity securities, available-for-sale	$ 52,346	72.8%	$ 51,121	75.3%
Equity securities	130	0.2	320	0.5
Mortgage loans on real estate	5,974	8.3	5,706	8.3
Policy loans	1,310	1.8	1,319	1.9
Funds withheld at interest	5,250	7.3	5,662	8.3
Short-term investments	84	0.1	64	0.1
Other invested assets	2,547	3.5	2,363	3.5
Cash and cash equivalents	4,313	6.0	1,449	2.1
Total cash and invested assets	$ 71,954	100.0%	$ 68,004	100.0%

Investment Yield

The following table presents consolidated average invested assets at amortized cost, net investment income and investment yield, excluding 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 (dollars in millions).

	Three months ended June 30,			Six months ended June 30,		
	2020	2019	Increase/ (Decrease)	2020	2019	Increase/ (Decrease)
Average invested assets at amortized cost	$ 30,420	$ 28,487	6.8 %	$ 29,923	$ 28,138	6.3 %
Net investment income	305	307	(0.7)%	604	617	(2.1)%
Investment yield (ratio of net investment income to average invested assets)	4.07%	4.38%	(31) bps	4.07%	4.43%	(36) bps

Investment yield decreased for the three and six months ended June 30, 2020, in comparison to the same periods in the prior year primarily due to the effect of a low interest rate environment combined with decreased income from limited partnerships and real estate joint ventures, which are included in other invested assets on the condensed consolidated balance sheets.

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 (as of June 30, 2020), unrealized gains and losses, estimated fair value of these securities, and impairments in AOCI by type as of June 30, 2020 and December 31, 2019.

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”). As of June 30, 2020 and December 31, 2019, approximately 95.1% and 95.5%, 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 5.6% and 6.3% of the total fixed maturity securities as of June 30, 2020 and December 31, 2019, 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 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 62.3% and 61.4% of total fixed maturity securities as of June 30, 2020 and December 31, 2019, respectively. See “Corporate Fixed Maturity Securities” in Note 4 – “Investments” in the Notes to Condensed Consolidated Financial Statements for tables showing the major industry types, which comprise the corporate fixed maturity holdings as of June 30, 2020 and December 31, 2019.

As of June 30, 2020, the Company’s investments in Canadian government securities represented 9.3% of the fair value of total fixed maturity securities compared to 9.0% of the fair value of total fixed maturities as of December 31, 2019. These assets are primarily high quality, long duration provincial strips, 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).

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 security portfolio, as of June 30, 2020 and December 31, 2019 was as follows (dollars in millions):

		June 30, 2020			December 31, 2019		
NAIC Designation	Rating Agency Designation	Amortized Cost	Estimated Fair Value	% of Total	Amortized Cost	Estimated Fair Value	% of Total
1	AAA/AA/A	$ 29,018	$ 33,246	63.5%	$ 30,100	$ 33,284	65.2%
2	BBB	15,222	16,555	31.6	14,366	15,514	30.3
3	BB	1,987	1,963	3.8	1,706	1,748	3.4
4	B	560	515	1.0	514	518	1.0
5	CCC and lower	91	46	0.1	36	23	—
6	In or near default	25	21	—	31	34	0.1
	Total	$ 46,903	$ 52,346	100.0%	$ 46,753	$ 51,121	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 June 30, 2020 and December 31, 2019 (dollars in millions):

	June 30, 2020			December 31, 2019		
	Amortized Cost	Estimated Fair Value	% of Total	Amortized Cost	Estimated Fair Value	% of Total
RMBS:						
Agency	$ 708	$ 776	11.8%	$ 742	$ 777	10.6%
Non-agency	1,254	1,289	19.4	1,597	1,621	22.3
Total RMBS	1,962	2,065	31.2	2,339	2,398	32.9
ABS:						
Collateralized loan obligations ("CLOs")	1,612	1,558	23.4	1,750	1,743	24.0
ABS, excluding CLOs	1,186	1,173	17.6	1,223	1,235	17.0
Total ABS	2,798	2,731	41.0	2,973	2,978	41.0
CMBS	1,850	1,851	27.8	1,841	1,899	26.1
Total	$ 6,610	$ 6,647	100.0%	$ 7,153	$ 7,275	100.0%

The Company's RMBS portfolio includes agency-issued pass-through securities and collateralized mortgage obligations. A majority of the 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 mortgage-backed securities 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 mortgage-backed securities 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, single-family rentals, container leasing, railcar leasing, aircraft and student loans. The principal risks in holding asset-backed securities 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 June 30, 2020 and December 31, 2019, the Company had $448 million and $110 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, securities determined to have expected credit loss will record an allowance for credit loss in the amount that the fair value is less than the amortized cost.

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 – Fixed Maturity Securities Available-for-Sale" in Note 1 – "Business and Basis of Presentation" for additional information. The table below summarizes impairment losses and changes in allowance for credit losses on fixed maturity securities, other impairment losses and changes in the mortgage loan provision for the three and six months ended June 30, 2020 and 2019 (dollars in millions).

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Impairment losses and change in allowance for credit losses on fixed maturity securities	$ —	$ —	$ 34	$ 9
Other impairment losses	5	5	5	7
Change in mortgage loan provision	17	1	30	1
Total	$ 22	$ 6	$ 69	$ 17

The impairment losses and change in allowance for credit losses on fixed maturity securities for the six months ended June 30, 2020, includes $1 million in impairment losses on securities the Company intended to sell and an increase of $33 million in the allowance for credit losses related to high-yield securities as result of the uncertainty in the global markets due to the COVID-19 pandemic. The fixed maturity impairment losses for the six months ended June 30, 2019, were primarily related to a U.S. utility company. The other impairment losses for the three and six months ended June 30, 2020 and three months ended June 30, 2019, were primarily due to impairments on limited partnerships. The other impairment losses for the six months ended June 30, 2019, were primarily due to impairments on real estate joint ventures and limited partnerships. The change in mortgage loan provision for the three and six months ended June 30, 2020, was due to an increase in the mortgage loan valuation allowance due to the current market conditions related to the COVID-19 pandemic.

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 values and gross unrealized losses, including impairment losses reported in AOCI, 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 June 30, 2020 and December 31, 2019.

As of June 30, 2020 and December 31, 2019, the Company classified approximately 4.8% and 6.1%, 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 securities, bank loans, and Canadian provincial strips with inactive trading markets.

See "Securities Borrowing, Lending and Other" 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 programs.

Mortgage Loans on Real Estate

The Company's mortgage loan portfolio consists of U.S., Canada and United Kingdom 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 on Real Estate" in Note 4 – "Investments" in the Notes to Condensed Consolidated Financial Statements. For the six months ended June 30, 2020, the Company increased its valuation allowance on its commercial mortgage loan portfolio by approximately $30 million to $56 million as result of the negative impact the COVID-19 pandemic has had on the Company's borrowers. The Company continues to monitor and evaluate the impact of COVID-19 pandemic on its investment portfolio and is working closely with its borrowers to evaluate any short-term cash flow issues. As of June 30, 2020, the Company modified the payment terms of approximately 40 loans, with a carrying value of approximately $540 million in response to COVID-19. These loans met the criteria established in the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), and were not considered a troubled debt restructuring. In accordance with the CARES Act criteria, these loans were not more than 30 days past due at December 31, 2019, and the modifications included deferral or delayed payments of principal or interest on the loan.

As of June 30, 2020 and December 31, 2019, the Company's recorded investment in mortgage loans, gross of unamortized deferred loan origination fees and expenses and valuation allowances, were distributed geographically as follows (dollars in millions):

	June 30, 2020		December 31, 2019	
	Recorded Investment	% of Total	Recorded Investment	% of Total
U.S. Region:				
West	$ 2,349	38.8%	$ 2,302	40.2%
South	2,111	34.9	1,929	33.6
Midwest	1,074	17.8	996	17.4
Northeast	275	4.6	262	4.6
Subtotal - U.S.	5,809	96.1	5,489	95.8
Canada	179	3.0	182	3.2
United Kingdom	52	0.9	56	1.0
Total	$ 6,040	100.0%	$ 5,727	100.0%

See "Mortgage Loans on Real Estate" in Note 1 – "Business and Basis of Presentation" in the Notes to Condensed Consolidated Financial Statements for information regarding the Company's policy for valuation allowances and impairments on mortgage loans.

See "Mortgage Loans on Real Estate" in Note 4 – "Investments" in the Notes to Condensed Consolidated Financial Statements for information regarding valuation allowances and impairments.

Policy Loans

The majority of policy loans are associated with one client. These policy loans present no credit risk because the amount of the loan cannot exceed the obligation due to the ceding company upon the death of the insured or surrender of the underlying policy. The provisions of the treaties in force and the underlying policies determine the policy loan interest rates. The Company earns a spread between the interest rate earned on policy loans and the interest rate credited to corresponding liabilities.

Funds Withheld at Interest

For reinsurance agreements written on a modco 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 June 30, 2020 and December 31, 2019. 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, FVO contractholder-directed unit-linked investments and FHLB common stock. 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 June 30, 2020 and December 31, 2019.

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 June 30, 2020 and December 31, 2019.

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 at the reporting date plus or minus any collateral posted or held by the Company. The Company had $4 million and no credit exposure as of June 30, 2020 and December 31, 2019, respectively.

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 beneficial interests in lifetime mortgages in the UK. 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.

Other invested assets include $787 million and $775 million, net of valuation allowances, of lifetime mortgages as of June 30, 2020 and December 31, 2019, respectively. Investment income includes $10 million and $8 million in interest income earned on lifetime mortgages for the three months ended June 30, 2020 and 2019, respectively, and $20 million and $16 million in interest income earned on lifetime mortgages for the six months ended June 30, 2020 and 2019, respectively.

New Accounting Standards

See Note 14 – “New Accounting Standards” in the Notes to Condensed Consolidated Financial Statements.

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 June 30, 2020, 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, 2019, a description of which may be found in its Annual Report on Form 10-K, for the year ended December 31, 2019, 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 June 30, 2020, that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting. As a result of the COVID-19 pandemic, the majority of our workforce began working remotely in March 2020. These changes to the working environment did not have a material effect on our internal controls over financial reporting during the most recent quarter. The Company continues to monitor and assess the COVID-19 situation on its internal controls to minimize the impact on their design and operating effectiveness.

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

In the risk factor below, we refer to the Company as “we,” “us,” or “our”. Other than the risk factor listed below, there have been no material changes from the risk factors previously disclosed in the Company’s 2019 Annual Report.

Our business, results of operations and financial condition have been, and will likely continue to be, adversely affected by the COVID-19 pandemic and the response thereto.

The ongoing novel coronavirus (“COVID-19”) global and national health emergency has caused significant disruption in the international and U.S. economies and financial markets. On March 11, 2020, the World Health Organization declared the COVID-19 outbreak a pandemic. The COVID-19 pandemic and the response thereto has severely impacted, and will likely continue to severely impact, global economic conditions, resulting in substantial volatility in the global financial markets, increased unemployment and operational challenges such as the temporary closures of businesses, sheltering-in-place directives and increased remote work protocols. Governments and central banks around the world have reacted to the economic crisis caused by the pandemic by implementing stimulus and liquidity programs and cutting interest rates, though it is unclear whether these or future actions will be successful in countering the economic disruption. If the pandemic is prolonged or the actions of governments and central banks are unsuccessful, the adverse impact on the global economy will deepen, and our results of operations and financial condition in future quarters will be adversely affected.

As described in more detail below, the COVID-19 pandemic and the response thereto has adversely affected, and/or will likely adversely affect, us in the following areas:

- Degradation of general economic conditions;
- Investment results;
- Capital, liquidity and collateral;
- Insurance risks, including mortality and morbidity claims;
- Possible ratings downgrade;
- Adverse legislative or regulatory action;
- Operations; and
- Premiums and other income.

Degradation of general economic conditions. While still evolving, the COVID-19 pandemic and the extraordinary measures being put in place to address it have caused significant economic and financial turmoil both in the U.S. and around the world, fueling concerns of a global recession. These conditions are expected to continue and worsen in the near term. Our results of operations, financial condition, cash flows and statutory capital position are materially affected by conditions in the global capital markets and economy generally. If the pandemic is prolonged or the actions of governments and central banks to counter the economic disruption are unsuccessful, the adverse impact on the global economy will deepen, and our business, results of operations and financial condition will continue to be adversely affected.

Investment results. Our investment portfolio (and, specifically, the valuations of investment assets we hold) has been, and may continue to be, adversely affected as a result of market developments from the COVID-19 pandemic and uncertainty regarding its outcome. Moreover, changes in interest rates, reduced liquidity in the financial markets or a continued slowdown in the U.S. or in global economic conditions have and in the future may also adversely affect the values and cash flows of these assets. Our corporate fixed income portfolio has been and in the future may be adversely impacted by delayed principal or interest payments, ratings downgrades, increased bankruptcies and credit spread widening in distressed industries and individual companies. Our investments in mortgage loans and mortgage-backed securities have been and in the future could be negatively affected by delays or failures of borrowers to make payments of principal and interest when due or delays or moratoriums on foreclosures or enforcement actions with respect to delinquent or defaulted mortgages. Further, a continued low interest rate environment, including as a result of market developments from the COVID-19 pandemic and the central banks’ response thereto, would put downward pressure on the average yield earned on our investments, negatively impacting our investment income and results of operations in the future. Market dislocations, decreases in observable market activity or unavailability of information, in each case, arising from the pandemic, may restrict our access to key inputs used to derive certain estimates and assumptions made in connection with financial reporting or otherwise, including estimates and changes in long term macro-economic assumptions relating to accounting for current expected credit losses, more commonly referred to as “CECL.”

Capital, liquidity and collateral. The severe impact on global economic conditions caused by the COVID-19 pandemic and the response thereto has negatively impacted and in the future could negatively impact our financial condition, including possible constraints on our capital and liquidity, as well as a higher cost of capital and possible changes or downgrades to our credit ratings. The current disruptions, uncertainty and volatility in the capital and credit markets may limit our access to capital required to operate our business, most significantly our reinsurance operations. The availability of collateral and the related cost of such collateral affects the type and volume of business we reinsure and could increase our costs. We maintain credit and letter of credit facilities with various financial institutions as a potential source of additional collateral and liquidity. Our failure to comply with the covenants and other requirements contained in these facilities, or the failure of the lenders to meet their commitments to provide funds or issue letters of credit, in each case as a result of the COVID-19 pandemic and the related economic and financial market disruption or otherwise, would impact our ability to access these facilities when needed, adversely affecting our liquidity, financial condition and results of operations.

Insurance risks, including mortality and morbidity claims. At this time, we cannot predict the ultimate number of claims and financial impact resulting from the COVID-19 pandemic and the response thereto. Actual claims and financial impact from these events could vary materially from current estimates due to several factors, including the inherent uncertainties in making such determinations and the evolving nature of the pandemic. Mortality or morbidity experience that is less favorable than the assumptions used in pricing our reinsurance agreements, as a result of the COVID-19 pandemic or otherwise, has negatively impacted and in the future could negatively impact our financial condition and results of operations. In addition, increased economic uncertainty and increased unemployment resulting from the economic impacts of the pandemic may result in policyholders seeking sources of liquidity and withdrawing at rates greater than previously expected. If policyholder lapse and surrender rates significantly exceed expectations, it could have a material adverse effect on our business, results of operations and financial condition.

Possible ratings downgrade. A downgrade in our ratings or in the ratings of our reinsurance subsidiaries, whether caused by company-specific factors or factors related to the COVID-19 pandemic, general economic conditions and/or the insurance industry as a whole, could adversely affect us. A downgrade in the rating of RGA or any of our rated subsidiaries could increase our cost of capital and adversely affect our ability to raise capital to facilitate operations and growth. Upon certain downgrade events, some of our reinsurance contracts would either permit our client ceding insurers to terminate such reinsurance contracts or require us to post collateral to secure our obligations under these reinsurance contracts, either of which could negatively impact our ability to conduct business and our results of operations. Any downgrade in the ratings of our reinsurance subsidiaries could also adversely affect their ability to sell products, retain existing business and compete for attractive acquisition opportunities. We cannot assure you that actions taken by ratings agencies, including as a result of the COVID-19 pandemic, the response thereto and the significant economic and financial turmoil caused thereby, would not result in a material adverse effect on our business, results of operations and financial condition.

Adverse legislative or regulatory action. Government actions, both in the U.S. and internationally, to address and contain the impact of the COVID-19 pandemic may adversely affect us. Such actions could result in additional regulation or restrictions affecting the conduct of our business in the future. For example, our clients may be subject to legislative and regulatory action that impacts their ability to collect premiums or cancel policies, which may affect our clients’ performance under reinsurance agreements with us. It is also possible that changes in economic conditions and steps taken by federal, state and local governments in response to COVID-19 could require an increase in taxes at the federal, state and local levels, which would adversely impact our results of operations.

Operations. We are taking precautions to protect the safety and well-being of our employees, service providers and clients. However, no assurance can be given that the steps being taken will be adequate or appropriate. Our operations could be disrupted if key members of our senior management or a significant percentage of our workforce, or the workforce of our service providers or clients, are unable to continue to work because of illness, government directives or otherwise. Having shifted to remote work arrangements, we may experience reductions in our operating effectiveness and face increased operational risk, including but not limited to cybersecurity attacks or data security incidents. In addition, we rely on the performance of others, including our insurance company clients, retrocessionaires and service providers, and their failure to perform in a satisfactory manner as a result of the COVID-19 pandemic and the response thereto could negatively affect our operations.

Premiums and other income. We expect the impact of COVID-19 on general economic activity to negatively impact our premiums, fee income and market-related revenues. The pandemic and government directives around the world responding thereto has and in the future may also negatively impact our ability to generate new business premiums and delay our planned entry into, or expansion of, investments in new and emerging markets. We began to experience these impacts at the end of the first quarter of 2020 and expect them to persist and be more significant during the remainder of 2020 and beyond, but the degree of the impacts will depend on the extent and duration of the economic contraction.

As a result of the above risks, COVID-19 and the response thereto could materially and adversely impact our business, results of operation and financial condition. While COVID-19 negatively impacted our results of operations in the first half of 2020, the extent to which it, and the related global economic crisis, will affect our businesses, results of operations and financial condition, and capital and liquidity over time, will depend on future developments that are highly uncertain and cannot be predicted, including the scope and duration of the pandemic and any recovery period, future actions taken by governmental authorities, central banks and other third parties in response to the pandemic, and the effects on our clients, counterparties, employees and third-party service providers. Moreover, the effects of COVID-19 and the response thereto will heighten the other risks described in the section entitled “Risk Factors” in our 2019 Annual Report and any subsequent Quarterly Report on Form 10-Q or Current Report on Form 8-K.

We utilize assumptions, estimates and models to evaluate the potential impact on our business, results of operations and financial condition as a result of the COVID-19 pandemic and the response thereto. If actual events differ materially from those assumptions, estimates or models, our potential exposure to mortality claims and investment portfolio losses could be materially higher than those reflected in our capital plans, and our business, financial condition, and results of operations could be materially adversely affected.

We utilize assumptions, estimates and models to evaluate the potential impact on our business, results of operations and financial condition as a result of COVID-19 and the response thereto, including developing scenarios to evaluate our potential exposure to mortality claims, potential investment portfolio losses and other risks associated with our assets and liabilities. The scenarios and related analyses are subject to various assumptions, professional judgment, uncertainties and the inherent limitations of any statistical analysis, including the use and quality of historical internal and industry data. Consequently, actual losses from loss events may differ materially from what the scenarios may illustrate. This potential difference could be even greater for events with limited or no modeled annual frequency, such as COVID-19 and the response thereto.

More specifically, we evaluate our potential exposure to mortality claims by developing a range of scenarios involving assumptions and estimates relating to a number of variables, such as country-specific circumstances, measures by public and private institutions, impacts of COVID-19 on all other causes of death, the development and timing of effective treatments and/or a vaccine for COVID-19, comorbidities, number of deaths by region or country (and the variability thereof), the duration and pattern of the pandemic, geography-specific institutional and individual mitigation efforts, medical capacity, and other factors. We also estimated adjustments to reflect, among other factors, the favorable age distribution of our insured population and the better health profile and socio-economic status of insured lives as compared to the general population. However, a number of other factors have not been considered, such as smoking status, residential population density, geography-specific testing and interventions and their effectiveness or geography, culture or other country-specific factors. Further, the scenarios do not consider impacts on morbidity claims. Each assumption, estimate or risk not included in the scenarios introduces uncertainty. We also evaluate potential losses from our investment portfolio due to the pandemic based on stress scenarios based on assumptions and estimates relating to a range of factors that are subject to significant uncertainties, including, among others, the magnitude and duration of the economic downturn, ratings downgrades, bankruptcies and credit spread widening. In addition, we may not achieve the earnings generation that we expect, and we may not be able to issue additional debt or access other capital management tools on terms satisfactory to us, or at all. Actual events may differ materially from those assumptions and estimates; consequently, we could incur losses exceeding those reflected in our scenarios and related analyses, and our business, financial condition, and results of operations could be materially adversely affected.

We are operating in an unprecedented period of uncertainty, and while we are attempting to evaluate how the COVID-19 pandemic is impacting general population deaths, whether specifically attributed to COVID-19 or otherwise, and how such deaths will translate into mortality claims for our business over time, we are unable to predict the number of COVID-19 deaths that will ultimately occur worldwide, in any particular geography or in our insured population, or potential losses in our investment portfolio. Further, we do not currently have enough information to ascertain the likelihood of the assumptions or estimates related to our mortality and investment loss scenarios. Accordingly, any of our scenarios do not represent forecasts or projections of actual future events or performance. They should not be construed as financial guidance, and should not be relied on as such.

As a result of the factors, uncertainties and contingencies described above, our reliance on assumptions, estimates and data used to evaluate our potential exposure to mortality claims and potential losses from our investment portfolio related to the COVID-19 pandemic is subject to a high degree of uncertainty that could result in actual losses that are materially different from those reflected in the scenarios used to develop our capital plans, and our business, financial condition, and results of operations could be materially adversely affected.

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

Issuer Purchases of Equity Securities

The following table summarizes RGA's repurchase activity of its common stock during the quarter ended June 30, 2020:

	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
April 1, 2020 - April 30, 2020	655	$ 106.16	—	$ 167,573,148
May 1, 2020 - May 31, 2020	63,935	$ 86.57	—	$ 167,573,148
June 1, 2020 - June 30, 2020	132	$ 103.00	—	$ 167,573,148

(1) RGA had no repurchases of common stock under its share repurchase program for April, May and June 2020. The Company net settled - issuing 2,447, 168,622 and 420 shares from treasury and repurchased from recipients 655, 63,935 and 132 shares in April, May and June 2020, 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, with no expiration date, for up to $400 million of RGA's outstanding common stock. On May 6, 2020, the Company announced that it has suspended stock repurchases until further notice.

ITEM 6. Exhibits

See index to exhibits.

INDEX TO EXHIBITS

Exhibit Number	Description
3.1(i)	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.
3.1(ii)	Certificate of Designation Termination, effective as of May 21, 2020, incorporated by reference to Exhibit 3.1(ii) 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	Sixth Supplemental Indenture, dated as of June 9, 2020, between the Company and The Bank of New York Mellon Trust Company, N.A., as Trustee, incorporated by reference to Exhibit 4.2 to Current Report on Form 8-K filed on June 9, 2020.
4.2	Form of 3.150% Senior Note due 2030 (incorporated by reference from Exhibit A to the Supplemental Indenture filed as Exhibit 4.1 hereto), incorporated by reference to Exhibit 4.3 to Current Report on Form 8-K filed on June 9, 2020.
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: August 6, 2020	By:	/s/ Anna Manning Anna Manning President & Chief Executive Officer (Principal Executive Officer)
Date: August 6, 2020	By:	/s/ Todd C. Larson Todd C. Larson Senior Executive Vice President & Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 31.1

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: August 6, 2020

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

Exhibit 31.2

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: August 6, 2020

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

Exhibit 32.1

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

In connection with the Quarterly Report on Form 10-Q of Reinsurance Group of America, Incorporated and subsidiaries, (the “Company”), for the quarterly period ended June 30, 2020, 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: August 6, 2020

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

Exhibit 32.2

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

In connection with the Quarterly Report on Form 10-Q of Reinsurance Group of America, Incorporated and subsidiaries, (the “Company”), for the quarterly period ended June 30, 2020, 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: August 6, 2020

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