UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

☒ Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2021

☐ 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)	(I.R.S. Employer Identification No.)

16600 Swingley Ridge Road, Chesterfield, Missouri (Address of principal executive offices) **63017** (Zip Code)

Registrant's telephone number, including area code: **(636) 736-7000**

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

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes x No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes ☐ No x

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 ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). Yes x No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a 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 ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. x

Indicate by check mark whether the registrant is a shell company. Yes ☐ No x

The aggregate market value of the stock held by non-affiliates of the registrant, based upon the closing sale price of the common stock on June 30, 2021, as reported on the New York Stock Exchange was approximately $7.8 billion.

As of January 31, 2022, 67,189,921 shares of the registrant's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Form 10-K incorporates by reference certain information from the Registrant's Definitive Proxy Statement for the Annual Meeting of Shareholders (the "Proxy Statement") to be held in May 2022, to be filed by the Registrant with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the year ended December 31, 2021.

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES

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Item 1. BUSINESS

A. Overview

Reinsurance Group of America, Incorporated (“RGA”) is an insurance holding company that was formed on December 31, 1992. The consolidated financial statements herein include the assets, liabilities, and results of operations of RGA and its subsidiaries, all of which are wholly owned, and is referred to as the “Company”, “we”, “us” and “our” in this Annual Report on Form 10-K.

The Company is a leading global provider of traditional life and health reinsurance and financial solutions with operations in the U.S., Latin America, Canada, Europe, the Middle East, Africa, Asia and Australia. Reinsurance is an arrangement under which an insurance company, the “reinsurer,” agrees to indemnify another insurance company, the “ceding company,” for all or a portion of the insurance and/or investment risks underwritten by the ceding company. Reinsurance is designed to:

i. reduce the net amount at risk on individual risks, thereby enabling the ceding company to increase the volume of business it can underwrite, as well as increase the maximum risk it can underwrite on a single risk;

ii. enhance the ceding company’s financial strength and surplus position;

iii. stabilize operating results by leveling fluctuations in the ceding company’s loss experience; and

iv. assist the ceding company in meeting applicable regulatory requirements.

The Company has the following geographic-based and business-based operational segments:

- U.S. and Latin America;
- Canada;
- Europe, Middle East and Africa (“EMEA”);
- Asia Pacific; and
- Corporate and Other.

Geographic-based operations are further segmented into traditional and financial solutions businesses. The Company’s segments primarily write traditional reinsurance and financial solutions business that is wholly or partially retained in one or more of RGA’s reinsurance subsidiaries. See “Segments” for more information concerning the Company’s operating segments.

Impacts of the COVID-19 Pandemic on RGA’s Business

The COVID-19 global pandemic and the response thereto continued to result in increases in mortality, morbidity and other insurance risks during 2021. The global financial markets have stabilized since the beginning of the pandemic; however, they continue to be in a state of uncertainty due to COVID-19, including an increase in inflation, supply chain issues and the continued disruption and shutdown of businesses resulting in uncertainty in the global financial markets, all of which impacted the Company’s financial performance in 2021. 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, the impact of new variants of the virus, and vaccination levels globally. Given these many variables, the Company cannot reliably predict the future impact of the pandemic on its business, results of operations and financial condition. For a further discussion of the risks, uncertainties and actions taken in response to COVID-19, refer to Item 1A "Risk Factors" and Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations.”

Traditional Reinsurance

Traditional reinsurance includes individual and group life and health, disability, long-term care and critical illness reinsurance.

- Life reinsurance primarily refers to reinsurance of individual or group-issued term, whole life, universal life, and joint and last survivor insurance policies.
- Health and disability reinsurance primarily refers to reinsurance of individual or group health policies.
- Long-term care reinsurance provides benefits in the event a person is no longer able to perform some specified activities of daily living.
- Critical illness reinsurance provides a benefit in the event of the diagnosis of a pre-defined critical illness.

Traditional reinsurance is written on a facultative or automatic treaty basis. Facultative reinsurance is individually underwritten by the reinsurer for each policy to be reinsured, with the pricing and other terms established based upon rates negotiated in advance. Facultative reinsurance is normally purchased by ceding companies for medically impaired lives, unusual risks, or liabilities in excess of the binding limits specified in their automatic reinsurance treaties.

An automatic reinsurance treaty provides that the ceding company will cede risks to a reinsurer on specified blocks of policies where the underlying policies meet the ceding company's underwriting criteria. In contrast to facultative reinsurance, the reinsurer does not approve each individual policy being reinsured. Automatic reinsurance treaties generally provide that the reinsurer will be liable for a portion of the risk associated with the specified policies written by the ceding company. Automatic reinsurance treaties specify the ceding company's binding limit, which is the maximum amount of risk on a given life that can be ceded automatically to the reinsurer and that the reinsurer must accept. The binding limit may be stated either as a multiple of the ceding company's retention or as a stated dollar amount.

Facultative and automatic reinsurance may be written as yearly renewable term, coinsurance, modified coinsurance or coinsurance with funds withheld.

- Yearly renewable term treaty – The reinsurer assumes primarily the mortality or morbidity risk.
- Coinsurance arrangement – Depending upon the terms of the contract, the reinsurer may share in the risk of loss due to mortality or morbidity, lapses, and the investment risk, if any, inherent in the underlying policy.
- Modified coinsurance and coinsurance with funds withheld – Differ from coinsurance arrangements in that the assets supporting the reserves are retained by the ceding company.

Generally, the amount of life and health reinsurance ceded is stated on an excess or a quota share basis. Reinsurance on an excess basis covers amounts in excess of an agreed-upon retention limit. Retention limits vary by ceding company and also may vary by the age or underwriting classification of the insured, the product, and other factors. Under quota share reinsurance, the ceding company states its retention in terms of a fixed percentage of the risk with the remainder to be ceded to one or more reinsurers up to the maximum binding limit.

Many reinsurance agreements include recapture rights that permit the ceding company to reassume all or a portion of the risk formerly ceded to the reinsurer after an agreed-upon period of time or in some cases due to deterioration in the financial condition or ratings of the reinsurer. Recapture of business previously ceded does not affect premiums ceded prior to the recapture of such business, but would reduce premiums in subsequent periods. The potential adverse effects of recapture rights are mitigated by the following factors: (i) recapture rights vary by treaty and the risk of recapture is a factor that is considered when pricing a reinsurance agreement; (ii) ceding companies generally may exercise their recapture rights only to the extent they have increased their retention limits for the reinsured policies; (iii) ceding companies generally must recapture all of the policies eligible for recapture under the agreement in a particular year if any are recaptured, which prevents a ceding company from recapturing only the most profitable policies; and (iv) the ceding company is sometimes required to pay a fee to the reinsurer upon recapture. In addition, when a ceding company recaptures reinsured policies, the reinsurer generally releases the reserves it maintained to support the recaptured portion of the policies.

Financial Solutions

Financial solutions include longevity reinsurance, asset-intensive reinsurance, capital solutions and stable value products.

Asset-Intensive Reinsurance

Asset-intensive reinsurance refers to transactions with a significant investment component, which qualify as reinsurance under U.S. generally accepted accounting principles ("GAAP"). Asset-intensive reinsurance allows the Company's clients to manage their investment risk and available capital to pursue new growth opportunities.

An ongoing partnership with clients is important with asset-intensive reinsurance because of the active management involved in this type of reinsurance. This active management includes investment decisions, investment and claims management, and the determination of non-guaranteed elements. Some examples of asset-intensive reinsurance are: fixed deferred annuities, immediate/payout annuities, indexed annuities, unit-linked variable annuities, universal life, corporate-owned life insurance and bank-owned life insurance, unit-linked variable life, immediate/payout annuities, whole life, disabled life reserves, and extended term insurance.

Longevity Reinsurance

RGA's longevity reinsurance products are reinsurance contracts from which the Company earns premium for assuming the longevity risk of pension plans and other annuity products that have been insured by third parties. In many countries, companies are increasingly interested in reducing their exposure to longevity risk related to employee retirement benefits and individual annuities. This concern comes from both the absolute size of the risk and also through the volatility that

changes in life expectancy can have on their reported earnings. In addition, insurance companies that offer lifetime annuities are seeking ways to manage their current exposure, while also recognizing the potential to take on more risk from employers and individuals.

The Company has entered into transactions on existing longevity business for clients in the U.S., Europe and Canada. These have been arrangements with traditional insurance companies, as well as customized arrangements for banks dealing with pension schemes.

Stable Value Products

The Company provides guaranteed investment contracts to retirement plans that include investment-only, stable value wrap products. The assets are owned by the trustees of such plans, who invest the assets under the terms of investment guidelines to which the Company agrees. The contracts contain a guarantee of a minimum rate of return on participant balances supported by the underlying assets, and a guarantee of liquidity to meet certain participant-initiated plan cash flow requirements.

Capital Solutions

Capital solutions includes financial reinsurance and fee-based transactions which assist ceding companies in meeting applicable regulatory requirements by enhancing the ceding companies' financial strength and regulatory surplus position. Financial reinsurance and fee-based transactions do not qualify as reinsurance under GAAP due to the remote-risk nature of the transactions and are reported in accordance with deposit accounting guidelines or other applicable accounting guidelines.

B. Corporate Structure

As a holding company, RGA is separate and distinct from its subsidiaries and has no significant business operations of its own. Therefore, it relies on capital raising efforts, interest income on undeployed corporate investments and dividends from its insurance companies and other subsidiaries as the principal source of cash flow to meet its obligations, pay dividends and repurchase common stock. Information regarding the cash flow and liquidity needs of RGA may be found in Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources.

Regulation

The following table provides the jurisdiction of the regulatory authority for RGA's primary operating and captive subsidiaries:

Subsidiary	Regulatory Authority Jurisdiction
RGA Reinsurance Company ("RGA Reinsurance")	Missouri
Parkway Reinsurance Company ("Parkway Re")	Missouri
Rockwood Reinsurance Company ("Rockwood Re")	Missouri
Castlewood Reinsurance Company ("Castlewood Re")	Missouri
Chesterfield Reinsurance Company ("Chesterfield Re")	Missouri
Reinsurance Company of Missouri, Incorporated ("RCM")	Missouri
Timberlake Reinsurance Company II ("Timberlake Re")	South Carolina
RGA Life Reinsurance Company of Canada ("RGA Canada")	Canada
RGA Reinsurance Company (Barbados) Ltd. ("RGA Barbados")	Barbados
RGA Americas Reinsurance Company, Ltd. ("RGA Americas")	Bermuda
Manor Reinsurance, Ltd. ("Manor Re")	Barbados
RGA Atlantic Reinsurance Company Ltd. ("RGA Atlantic")	Barbados
RGA Worldwide Reinsurance Company, Ltd. ("RGA Worldwide")	Barbados
RGA Global Reinsurance Company, Ltd. ("RGA Global")	Bermuda
RGA Reinsurance Company of Australia Limited ("RGA Australia")	Australia
RGA International Reinsurance Company dac ("RGA International")	Ireland
RGA Reinsurance Company of South Africa, Limited ("RGA South Africa")	South Africa
Aurora National Life Assurance Company ("Aurora National")	California
Omnilife Insurance Company, Limited	United Kingdom

Certain of the Company's subsidiaries are subject to regulations in the other jurisdictions in which they are licensed or authorized to do business. Insurance laws and regulations, among other things, establish minimum capital requirements and limit the amount of dividends, distributions, and intercompany payments that affiliates can make without regulatory approval. Additionally, insurance laws and regulations impose restrictions on the amounts and types of investments that insurance companies may hold. New capital standards (discussed below) are being developed and are likely to be applied to one or more

of the Company's subsidiaries to either require more capital and/or limit the extent to which some forms of existing capital may be counted in an evaluation of financial strength by its regulators.

U.S. Regulation

Insurance Regulation

The insurance laws and regulations, as well as the level of supervisory authority that may be exercised by the various state insurance departments, vary by jurisdiction. These laws and regulations generally:

- Grant broad powers to supervisory agencies or regulators to examine and supervise insurance companies and insurance holding companies with respect to every significant aspect of the conduct of the insurance business. This includes the power to pre-approve the execution or modification of contractual arrangements.
- Require insurance companies to meet certain solvency standards and asset tests, to maintain minimum standards of financial strength and to file certain reports with regulatory authorities (including information concerning their capital structure, ownership and financial condition).
- Subject insurers to potential assessments for amounts paid by guarantee funds.

RGA Reinsurance, Chesterfield Re and RCM are subject to the state of Missouri's adoption of the National Association of Insurance Commissioners ("NAIC") Model Audit Rule, which requires an insurer to have an annual audit by an independent certified public accountant, provide an annual management report of internal control over financial reporting, file the resulting reports with the Director of Insurance and maintain an audit committee. Aurora National is subject to similar regulation by the State of California.

The Insurance Holding Company System Regulatory Acts in the U.S. permit the Missouri regulator to request and consider similar information in its regulation of the solvency of and capital standards for RGA Reinsurance, Chesterfield Re and RCM. In addition, the California regulator is permitted to request and consider in its regulation of the solvency of and capital standards for Aurora National, information about the operations of other subsidiaries of RGA and the extent to which contagion risk posed by those operations may also exist.

In addition, RGA is subject to a supervisory college, conducted by its group supervisor the Missouri Department of Commerce and Insurance ("MDCI"). The supervisory college is comprised of insurance regulators of the major jurisdictions in which RGA has established insurance branches and subsidiaries. Since the inception of the supervisory college in October 2012, the MDCI has conducted regular in-person supervisory college meetings in addition to numerous regulator-only conference calls. These meetings bring about requests for information from RGA's regulators as they monitor RGA's solvency, governance and overall management. While the supervisory college has the ability to impose limitations on the activities of the insurance subsidiaries of RGA, particularly since RGA has been designated by its group supervisor as an Internationally Active Insurance Group ("IAIG"), no such limitations have been imposed to date. The existence of the supervisory college generally helps RGA's regulators understand its business to a greater degree and encourages a more global view by RGA of its own regulation.

RGA's reinsurance subsidiaries are required to file statutory financial statements in each jurisdiction in which they are licensed and may be subject to onsite, periodic examinations by the insurance regulators of the jurisdictions in which each is licensed, authorized, or accredited. To date, none of the regulators' reports related to the Company's periodic examinations have contained material adverse findings.

Although some of the rates and policy terms of U.S. direct insurance agreements are regulated by state insurance departments, the rates, policy terms, and conditions of reinsurance agreements generally are not subject to regulation by any regulatory authority, which is also true outside of the U.S. In the U.S., however, the NAIC Model Law on Credit for Reinsurance, which has been adopted in most states, imposes certain requirements for an insurer to take reserve credit for risk ceded to a reinsurer. Generally, the reinsurer is required to be licensed, accredited or certified in the insurer's state of domicile or the reinsurer must be domiciled in a jurisdiction that is found by the U.S. regulators to observe standards established in the U.S. – E.U. Covered Agreement. Otherwise the reinsurer must post security for reserves transferred to the reinsurer in the form of letters of credit or assets placed in trust. The option for a U.S. domiciled insurer to obtain credit for the reserves it cedes to a reinsurer domiciled in a jurisdiction that observes standards established in the U.S. – E.U. Covered Agreement is termed ceding reinsurance to a "reciprocal reinsurer." Insurers ceding business to reciprocal reinsurers are permitted to take reserve credit without the reinsurer having to establish security. The NAIC Life and Health Reinsurance Agreements Model Regulation, which has been adopted in most states, imposes additional requirements for insurers to claim reserve credit for reinsurance ceded (excluding yearly renewable term reinsurance and non-proportional reinsurance). These requirements include bona fide risk transfer, an insolvency clause, written agreements, and filing of reinsurance agreements involving in force business, among other things. Outside of the U.S., rules for reinsurance and requirements for minimum risk transfer are less specific and are less likely to be published as rules, but nevertheless standards can be imposed to varying extents.

U.S. Valuation of Life Policies Model Regulation (commonly referred to as Regulation XXX), implemented beginning in 2002 for various types of life insurance business, significantly increased the level of reserves that U.S. life insurance and life reinsurance companies must hold on their statutory financial statements for various types of life insurance business, primarily certain level premium term life products. The reserve levels required under Regulation XXX are normally in excess of reserves required under GAAP. In situations where primary insurers have reinsured business to reinsurers that are unlicensed and unaccredited in the U.S., the reinsurer must provide collateral equal to its reinsurance reserves in order for the ceding company to receive statutory financial statement credit. Reinsurers have historically utilized letters of credit for the benefit of the ceding company, or have placed assets in trust for the benefit of the ceding company, or have used other structures as the primary forms of collateral. An exception to this requirement is expected to exist for reinsurance ceded to reciprocal reinsurers.

RGA Reinsurance is the primary subsidiary of the Company subject to Regulation XXX. In order to manage the effect of Regulation XXX on its statutory financial statements, RGA Reinsurance has retroceded a majority of Regulation XXX reserves to unaffiliated and affiliated unlicensed reinsurers and special purpose reinsurers, or captives. RGA Reinsurance's statutory capital may be significantly reduced if the unaffiliated or affiliated reinsurer is unable to provide the required collateral to support RGA Reinsurance's statutory reserve credits and RGA Reinsurance cannot find an alternative source for the collateral. The NAIC has requirements for life insurers using special purpose reinsurers. While RGA Reinsurance's reserve financing arrangements using special purpose reinsurers or "captive reinsurers" are permitted, the rules place limitations on RGA Reinsurance's ability to utilize captive reinsurers to finance reserve growth related to future business. Such limitations have caused the Company to utilize alternative retrocession strategies, primarily involving the use of a certified reinsurer as discussed below.

Based on the growth of the Company's business and the pattern of reserve levels under Regulation XXX associated with term life business and other statutory reserve requirements, the amount of ceded reserve credits is expected to grow, albeit, with the implementation of principles-based reserves in the U.S. growth is expected at slower rates than in the immediate past. This growth will require the Company to obtain additional letters of credit, put additional assets in trust, or utilize other funding mechanisms to support reserve credits. If the Company is unable to support the reserve credits, the regulatory capital levels of several of its subsidiaries may be significantly reduced, while the regulatory capital requirements for these subsidiaries would not change. The reduction in regulatory capital could affect the Company's ability to write new business and retain existing business.

Affiliated captives are commonly used in the insurance industry to help manage statutory reserve and collateral requirements and are often domiciled in the same state as the insurance company that sponsors the captive. The NAIC has analyzed the insurance industry's use of affiliated captive reinsurers to satisfy certain reserve requirements and has adopted measures to promote uniformity in both the approval and supervision of such reinsurers. Current standards addressing the use of captive reinsurers allow captives organized prior to 2016 to continue in accordance with their currently approved plans. New standards imposed upon the use of captive insurers for transactions after 2015 increase costs and add complexity to the use of captive insurers. As a result, the Company may need to alter the type and volume of business it reinsures, increase prices on those products, raise additional capital to support higher regulatory reserves or implement higher cost strategies.

In the U.S., the introduction of the certified reinsurer has provided an alternative way to manage regulatory reserves and collateral requirements. In 2014, RGA Americas was designated as a certified reinsurer by the MDCI. This designation allows the Company to retrocede business to RGA Americas in lieu of using captives for collateral requirements. Beginning in 2017, the NAIC approved principles-based reserving for U.S. insurers; however, implementation required approval by the states. To achieve this, the NAIC amended the standard valuation law to adopt life principles-based reserving (PBR) that was effective January 1, 2017, allowing a three-year adoption period. The Company adopted PBR in 2020, and PBR reserves are determined based on the terms of the reinsurance agreement which may differ from those of the direct policies. The Company has chosen not to establish captives subject to the new regulations as it evaluates the impact of the regulations on new captives, and how these new captives fit into the Company's overall risk management and financing programs.

Reinsurers may place assets in trust to satisfy collateral requirements for certain treaties. In addition, the Company holds securities in trust to satisfy collateral requirements under certain third-party reinsurance treaties. Under certain conditions in some treaties, the Company may be obligated to move reinsurance from one subsidiary of RGA to another subsidiary, post additional collateral for the ceding insurer or allow the ceding insurer to cancel the reinsurance. These conditions include change in control, level of capital or ratings of the subsidiary, insolvency, nonperformance under a treaty, or loss of the subsidiary's reinsurance license. If the Company is ever required to perform under these obligations, the risk to the consolidated company under the reinsurance treaties would not change; however, additional capital may be required due to the change in jurisdiction of the subsidiary reinsuring the business and may create a strain on liquidity, possibly causing a reduction in dividend payments or hampering the Company's ability to write new business or retain existing business. In the event that a treaty is terminated, the future profits related to the terminated treaty may be lost.

RGA Reinsurance, Chesterfield Re, Parkway Re, Rockwood Re, Castlewood Re and RCM prepare statutory financial statements in conformity with accounting practices prescribed or permitted by the State of Missouri. Timberlake Re prepares statutory financial statements in conformity with accounting practices prescribed or permitted by the State of South Carolina. Aurora National prepares its statutory financial statements in conformity with accounting practices prescribed or permitted by the State of California. Each of these states require domestic insurance companies to prepare their statutory financial statements in accordance with the NAIC Accounting Practices and Procedures manual subject to any deviations permitted by each state's insurance commissioner. The Company's non-U.S. subsidiaries are subject to the regulations and reporting requirements of their respective countries of domicile.

Capital Requirements

Risk-Based Capital ("RBC") guidelines promulgated by the NAIC are applicable to RGA Reinsurance, RCM, Aurora National, and Chesterfield Re, and identify minimum capital requirements based upon business levels and asset mix. These subsidiaries maintain capital levels in excess of the amounts required by the applicable guidelines. Timberlake Re, Parkway Re, Rockwood Re and Castlewood Re's capital requirements are determined solely by their licensing orders issued by their states of domicile. Pursuant to its licensing order issued by the South Carolina Department of Insurance, Timberlake Re only calculates RBC as a means of demonstrating its ability to pay principal and interest on its surplus note issued to Timberlake Financial, L.L.C. ("Timberlake Financial"). It is not otherwise subject to the RBC guidelines. Similarly, Parkway Re, Rockwood Re and Castlewood Re are not subject to the requirements of the NAIC's RBC guidelines. A decline in the RBC of one or more of the Company's U.S. insurers can cause the appearance of less capitalization in its U.S. insurers, individually, or when considered as a group.

While the NAIC is still developing its group capital calculation and has not yet articulated the ways in which it intends U.S. states to use the calculation, the calculation is expected to be used to assess the adequacy of capital within an insurance group domiciled in the U.S., particularly for groups such as RGA that are designated an IAIG by the group supervisor. The Company cannot currently predict the effect that any proposed or future group capital standard will have on its financial condition or operations or the financial condition or operations of its subsidiaries.

Regulations in international jurisdictions also require certain minimum capital levels, and subject the companies operating in such jurisdictions, to oversight by the applicable regulatory bodies. RGA's subsidiaries meet the minimum capital requirements in their respective jurisdictions. The International Association of Insurance Supervisors continues work on its insurance capital standard. While the insurance capital standard is a model for capital standards and not a standard that must be followed on its own in any jurisdiction, it is likely to influence capital requirements for insurers around the world and may lead to a need for additional capital in one or more of RGA's subsidiaries. The Company cannot predict the effect that any proposed or future legislation or rulemaking in the countries in which it operates may have on the financial condition or operations of the Company or its subsidiaries.

Insurance Holding Company Regulations

RGA Reinsurance, Chesterfield Re and RCM are subject to regulation under the insurance and insurance holding company statutes of Missouri. Aurora National is subject to regulation under the insurance and insurance holding company statutes of California. These insurance holding company laws and regulations generally require insurance and reinsurance subsidiaries of insurance holding companies to register and file with the home state regulator certain reports describing, among other information, capital structure, ownership, financial condition, certain intercompany transactions, and general business operations. The insurance holding company statutes and regulations also require prior approval of, or in certain circumstances, prior notice to the home state regulator of, certain material intercompany transfers of assets, as well as certain transactions between insurance companies, their parent companies and affiliates.

Under current Missouri and California insurance laws and regulations, no person may acquire any voting security or security convertible into a voting security of an insurance holding company, such as RGA, if as a result of the acquisition such person would "control" the insurance holding company. "Control" is presumed to exist under Missouri and California law if a person directly or indirectly owns or controls 10% or more of the voting securities of another person. Changes in control of an insurer are not permitted under the laws of these states unless: (i) certain filings are made with the home state regulator, (ii) certain requirements are met, including a public hearing, and (iii) approval or exemption is granted by the home state regulator. Additionally, revisions to the insurance holding company regulations of Missouri and California require increased disclosure to regulators of matters within the RGA group of companies.

Restrictions on Dividends and Distributions

Current Missouri law, applicable to RCM and its subsidiaries, RGA Reinsurance and Chesterfield Re, permits the payment of dividends or distributions by each company that together with dividends or distributions paid during the preceding twelve months by that company do not exceed the greater of (i) 10% of the insurer's statutory capital and surplus as of the preceding December 31, or (ii) the insurer's statutory net gain from operations for the preceding calendar year. Any proposed

dividend in excess of this amount is considered an “extraordinary dividend” and may not be paid until it has been approved, or a 30-day waiting period has passed during which it has not been disapproved, by the Director of the MDCI. Additionally, dividends may be paid only to the extent the insurer has unassigned surplus (as opposed to contributed surplus). The regulatory limitations and other restrictions described herein could limit the Company’s financial flexibility in the future should it choose to or need to use subsidiary dividends as a funding source for its obligations. See Note 11 – “Financial Condition and Net Income on a Statutory Basis” in the Notes to Consolidated Financial Statements for additional information on the Company’s dividend restrictions.

The California Insurance Holding Company Act defines an extraordinary dividend consistent with the definition found in the Missouri Insurance Holding Company Act and imposes an identical restriction upon the ability of Aurora National to pay dividends to RGA Reinsurance. In contrast to both the Missouri and the California Insurance Holding Company Acts, the NAIC Model Insurance Holding Company System Regulatory Act defines an extraordinary dividend as a dividend or distribution that together with dividends or distributions paid during the preceding twelve months exceeds the lesser of (i) 10% of statutory capital and surplus as of the preceding December 31, or (ii) statutory net gain from operations for the preceding calendar year. The Company is unable to predict whether, when, or if, Missouri will enact a new regulation for extraordinary dividends.

Missouri insurance laws and regulations also require that the statutory surplus of Chesterfield Re, RCM and RGA Reinsurance following any dividend or distribution be reasonable in relation to their outstanding liabilities and adequate to meet their financial needs. The Director of the MDCI may call for a rescission of the payment of a dividend or distribution by these entities that would cause their statutory surplus to be inadequate under the standards of the Missouri insurance regulations. California insurance laws and regulations impose the same restrictions on Aurora National as to the dividends or distributions that are made.

Pursuant to the South Carolina Director of Insurance, Timberlake Re may declare dividends subject to a minimum Total Adjusted Capital threshold, as defined by the NAIC’s RBC regulation. As of December 31, 2021, Timberlake Re met the minimum required threshold. Any dividends paid by Timberlake Re would be paid to Timberlake Financial, which in turn is subject to contractual limitations on the amount of dividends it can pay to RCM.

Dividend payments from non-U.S. operations are subject to similar restrictions established by local regulators. The non-U.S. regulatory regimes also commonly limit the dividend payments to the parent to a portion of the prior year’s statutory income, as determined by the local accounting principles. The regulators of the Company’s non-U.S. operations may also limit or prohibit profit repatriations or other transfers of funds to the U.S. if such transfers are deemed to be detrimental to the solvency or financial strength of the non-U.S. operations, or for other reasons. Most of the non-U.S. operating subsidiaries are second tier subsidiaries that are owned by various non-U.S. holding companies. The capital and rating considerations applicable to the first tier subsidiaries may also impact the dividends paid to RGA.

Default or Liquidation

In the event that RGA defaults on any of its debt or other obligations, or becomes the subject of bankruptcy, liquidation, or reorganization proceedings, the creditors and stockholders of RGA will have no right to proceed against the assets of any of the subsidiaries of RGA. If any of RGA’s reinsurance subsidiaries were to be liquidated or dissolved, the liquidation or dissolution would be conducted in accordance with the rules and regulations of the appropriate governing body in the state or country of the subsidiary’s domicile. The creditors of any such reinsurance company, including, without limitation, holders of its reinsurance agreements and state guaranty associations (if applicable), would be entitled to payment in full from such assets before RGA, as a direct or indirect stockholder, would be entitled to receive any distributions or other payments from the remaining assets of the liquidated or dissolved subsidiary.

Federal Regulation

Since the 2010 enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act, the U.S. federal government has paid greater attention to the manner in which insurance and reinsurance is regulated, particularly when U.S. insurers and reinsurers are doing business outside of the U.S. Under the Dodd-Frank Act, the Federal Insurance Office within the U.S. Treasury Department has negotiated a “covered agreement” with the European Union. The covered agreement, while promoting the recognition of U.S. state insurance regulators as group supervisors of U.S.-based global reinsurers such as RGA, also provides for an elimination of the collateral that has to be posted by reinsurers based in the European Union, and by NAIC’s anticipated extension of the rules, to those reinsurers based in additional jurisdictions that seek evaluation by the NAIC for treatment comparable to that given to members of the European Union under the U.S. – E.U. Covered Agreement. The extension of Covered Agreement treatment to additional jurisdictions will provide for the elimination of the collateral that reinsurers domiciled in those jurisdictions must currently post in favor of U.S. ceding insurers. This agreement, coupled with new state credit for reinsurance laws, has the potential to lower the cost at which RGA Reinsurance’s competitors are able to provide reinsurance to U.S. insurers. Additionally under the Dodd-Frank Act, one or more of RGA’s client ceding insurers domiciled in the U.S. may from time-to-time be designated systemically important by the Federal Reserve.

Insurers designated systemically important can be subject to the imposition of an additional layer of regulation over already existing state regulation. While it is not currently expected that any RGA entity would be deemed to be systemically important and become subject to this additional scrutiny, the reinsurance programs RGA maintains with the insurers so designated as systemically important are subject to scrutiny by the Federal Reserve. While no U.S. insurers or reinsurers are currently designated systemically important, it is possible that one or more of RGA's clients will be given this designation in the future leading to additional scrutiny of those clients' reinsurance programs by the Federal Reserve.

With the potential regulation of some U.S. domiciled insurers by the U.S. government, it is possible that the scope of the federal government's ability to regulate insurers and reinsurers will be expanded. It is not possible to predict the effect of such decisions or changes in law on the operation of the Company, but the Dodd-Frank Act makes it more likely than in the past that insurance or reinsurance may be to some extent become regulated at the federal level. A shift in regulation from the state to the federal level may bring into question the continued validity of the McCarran-Ferguson Act, which exempts the "business of insurance" from most federal laws, including anti-trust laws. With the McCarran-Ferguson Act exemption for the business of insurance, a reinsurer may set rate, underwriting and claims handling standards for its ceding company clients to follow.

Environmental Considerations Related to Real Property Ownership, Development and Mortgage Investment

Federal, state and local environmental laws and regulations apply to the Company's ownership and operation of real property. Inherent in owning and operating real property are the risks of hidden environmental liabilities and the costs of any required clean-up. Under the laws of certain states, contamination of a property may give rise to a lien on the property to secure recovery of the costs of clean-up. In several states, this lien has priority over the lien of an existing mortgage against such property. In addition, in some states and under the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), the Company may be liable, in certain circumstances, as an "owner" or "operator," for costs of cleaning-up releases or threatened releases of hazardous substances at a property mortgaged to it. The Company also risks environmental liability when it forecloses on a property mortgaged to it, although federal legislation provides for a safe harbor from CERCLA liability for secured lenders that foreclose and sell the mortgaged real estate, provided that certain requirements are met. However, there are circumstances in which actions taken could still expose the Company to CERCLA liability. Application of various other federal and state environmental laws could also result in the imposition of liability on the Company for costs associated with environmental hazards.

In addition to conducting an environmental assessment while underwriting a mortgage loan, the Company routinely conducts environmental assessments prior to taking title to real estate through foreclosure on real estate collateralizing mortgages that it holds. Although unexpected environmental liabilities can always arise, the Company seeks to minimize this risk by undertaking these environmental assessments and complying with its internal procedures, and as a result, the Company believes that any costs associated with compliance with environmental laws and regulations or any clean-up of properties would not have a material adverse effect on the Company's results of operations.

Environmental, Social and Governance

Insurance regulators are considering imposing new rules regarding how insurers incorporate and report about environmental, social, and governance ("ESG") considerations into their operational decisions, underwriting, and investment decisions. Currently, efforts are aimed at enacting laws and regulations that focus on testing underwriting models for bias. Other current ESG initiatives are aimed at reviewing the investment portfolios of insurers and requiring discussions regarding ESG topics between insurers and their regulators. It is possible that rules governing insurance underwriting and factors utilized by insurers in the selection of risks may be altered in the future in a way that impacts the profitability of RGA's business. The extent to which ESG concerns may impact RGA in the future is uncertain, but RGA has incorporated ESG factors and goals into its current strategic plan, operations, and risk assessment processes.

International Regulation

RGA's international insurance operations are principally regulated by insurance regulatory authorities in the jurisdictions in which they are located or operate branch offices. The regulation includes minimum capital, solvency and governance requirements. The authority of RGA's international operations to conduct business is subject to licensing requirements, inspections and approvals and these authorizations are subject to modification and revocation. Periodic examinations of the insurance company books and records, financial reporting requirements, risk management processes and governance procedures are among the techniques used by regulators to supervise RGA's non-U.S. insurance businesses. The regulators of RGA's non-U.S. insurance companies, and the California Department of Insurance are also invited to be part of the supervisory college held by the MDCI, RGA's group supervisor.

Bermuda's Insurance Act 1978 (the "Bermuda Insurance Act") distinguishes between insurers carrying on long-term business, insurers carrying on special purpose business and insurers carrying on general business. There are five classifications of insurers carrying on long-term business, ranging from Class A insurers to Class E insurers. Taking a risk-based approach to

regulation that looks at the nature, scale and complexity of an insurer's business, the Bermuda Monetary Authority ("BMA") typically applies less regulatory oversight to Class A captive insurers and greater regulatory oversight to Class E commercial insurers. The Company's subsidiaries domiciled in Bermuda are licensed for long-term business and are classified as Class E insurers and are therefore subject to extensive regulation and supervision by the BMA. Such regulation includes rules regarding privacy, anti-money laundering, bank secrecy, anti-corruption and foreign asset control in addition to insurance regulation. To that end, the BMA has broad powers to regulate business activities of the Company's Bermuda domiciled subsidiaries, mandate capital and surplus requirements, regulate trade and claims practices and require strong enterprise risk management and corporate governance activities.

The Company's Bermuda subsidiaries, as Class E insurers, file annual statutory financial statements and annual audited financial statements prepared in accordance with accounting principles generally accepted in the U.S. within four months of the end of each fiscal year, unless such deadline is specifically extended. The Bermuda Insurance Act prescribes rules for the preparation of the statutory financial statements. In addition, the Company's Bermuda subsidiaries are required to file with the BMA a capital and solvency return along with its annual statutory financial return.

The Company's Bermuda subsidiaries must at all times maintain a minimum margin of solvency ("MMS") and an enhanced capital requirement ("ECR") in accordance with the provisions of the Bermuda Insurance Act. If either the minimum MMS or ECR is not met then the Bermuda Insurance Act mandates certain actions and filings with the BMA including the filing of a written report detailing the circumstances giving rise to the failure and the manner and time within which the insurer intends to rectify the failure. The BMA has embedded an economic balance sheet ("EBS") framework as part of the Bermuda Solvency Capital Requirement ("BSCR") that forms the basis for an insurer's ECR. As Class E insurers, the Company's Bermuda subsidiaries' ECR is established by reference to the Class E BSCR model, which provides a method for determining an insurer's capital requirements by taking into account the risk characteristics of different aspects of the insurer's business. The BSCR formula establishes capital requirements for different categories of risk such as fixed income investment risk, equity investment risk, long-term interest rate/liquidity risk, currency risk, concentration risk, credit risk, operational risk and seven categories of long-term insurance risk. Depending on the risk category, the capital requirement is either determined by applying shocks or by applying prescribed factors, where such shocks and factors were developed by the BMA and were calibrated at 99% Tail Value-at-Risk ("TVaR") over a one-year time horizon.

Under the Bermuda Insurance Act, the Company's Bermuda subsidiaries are prohibited from declaring or paying a dividend if they are not meeting their ECR or MMS requirements or if the declaration or payment of the dividend would cause such a breach. Failing to meet the MMS requirement on the last day of any financial year prohibits a company from declaring or paying any dividends during the next financial year without the approval of the BMA. Additional actions and filings may be required before a company can declare and pay a dividend depending on its prior year statutory capital and surplus. The restrictions on declaring or paying dividends and distributions under the Bermuda Insurance Act are in addition to those under Bermuda's Companies Act 1981 (the "Companies Act"). Under the Companies Act, the Company's Bermuda subsidiaries may not declare or pay a dividend, or make a distribution out of contributed surplus, if there are reasonable grounds for believing that: (1) the company is, or would after the payment be, unable to pay its liabilities as they become due, or (2) the realizable value of the company's assets would thereby be less than its liabilities.

The Company's subsidiaries domiciled in Bermuda are subject to extensive regulation and supervision by the Bermuda Monetary Authority ("BMA"). Such regulation includes rules regarding privacy, anti-money laundering, bank secrecy, anti-corruption and foreign asset control in addition to insurance regulation. To that end, the BMA has broad powers to regulate business activities of the Company's Bermuda domiciled subsidiaries, mandate capital and surplus requirements, regulate trade and claims practices and require strong enterprise risk management and corporate governance activities. The Company's subsidiaries domiciled in Barbados are subject to regulation and supervision by the Financial Services Commission in Barbados. Recently enacted economic substance requirements in Bermuda and Barbados may place additional requirements, including reporting requirements, on the Company's subsidiaries domiciled in those countries in order to demonstrate purpose and governance of those entities and their operations to greater levels than required in the past.

Much like the adoption of the Dodd-Frank Act in the U.S., regulators around the world continue to consider ways to avoid a recurrence of the causes of the 2008 – 2009 financial crisis. A group leading this effort is the Financial Stability Board ("FSB"). The FSB consists of representatives of national financial authorities of the G20 nations. The G20 and the FSB and related governmental bodies have developed proposals to address issues such as group supervision, capital and solvency standards, systemic economic risk and corporate governance, including executive compensation and many other related issues associated with the financial crisis. At the direction of the FSB, the International Association of Insurance Supervisors ("IAIS") has developed a model framework for the supervision of Internationally Active Insurance Groups ("IAIG") that contemplates "group-wide supervision" across national boundaries. RGA now qualifies as an IAIG bringing about requirements for RGA to conduct a group-wide risk and solvency assessment to monitor and manage its overall solvency. At this time RGA cannot predict what additional capital requirements, compliance costs or other burdens these requirements would impose on it, if

adopted for the evaluation of a U.S.- domiciled insurance group. There is also the potential for inconsistent or conflicting regulation of the RGA group of companies as lawmakers and regulators in multiple jurisdictions simultaneously pursue these initiatives.

Additionally, RGA International, operating in the European Economic Area (“EEA”), is subject to the Solvency II measures developed by the European Insurance and Occupational Pensions Authority and will be required to abide by the evolving risk management practices, capital standards and disclosure requirements of the Solvency II framework. Additionally, the Company’s clients located in the EEA will need to abide by these standards in operating their insurance businesses, including the management of their ceded reinsurance. Currently, insurers and reinsurers located in the EEA are operating under Solvency II. The Company expects Solvency II to have a significant influence on not only the regulation of solvency measures applied to insurers and reinsurers operating within the EEA, but the Company also expects the solvency regulation measures to influence future regulatory structures of countries outside of the EEA, including Japan. Influences of the Solvency II – type framework are already present in the insurance regulation of Bermuda and China and currently influence the solvency measures imposed upon RGA Global and RGA Americas.

As a result of the 2016 Brexit referendum, under which the United Kingdom (“UK”) exited the European Union effective January 31, 2020, the regulatory approval of RGA International as a reinsurer of insurance business written by UK domiciled insurers remains susceptible to termination after the end of 2020. While it currently appears that any post Brexit insurance regulation in the UK will permit the separate registration of RGA International as a branch in the UK, there exists questions as to what requirements will be imposed upon reinsurers domiciled outside of the UK after implementation of the Brexit initiative.

Additionally, some countries limit the amount of insurance business that can be ceded to foreign reinsurers. Requirements of this type are proposed from time-to-time in developing markets. These forced localization requirements have the impact of limiting the amount of reinsurance business RGA can conduct in those countries without the participation of a local reinsurer.

RGA expects the scope and extent of regulation outside of the U.S., as well as group regulatory oversight generally, to continue to increase.

Privacy and Cybersecurity Regulation

Various jurisdictions in which the Company’s subsidiaries and their clients operate have established laws protecting the privacy and handling of consumers’ private data. The area of cybersecurity has also come under increased scrutiny from insurance regulators. These laws and regulations vary country to country and state to state, but they generally require the establishment of programs to detect and prevent unauthorized access to personal data and to mitigate theft of personal data. They also may require the Company, among other things, to notify client insurers or individuals of any security breach involving protected data, and to provide individuals with the right to access personal data and with the right to be forgotten.

In the U.S. the NAIC adopted the Insurance Data Security Model Law which establishes standards for data security and for the investigation of and notification of insurance regulators of cybersecurity events involving unauthorized access to certain private information belonging to insureds. To date, this Model Law has not been widely adopted, but the Company expects further adoption in the future. The cybersecurity regulation in New York is applicable to many of the Company’s clients, and it requires the Company to demonstrate the existence and soundness of its cybersecurity program to those clients. The California Consumer Privacy Act of 2018 (“CCPA”) grants all California residents the right to know what information a business has collected from them and the sourcing and sharing of that information. The CCPA also gives the California consumer the right to have a business delete their personal information with some exceptions. The California restrictions, and related exceptions became effective on January 1, 2020. The Company expects that the exceptions will apply to a significant portion of its business. Laws and regulations similar to the New York cybersecurity regulation and the CCPA, as well as measures similar to the NAIC’s Insurance Data Security Model Law are likely to be adopted by more U.S. states in the near future, if not by the U.S. federal government.

In addition, new and proposed privacy and cybersecurity laws and regulations in many European and Asian countries restrict RGA’s ability to transfer data and impose other requirements on holders of data. In Europe, the General Data Protection Regulation (“GDPR”), which establishes uniform data privacy laws across the European Union (“EU”) is effective for all EU member states and is extraterritorial in that it applies to EU entities, as well as entities established in the EU that offer goods or services to data subjects in the EU or monitor consumer behavior that takes place in the EU. The GDPR anticipates the processing of data for reinsurance and other purposes and applies standards and rules that covered entities must establish and monitor with respect to such processing and use. Many of the restrictions enacted by jurisdictions outside of the EU either do not anticipate the processing of data for reinsurance purposes at all or place costly restrictions on the ability of a reinsurer to service its business by requiring processing to be done within the borders of the country in which the insured consumer resides. Further adoptions of laws patterned after the GDPR are expected around the world.

Ratings

Insurer financial strength ratings, sometimes referred to as claims paying ratings, represent the opinions of rating agencies regarding the financial ability of an insurance company to meet its obligations under an insurance policy. The Company's insurer financial strength ratings as of the date of this filing are listed in the table below for each rating agency that meets with the Company's management on a regular basis. As of the date of this filing, the Standard & Poor's ("S&P"), A.M. Best Company ("A.M. Best"), and the Moody's Investors Service ("Moody's") ratings listed below are on stable outlook.

Insurer Financial Strength Ratings	A.M. Best [1]	Moody's [2]	S&P [3]
RGA Reinsurance Company	A+	A1	AA-
RGA Life Reinsurance Company of Canada	A+	Not Rated	AA-
RGA International Reinsurance Company dac	Not Rated	Not Rated	AA-
RGA Global Reinsurance Company, Ltd.	Not Rated	Not Rated	AA-
RGA Reinsurance Company of Australia Limited	Not Rated	Not Rated	AA-
RGA Reinsurance Company (Barbados) Ltd.	Not Rated	Not Rated	AA-
RGA Americas Reinsurance Company, Ltd.	A+	Not Rated	AA-
RGA Atlantic Reinsurance Company Ltd.	A+	Not Rated	Not Rated
Omnilife Insurance Company Limited	Not Rated	Not Rated	A+

(1) An A.M. Best insurer financial strength rating of "A+" (superior) is the second highest out of sixteen possible ratings and is assigned to companies that have, in A.M. Best's opinion, a superior ability to meet their ongoing insurance obligations.

(2) A Moody's insurer financial strength rating of "A1" (good) is the fifth highest rating out of twenty-one possible ratings and indicates that Moody's believes the insurance company offers good financial security; however, elements may be present which suggest a susceptibility to impairment sometime in the future.

(3) An S&P insurer financial strength rating of "AA-" (very strong) is the fourth highest rating out of twenty-two possible ratings. According to S&P's rating scale, a rating of "AA-" means that, in S&P's opinion, the insurer has very strong financial security characteristics. A S&P insurer financial strength rating of "A+" (strong) is the fifth highest rating out of twenty-two possible ratings. According to S&P's rating scale, a rating of "A+" means that, in S&P's opinion, the insurer has strong financial security characteristics.

The ability to write reinsurance partially depends on a reinsurer's financial condition and its financial strength ratings. These ratings are based on a company's ability to pay policyholder obligations and are not directed toward the protection of investors. A ratings downgrade could adversely affect the Company's ability to compete. See Item 1A – "Risk Factors" for more on the potential effects of a ratings downgrade.

Underwriting

Automatic. The Company's management determines whether to write automatic reinsurance business by considering many factors, including the types of risks to be covered; the ceding company's retention limit and binding authority, product, and pricing assumptions; and the ceding company's underwriting standards, financial strength and distribution systems. For automatic business, the Company ensures that the underwriting standards, procedures and guidelines of its ceding companies are priced appropriately and consistent with the Company's expectations. To this end, the Company conducts periodic reviews of the ceding companies' underwriting and claims personnel and procedures.

Facultative. The Company has developed underwriting policies, procedures and standards with the objective of controlling the quality of business written as well as its pricing. The Company's underwriting process emphasizes close collaboration between its underwriting, actuarial, and administration departments. Management periodically updates these underwriting policies, procedures, and standards to account for changing industry conditions, market developments, and changes occurring in the field of medical technology. These policies, procedures, and standards are documented in electronic underwriting manuals made available to all the Company's underwriters. The Company regularly performs internal reviews of both its underwriters and underwriting process.

The Company's management determines whether to accept facultative reinsurance business on a prospective insured by reviewing the application, medical information and other underwriting information appropriate to the age of the prospective insured and the face amount of the application. An assessment of medical and financial history follows with decisions based on underwriting knowledge, manual review and consultation with the Company's medical directors as necessary. Many facultative applications involve individuals with multiple medical impairments, such as heart disease, high blood pressure, and diabetes, which require a complex underwriting/mortality assessment. The Company employs medical directors and medical consultants to assist its underwriters in making these assessments.

Pricing

The Company has pricing actuaries dedicated in every geographic market and in every product category who develop reinsurance treaty rates following the Company's policies, procedures and standards. Biometric assumptions are based primarily on the Company's own mortality, morbidity and persistency experience, reflecting industry and client-specific

experience. Economic and asset-related pricing assumptions are based on current and long-term market conditions and are developed by actuarial and investment personnel with appropriate experience and expertise. The Company's view of short- and long-term risks are reflected in pricing consistent with its internal capital model. For transactional business with material day-one invested assets there is diligence on the expected asset portfolio that is reflected in the pricing assumption. For transactional business focusing on tail risk the Company has policies and procedures related to views on transaction-specific tail risk events. A transaction process ensures that the business reflects the input of internal areas of expertise in deal teams and has procedures for escalation based on the size and nature of the risks. Management has established a high-level oversight of the processes and results of these activities, which includes peer reviews in every market as well as centralized procedures and processes for reviewing and auditing pricing activities.

Operations

The Company's business has been primarily obtained directly, rather than through brokers. The Company has an experienced sales and marketing staff that works to provide responsive service and maintain existing relationships.

The Company's administration, auditing, valuation and finance departments are responsible for treaty compliance auditing, financial analysis of results, generation of internal management reports, and periodic audits of administrative and underwriting practices. A significant effort is focused on periodic audits of administrative and underwriting practices, and treaty compliance of clients.

The Company's claims departments review and verify reinsurance claims, obtain the information necessary to evaluate claims, and arrange for timely claims payments. Claims are subjected to a detailed review process to ensure that the risk was properly ceded, the claim complies with the contract provisions, and the ceding company is current in the payment of reinsurance premiums to the Company. In addition, the claims departments monitor both specific claims and the overall claims handling procedures of ceding companies.

Customer Base

The Company provides reinsurance products primarily to the largest life insurance companies in the world. In 2021, the Company's five largest clients generated approximately $2.7 billion or 20% of the Company's gross premiums and other revenues. In addition, thirty-one other clients each generated annual gross premiums and other revenues of $100 million or more, and the aggregate gross premiums and other revenues from these clients represented approximately 46% of the Company's gross premiums and other revenues. No individual client generated 10% or more of the Company's total gross premiums and other revenues. For the purpose of this disclosure, companies that are within the same insurance holding company structure are combined.

Competition

New reinsurance opportunities continue to be highly price competitive; however, companies that consistently win business are financially strong, provide flexible terms and conditions, have a positive reputation, deliver excellent service, and demonstrate execution certainty and a long-term commitment to the business underwritten. The Company competes globally with other reinsurance companies, traditional insurance providers, private equity firms and other financial services companies.

Human Capital Resources

The Company continuously strives to fulfill its purpose; to make financial protection accessible to all. The Company's global team of approximately 3,500 employees consistently develop innovative solutions for its clients, deliver long-term returns for its investors, and create a meaningful impact in the communities where its employees live and work. Driving the Company's success is a shared commitment to pursue work that matters, to serve an industry with a strong social mission, and to create sustainable long-term value for all its stakeholders.

The Company's purpose has been especially evident while it protects the financial security of individuals and families affected by COVID-19. Hundreds of millions of people worldwide rely on the financial protection that insurance companies provide in times of uncertainty, and the Company remains committed to helping its clients fulfill its industry's noble purpose.

Effects of COVID-19 on the Company's Workforce

The majority of the Company's global employees continue to be remote workers, making remote work the norm throughout 2021. While where employees work has changed, the Company's employees continue to be committed and highly productive, remaining connected and engaged.

Throughout 2021, the Company maintained its focus on the physical and mental wellbeing of its employees. The Company continued to focus on a broad *Care Strategy* to ensure a sense of community and enhance collaboration among the Company's global teams while working remotely and social distancing. The Company's Care Strategy addressed diverse topics;

from physical and mental health and wellness (professionally and personally), to working effectively in a virtual world, to managing dispersed teams and finding the right work/life balance.

The Company's Culture

The Company's people, the way they work and the culture they cultivate are all key differentiators. The Company's employees describe RGA as a collaborative, results-driven, customer-centric, and an ethical organization.

Work at the Company is undertaken in an environment of high collaboration, which encourages innovation and entrepreneurship and demands the highest integrity. The Company's practice of combining technical expertise with curiosity and creativity, in partnership with its clients, defines the way it works internally and externally.

From the beginning, the Company was built on trust. Nearly 50 years later, trusted relationships – starting with its employees and extending to its clients, partners, and investors – remain the foundation of its success. In 2021, RGA's company-wide engagement survey demonstrated its employees' trust in what it does. Trust throughout the global workforce at the Company rated in the 90th percentile among the hundreds of other companies participating in the survey, which was conducted by a globally recognized workforce consulting firm. The Company honors its commitments to its employees, who in turn enable the Company to fulfill its commitments to its clients, shareholders, and society.

The Company's engagement score was equal when comparing genders globally. The overall engagement score for U.S. employees in under-represented groups was a one percentage point better than the overall U.S. average. Results from the global engagement survey, together with the Company's retention rates, highlight the commitment of the Company's Board of Directors and executive leadership team to its employees and its employees' commitment to the Company.

Talent Attraction, Retention and Development

As a global reinsurer, the Company's continued growth and vitality is built on attracting, selecting, developing and retaining exceptional talent in order to execute its strategy and to continue producing innovative solutions for its clients. The Company's focus on employee retention has resulted in a three-year average annual voluntary attrition rate of 6.8% globally.

The Company's hybrid approach to flexible work arrangements ("WorkWise"), prioritizes meeting business requirements while accommodating personal work styles in how, when, and where its employees work. Living RGA's purpose and fulfilling its commitments to partners, employees and employee's communities is its priority. WorkWise strengthens the Company's ability to attract and retain individuals to the organization. The many ways that the Company's teams connect, whether remote, hybrid, or in-person, reflect its culture and commitment to growth and innovation.

The Company invests significant resources to create and sustain a learning environment, ensuring its employees at all levels continue to develop professionally throughout their career with the Company. While technical expertise is critical, the Company also focuses on the development of highly effective interpersonal and leadership skills.

Compensation and Benefits and Pay Equity

The Company is committed to fostering a company culture that is inclusive, collaborative, and socially responsible. The Company is strengthened by its diverse workforce and recognizes that its employees are its greatest asset.

The Company's compensation programs, comprised of salary together with short and long-term incentives, strike a balance between external market competitiveness and internal equity, balancing global consistency with local market variations. This balance is achieved through consistent application of program standards on a global basis, while targeting compensation at competitive levels in the markets where it competes for talent.

The Company's benefit programs are an integral part of its employees' total reward package. Benefits are aligned with local market practices and include healthcare, retirement and savings, education assistance, flexible work programs, employee assistance programs, wellness programs, and parental leave programs, amongst others.

The Company has long been committed to ensuring equal pay for equal work. The Company-wide pay equity study, conducted by a third-party consultant, considered the average pay of females to males in comparable roles. The study analyzed the pay practices of all U.S. and non-U.S. employees in countries with more than 50 employees, representing approximately 90% of RGA's employees worldwide. Each year the results vary slightly due to changes in the employee population. Results dropped slightly this year with women paid 99.4% of what men are paid for comparable jobs. In addition, in the U.S., when using the same methodology of comparable roles, the average non-Caucasian to Caucasian pay ratio was 100.0%.

The Company is committed to gender and racial pay equity and will continue to review pay equity annually, and take action as required, to ensure its compensation programs remain aligned with its commitment to diversity, equity, and inclusion. Ensuring the Company's compensation practices are equitable is imperative to maintain the Company's culture and to ensure fair treatment of its employees.

Corporate Social Responsibility, Diversity, Equity and Inclusion

The Company believes that creating long-term value for its stakeholders implicitly requires enacting and executing sustainable business practices and strategies that, while delivering competitive returns, also take into account environmental, social and governance ("ESG") issues. The Company strives to govern itself in a sustainable manner that recognizes the need for strong governance, effective management systems and robust controls alongside its long-term operational goals and strategies. The Company understands that it has a responsibility to monitor and control its ecological and societal impact and adopt responsible practices on ESG issues in addition to its obligations regarding corporate strategy, risks, opportunities, and performance.

The Company strives to cultivate an environment in which diverse backgrounds, experiences, and perspectives are welcomed and employees feel comfortable and encouraged to discuss diversity, equity, and inclusion topics. The Company's diversity, equity, and inclusion initiatives are focused in four areas: (i) enabling an inclusive workplace; (ii) attracting, retaining and engaging a diverse workforce; (iii) fostering diverse partnerships in the communities where the Company operates; and (iv) ensuring accountability and responsibility throughout the Company. 100% of the Company's global employees have undertaken Everyday (Unconscious) Bias training, and 82% of its senior leaders have completed the Company's Inclusive Leadership course. The Company has integrated diversity, equity, and inclusion training into its leadership development offerings and expanded education offerings to include Mitigating Bias in Interviewing, Psychological Safety, and new manager training. The Company's education and accountability initiatives are the foundation of its efforts to promote diversity, equity, and inclusion.

The Company's Diversity, Equity and Inclusion Councils proactively leverage diverse teams around the world and serve as thought leaders for the Company to advance diversity, equity, and inclusion. They work to implement the Company's diversity, equity, and inclusion strategy and policies and advise on the Company's diversity, equity, and inclusion needs and the progress of these initiatives globally.

C. Segments

The Company obtains substantially all of its revenues through reinsurance agreements that cover a portfolio of life and health insurance products, including term life, credit life, universal life, whole life, group life and health, joint and last survivor insurance, critical illness, disability, longevity as well as asset-intensive (e.g., annuities), financial reinsurance and other capital motivated solutions. Generally, the Company, through various subsidiaries, has provided reinsurance for mortality, morbidity, lapse and investment-related risks associated with such products. With respect to asset-intensive products, the Company has also provided reinsurance for investment-related risks.

Additional information regarding the operations of the Company's segments and geographic operations is contained in Note 15 – "Segment Information" in the Notes to Consolidated Financial Statements.

U.S. and Latin America Operations

The U.S. and Latin America operations market traditional life and health reinsurance, reinsurance of asset-intensive products, financial reinsurance and other capital motivated solutions, primarily to U.S. life insurance companies.

Traditional Reinsurance

The U.S. and Latin America Traditional segment provides individual and group life and health reinsurance, including long term care, to domestic clients for a variety of products through yearly renewable term agreements, coinsurance, and modified coinsurance. This business has been accepted under many different rate scales, with rates often tailored to suit the underlying product and the needs of the ceding company. Premiums typically vary for smokers and non-smokers, males and females, and may include a preferred underwriting class discount. Reinsurance premiums are paid in accordance with the treaty, regardless of the premium mode for the underlying primary insurance. This business is made up of facultative and automatic treaty business.

Automatic business is generated pursuant to treaties that generally require the underlying policies to meet the ceding company's underwriting criteria, although in certain cases such policies may be rated substandard. In contrast to facultative reinsurance, reinsurers do not engage in underwriting assessments of each risk assumed through an automatic treaty.

As the Company does not apply its underwriting standards to each policy ceded to it under automatic treaties, the U.S. and Latin America operations generally require ceding companies to retain a portion of the business written on an automatic basis, thereby increasing the ceding companies' incentives to underwrite risks with due care and, when appropriate, to contest claims diligently.

The U.S. and Latin America facultative reinsurance operation involves the assessment of the risks inherent in (i) multiple impairments, such as heart disease, high blood pressure, and diabetes; (ii) cases involving large policy face amounts; and (iii) financial risk cases (i.e. cases involving policies disproportionately large in relation to the financial

characteristics of the proposed insured). The U.S. and Latin America operations' marketing efforts have focused on developing facultative relationships with client companies because management believes facultative reinsurance represents a substantial segment of the reinsurance activity of many large insurance companies and also serves as an effective means of expanding the U.S. and Latin America operations' automatic business.

Only a portion of approved facultative applications ultimately result in reinsurance, as applicants for impaired risk policies often submit applications to several primary insurers, which in turn seek facultative reinsurance from several reinsurers. Ultimately, only one insurance company and one reinsurer are likely to obtain the business. The Company tracks the percentage of declined and placed facultative applications on a client-by-client basis and generally works with clients to seek to maintain such percentages at levels deemed acceptable. As the Company applies its underwriting standards to each application submitted to it facultatively, it generally does not require ceding companies to retain a portion of the underlying risk when business is written on a facultative basis.

In addition, several of the Company's U.S. and Latin America clients have purchased life insurance policies insuring the lives of their executives. These policies have generally been issued to fund deferred compensation plans and have been reinsured with the Company.

Financial Solutions – Asset-Intensive Reinsurance

The Company's U.S. and Latin America Asset-Intensive operations primarily concentrate on the investment risk within underlying annuities and other investment oriented products. These reinsurance agreements are mostly structured as coinsurance, with some on a coinsurance with funds withheld, or modified coinsurance of primarily investment risk such that the Company recognizes profits or losses primarily from the spread between the investment earnings and amounts credited on the underlying contract liabilities.

The Company also provides guaranteed investment contracts to retirement plans that include investment-only, stable value wrap products. The assets are owned by the trustees of such plans, who invest the assets under the terms of investment guidelines to which the Company agrees. The contracts contain a guarantee of a minimum rate of return on participant balances supported by the underlying assets, and a guarantee of liquidity to meet certain participant-initiated plan cash flow requirements.

The Company primarily targets highly rated, financially secure companies as clients for asset-intensive business. These companies may wish to limit their own exposure to certain products or blocks of business. Ongoing asset/liability analysis is required for the management of asset-intensive business. The Company's analysis is a cross discipline analysis between the Company's underwriting, actuarial, investment and other departments throughout the organization and is completed in conjunction with an asset/liability analysis performed by the ceding companies.

Financial Solutions – Capital Solutions

The Company's U.S. and Latin America Capital Solutions operations assist ceding companies in meeting applicable regulatory requirements while enhancing their financial strength and regulatory surplus position. The Company assumes regulatory insurance liabilities from the ceding companies. In addition, the Company has committed to provide statutory reserve or asset support to third parties by funding loans or assuming real estate leases if certain defined events occur. Generally, such amounts are offset by receivables from ceding companies that are repaid by the future regulatory profits from the reinsured block of business. The Company structures its financial reinsurance and other capital solution transactions so that the projected future profits of the underlying reinsured business significantly exceed the amount of regulatory surplus provided to the ceding company.

The Company primarily targets highly rated insurance companies for capital solutions business. A careful analysis is performed before providing any regulatory surplus enhancement to the ceding company. This analysis is intended to ensure that the Company understands the risks of the underlying insurance product and that the transaction has a high likelihood of being repaid through the future regulatory profits of the underlying business. If the future regulatory profits of the business are not sufficient to repay the Company or if the ceding company becomes financially distressed and is unable to make payments under the treaty, the Company may incur losses. A staff of actuaries and accountants track experience for each treaty on a quarterly basis in comparison to models of expected results.

Customer Base

The U.S. and Latin America operations market life reinsurance and financial solutions primarily to U.S. life insurance companies. The treaties underlying this business generally are terminable by either party on 90 days written notice, but only with respect to future new business. Existing business generally is not terminable, unless the underlying policies terminate or are recaptured. In 2021, the five largest clients generated approximately $1.7 billion or 24% of U.S. and Latin America operation's gross premiums and other revenues. In addition, 50 other clients each generated annual gross premiums and other revenues of $20 million or more, and the aggregate gross premiums from these clients represented approximately 68% of U.S.

and Latin America operation's gross premiums and other revenues. For the purpose of this disclosure, companies that are within the same insurance holding company structure are combined.

Canada Operations

The Company operates in Canada primarily through RGA Canada. RGA Canada employs its own underwriting, actuarial, claims, pricing, accounting, systems, marketing and administrative staff in offices located in Montreal and Toronto.

Traditional Reinsurance

RGA Canada assists clients with capital management and mortality and morbidity risk management and is primarily engaged in individual life reinsurance, and to a lesser extent creditor, group life and health, critical illness and disability reinsurance, through yearly renewable term and coinsurance agreements. 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 individual life insurance.

The business is generally composed of facultative and automatic treaty business. Automatic business is generated pursuant to treaties that generally require the underlying policies to meet the ceding company's underwriting criteria, although in certain cases such policies may be rated substandard. In contrast to facultative reinsurance, reinsurers do not engage in underwriting assessments of each risk assumed through an automatic treaty.

RGA Canada generally requires ceding companies to retain a portion of the business written on an automatic basis, thereby increasing the ceding companies' incentives to underwrite risks with due care and, when appropriate, to contest claims diligently.

Facultative reinsurance involves the assessment of the risks from a medical and financial perspective. RGA Canada is recognized as a leader in facultative reinsurance, and this has served to maintain a strong market share on automatic business.

RGA Canada supports over half the companies active in the living benefits and group insurance markets. Solid claims management expertise and innovative product development capabilities support a growing share of these markets.

Financial Solutions

The Company's Canada Financial Solutions operations primarily concentrates on the investment and longevity risk within underlying annuities and other investment oriented products. These reinsurance agreements are mostly structured as coinsurance, with some on a coinsurance with funds withheld, or modified coinsurance of primarily investment risk such that the Company recognizes profits or losses primarily from the spread between the investment earnings and amounts credited on the underlying contract liabilities. Canada's Financial Solutions operations also provide capital solutions to assist ceding companies in meeting applicable regulatory requirements while enhancing their financial strength and regulatory position.

The Company primarily targets highly rated, financially secure companies as clients for its financial solutions business. These companies may wish to limit their own exposure to certain products or blocks of business. Ongoing asset/liability analysis is required for the management of asset-intensive business. The Company's analysis is a cross discipline analysis between the Company's underwriting, actuarial, investment and other departments throughout the organization and is completed in conjunction with an asset/liability analysis performed by the ceding companies.

Customer Base

Clients include most of the life insurers in Canada, although the number of life insurers is much smaller compared to the U.S. In 2021, the five largest clients generated approximately $798 million or 59% of Canada operation's gross premiums and other revenues. In addition, 11 other clients each generated annual gross premiums and other revenues of $20 million or more, and the aggregate gross premiums and other revenues from these clients represented approximately 35% of Canada operation's gross premiums and other revenues. For the purpose of this disclosure, companies that are within the same insurance holding company structure are combined.

Europe, Middle East and Africa Operations

The Europe, Middle East and Africa ("EMEA") operations serve clients from subsidiaries, licensed branch offices and/or representative offices primarily located in the United Kingdom (UK), Continental Europe, the Middle East, and South Africa. EMEA's office in the Middle East is located in the United Arab Emirates ("UAE").

EMEA's operations in the UK, Continental Europe, South Africa and the Middle East employ their own underwriting, actuarial, claims, pricing, accounting, marketing and administration staffs with additional support services provided by the Company's staff in other geographical locations.

Traditional Reinsurance

The principal types of reinsurance for this segment include individual and group life and health, critical illness, disability and underwritten annuities. Traditional reinsurance in the UK, South Africa, Italy and Germany consists predominantly of long term contracts, which are not terminable for existing risk without recapture or natural expiry, whereas in other markets within the region contracts are predominantly short term, renewing annually.

Financial Solutions

The Company's EMEA Financial Solutions segment includes longevity, asset-intensive and financial reinsurance. Longevity reinsurance takes the form of closed block annuity reinsurance and longevity swap structures. Asset-intensive business for this segment consists of coinsurance of payout annuities. Financial reinsurance assists ceding companies in meeting applicable regulatory requirements while enhancing their financial strength. Financial reinsurance transactions do not qualify as reinsurance under U.S. GAAP, due to the low risk nature of the transactions and are reported in accordance with deposit accounting guidelines.

Customer Base

In 2021, the five largest clients generated approximately $1.0 billion or 44% of EMEA operation's gross premiums and other revenues. In addition, 20 other clients each generated annual gross premiums and other revenues of $20 million or more, and the aggregate gross premiums and other revenues from these clients represented approximately 37% of EMEA operation's gross premiums and other revenues. For the purpose of this disclosure, companies that are within the same insurance holding company structure are combined.

Asia Pacific Operations

The Asia Pacific operations serve clients from subsidiaries, licensed branch offices and/or representative offices throughout Asia and Australia.

The Asian offices provide full reinsurance services with additional support services provided by the Company's staff in the U.S. and Canada. In addition, a regional team based in Hong Kong has been established in recent years to provide support to the Asian offices to accommodate business growth in the region. RGA Australia employs its own underwriting, actuarial, claims, pricing, accounting, systems, marketing, and administration service.

Traditional Reinsurance

The principal types of reinsurance for this segment written through yearly renewable term and coinsurance treaties include:

- Individual and group life and health,
- Critical illness, which provides a benefit in the event of the diagnosis of pre-defined critical illness
- Disability, which provides income replacement benefits in the event the policyholder becomes disabled due to accident or illness
- Superannuation which 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.

Reinsurance agreements may be either facultative or automatic agreements covering primarily individual risks and, in some markets, group risks.

Financial Solutions

The Asia Pacific Financial Solutions segment includes financial reinsurance, asset-intensive and certain disability, and life and health blocks that contain material investment risks. Financial reinsurance assists ceding companies in meeting applicable regulatory requirements while enhancing their financial strength. Financial reinsurance transactions do not qualify as reinsurance under GAAP, due to the remote risk nature of the transactions and are reported in accordance with deposit accounting guidelines. Asset-intensive business for this segment primarily concentrates on the investment risk within underlying annuities and life insurance policies. Asset-intensive transactions are mostly structured to take on investment risk such that the Company recognizes profits or losses primarily from the spread between the investment earnings and the interest credited on the underlying annuity contract liabilities.

Customer Base

In 2021, the five largest clients generated approximately $1.4 billion or 47% of Asia Pacific operation's gross premiums and other revenues. In addition, 24 other clients each generated annual gross premiums and other revenues of $20

million or more, and the aggregate gross premiums and other revenues from these clients represented approximately 38% of Asia Pacific operation's gross premiums and other revenues. For the purpose of this disclosure, companies that are within the same insurance holding company structure are combined.

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. 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 customer engagement within the life insurance industry and hence generate new future revenue streams.

D. Financial Information About Foreign Operations

The Company's foreign operations are primarily in Canada, Asia Pacific, EMEA and Latin America. Revenue, income (loss) before income taxes, which include investment related gains (losses), interest expense, depreciation and amortization, and identifiable assets attributable to these geographic regions are identified in Note 15 – "Segment Information" in the Notes to Consolidated Financial Statements. Although there are risks inherent to foreign operations, such as currency fluctuations and restrictions on the movement of funds, as described in Item 1A – "Risk Factors", the Company's financial position and results of operations have not been materially adversely affected thereby to date.

E. Available Information

Copies of the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports are available free of charge through the Company's website (www.rgare.com) as soon as reasonably practicable after the Company electronically files such reports with the Securities and Exchange Commission (www.sec.gov). Information provided on such websites does not constitute part of this Annual Report on Form 10-K.

Item 1A. RISK FACTORS

In the Risk Factors below, we refer to the Company as "we," "us," or "our." Investing in our securities involves certain risks. Any of the following risks could materially adversely affect our business, financial condition or results of operations. These risks are not exclusive, and additional risks to which we are subject include, but are not limited to, the factors mentioned under "Cautionary Note Regarding Forward-Looking Statements" in Item 7 below and the risks of our businesses described elsewhere in this Annual Report on Form 10-K. Many of these risks are interrelated and occur under similar business and economic conditions, and the occurrence of certain of them may in turn cause the emergence, or exacerbate the effect, of others. Such a combination could materially increase the severity of the impact on our business, liquidity, financial condition and results of operations.

Risks Related to COVID-19

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 COVID-19 pandemic has increased mortality rates in certain jurisdictions and populations. Additionally, the COVID-19 pandemic and the response thereto has caused significant disruption in the international and U.S. economies and financial markets and has severely impacted, and will likely continue to severely impact, global economic conditions, which may result 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 and are considering taking similar additional actions, though it is unclear whether any of these actions will be successful in countering the economic disruption. These reactions have increased government liabilities and balance sheets, which has been partially responsible for inflation in the United States and other jurisdictions. As a result, the U.S. Federal Reserve and other central banks have raised, or are considering raising interest rates. Furthermore, it is unclear as to how governments and central banks will respond in the future given the potential economic stresses related and unrelated to the COVID-19 pandemic, including inflation, supply chain disruptions and other economic and political issues. Depending on the length of the pandemic, the availability, effectiveness and use of treatments and vaccines, and the extent and success of actions by governments and central banks, the adverse mortality rates and impact on the global economy may deepen, and our results of operations and financial condition in future quarters will continue to be adversely affected. The COVID-19 pandemic and the response thereto has adversely affected, and/or will likely adversely affect, us in the following areas:

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 and the availability, effectiveness and use of treatments and vaccines. Furthermore, the long-term health consequences for individuals who have recovered from COVID-19 and the related impact, if any, on mortality and morbidity are all unknown. 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.

Degradation of general economic conditions. The COVID-19 pandemic and the extraordinary measures put in place to address it have caused significant economic and financial turmoil both in the U.S. and around the world. These conditions are expected to continue in the near term and may worsen. 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. Depending on the length of the pandemic, the availability, effectiveness and use of treatments and vaccines, and the extent and success of actions by governments and central banks to counter the economic disruption, the adverse impact on the global economy may 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 and related impacts on the economy. Moreover, changes in interest rates, reduced liquidity in the financial markets or a continued slowdown in U.S. or 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 response thereto, would continue to 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 an increased 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, and limit the availability of collateral, 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.

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 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. 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, may 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 governments in response to COVID-19 could require an increase in taxes, which would adversely impact our results of 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 negatively impacted and in the future may further negatively impact our ability to generate new business premiums and may delay our planned entry into, or expansion of, investments in new and emerging markets.

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

As a result of the above risks, COVID-19 and the response thereto could continue to materially and adversely impact our business, results of operation and financial condition. The extent to which COVID-19, 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, the availability, effectiveness and use of treatments and vaccines, 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 below and in 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 may differ materially from what the scenarios may illustrate. This potential difference could be even greater for events with limited or unmodelled 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 for COVID-19 and the effectiveness and adoption of vaccines 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 analysis, 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 are 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.

Risks Related to Our Business

We make assumptions when pricing our products relating to mortality, morbidity, lapsation, investment returns and expenses, and significant deviations in experience could negatively affect our financial condition and results of operations.

Our life reinsurance contracts expose us to mortality, morbidity and lapse risk. Our risk analysis and underwriting processes are designed with the objective of controlling the quality of the business and establishing appropriate pricing for the risks we assume. Among other things, these processes rely heavily on our underwriting, our analysis of mortality, longevity and morbidity trends, lapse rates, expenses and our understanding of medical impairments and their effect on mortality, longevity or morbidity.

We expect mortality, longevity, morbidity and lapse experience to fluctuate somewhat from period to period, but believe they should remain reasonably predictable over a period of many years. Mortality, longevity, morbidity or lapse experience that is less favorable than the rates that we used in pricing a reinsurance agreement may cause our net income to be

less than otherwise expected because the premiums we receive for the risks we assume may not be sufficient to cover the claims and profit margin. Furthermore, even if the total benefits paid over the life of the contract do not exceed the expected amount, unexpected increases in the incidence of deaths or illness can cause us to pay more benefits in a given reporting period than expected, adversely affecting our net income in any particular reporting period. Likewise, adverse experience could impair our ability to offset certain unamortized deferred acquisition costs and adversely affect our net income in any particular reporting period. We perform annual tests to establish that deferred policy acquisition costs remain recoverable at all times. These tests require us to make a significant number of assumptions. If our financial performance significantly deteriorates to the point where a premium deficiency exists, a cumulative charge to current operations will be recorded, which may adversely affect our net income in a particular reporting period.

We regularly review our reserves and associated assumptions as part of our ongoing assessment of our business performance and risks. If we conclude that our reserves are insufficient to cover actual or expected policy and contract benefits and claim payments as a result of changes in experience, assumptions or otherwise, we would be required to increase our reserves and incur charges in the period in which we make the determination. The amounts of such increases may be significant and this could materially adversely affect our financial condition and results of operations and may require us to generate or fund additional capital in our businesses.

Our financial condition and results of operations may also be adversely affected if our actual investment returns and expenses differ from our pricing and reserve assumptions. Changes in economic conditions may lead to changes in market interest rates or changes in our investment strategies, either of which could cause our actual investment returns and expenses to differ from our pricing and reserve assumptions.

Changes in accounting standards may adversely affect our reported results of operations and financial condition.

The Company's consolidated financial statements are prepared in conformity with GAAP. If we are required to adopt revised accounting standards in the future, it may adversely affect our reported results of operations and financial condition. For a discussion of the impact of accounting pronouncements issued but not yet implemented, see "New Accounting Pronouncements" in Note 2 – "Significant Accounting Principles and Pronouncements" in the Notes to the Consolidated Financial Statements. In August 2018, the Financial Accounting Standards Board issued guidance that will significantly change the accounting for long-duration insurance contracts. This guidance will become effective for the Company on January 1, 2023. We are still evaluating the impact this guidance will have on our consolidated financial statements, but it will likely have a material impact on our reported profitability, financial position and financial ratios. In addition, the required adoption of new accounting standards may result in significant incremental costs associated with initial implementation and ongoing compliance.

Our reinsurance subsidiaries are highly regulated, and changes in these regulations could negatively affect our business.

Our reinsurance subsidiaries are subject to government regulation in each of the jurisdictions in which they are licensed or authorized to do business. Governmental agencies have broad administrative power to regulate many aspects of the reinsurance business, which may include reinsurance terms and capital adequacy. These agencies are concerned primarily with the protection of policyholders and their direct insurers rather than shareholders or holders of debt securities of reinsurance companies. Moreover, insurance laws and regulations, among other things, establish minimum capital requirements and limit the amount of dividends, tax distributions and other payments our reinsurance subsidiaries can make without prior regulatory approval, and impose restrictions on the amount and type of investments we may hold.

We operate in the United States and in many jurisdictions around the world. We are subject to the laws and insurance regulations of the United States. Additionally, a substantial portion of our operations occur outside of the U.S. These international businesses are subject to the insurance, tax and other laws and regulations in the countries in which they are organized and in which they operate. These laws and regulations may apply heightened scrutiny to non-domestic companies, which can adversely affect our operations, liquidity, profitability and regulatory capital. Foreign governments and regulatory bodies from time to time consider legislation and regulations that could subject us to new or different requirements and such changes could negatively impact our operations in the relevant jurisdictions. See "Item 1. Business – B. Corporate Structure – Regulation" for a summary of certain U.S. state and federal laws and foreign laws and regulations applicable to our business. Our failure to comply with these and other laws and regulations could subject us to penalties from governmental or self-regulatory authorities, costs associated with remedying any such failure or related claims, harm to our business relationships and reputation, or interrupt our operations, any of which could negatively impact our financial position and results of operations.

A downgrade in our ratings or in the ratings of our reinsurance subsidiaries could adversely affect our ability to compete.

Our financial strength and credit ratings are important factors in our competitive position. Rating organizations periodically review the financial performance and condition of insurers, including our reinsurance subsidiaries. These ratings

are based on an insurance company's ability to pay its obligations and are not directed toward the protection of investors. Rating organizations assign ratings based upon several factors. While most of the factors considered relate to the rated company, some of the factors relate to general economic conditions and circumstances outside the rated company's control. The various rating agencies periodically review and evaluate our capital adequacy in accordance with their established guidelines and capital models. In order to maintain our existing ratings, we may commit from time to time to manage our capital at levels commensurate with such guidelines and models. If our capital levels are insufficient to fulfill any such commitments, we could be required to reduce our risk profile by, for example, retroceding some of our business or by raising additional capital by issuing debt, hybrid or equity securities. Additionally, rating agencies may make changes in their capital models and rating methodologies, which could increase the amount of capital required to support our ratings. In December 2021 S&P announced proposed changes to its rating methodologies. The proposed changes have not been finalized. Thus, the impact, if any, that these changes may have on our ratings is unknown. Any such actions could have a material adverse impact on our earnings and financial condition or materially dilute our shareholders' equity ownership interests.

Any downgrade in the ratings of our reinsurance subsidiaries could adversely affect their ability to sell products, retain existing business, and compete for attractive acquisition opportunities. The ability of our subsidiaries to write reinsurance is influenced by their ratings. Ratings are subject to revision or withdrawal at any time by the assigning rating organization. A rating is not a recommendation to buy, sell or hold securities, and each rating should be evaluated independently of any other rating.

We believe that the rating agencies consider the financial strength and flexibility of a parent company and its consolidated operations when assigning a rating to a particular subsidiary of that company. A downgrade in the rating or outlook of RGA, among other factors, could adversely affect our ability to raise and then contribute capital to our subsidiaries for the purpose of facilitating their operations and growth. A downgrade could also increase our own cost of capital. For example, the facility fee and interest rate for our syndicated revolving credit facility are based on our senior long-term debt ratings. A decrease in those ratings could result in an increase in costs for that credit facility and others. Also, if there is a downgrade in the rating of RGA, or any of our rated subsidiaries, 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. Accordingly, we believe a ratings downgrade of RGA, or any of our rated subsidiaries, could negatively impact our ability to conduct business.

We cannot assure you that actions taken by ratings agencies would not result in a material adverse effect on our business, financial condition or results of operations. In addition, it is unclear what effect, if any, a ratings change would have on the price of our securities in the secondary market.

The availability and cost of collateral, including letters of credit, asset trusts and other credit facilities, as well as regulatory changes relating to the use of captive insurance companies, could adversely affect our business, financial condition or results of operations.

Regulatory reserve requirements in various jurisdictions in which we operate may be significantly higher than the reserves required under GAAP. Accordingly, we reinsure, or retrocede, business to affiliated and unaffiliated reinsurers to reduce the amount of regulatory reserves and capital we are required to hold in certain jurisdictions.

As described in "Item 1. Business – B. Corporate Structure – Regulation – U.S. Regulation", Regulation XXX and principles-based reserves (commonly referred to as PBR) requires U.S. life insurance companies to hold a relatively high level of regulatory reserves on their financial statements for various types of life insurance business. Based on the assumed growth rate in our current business plan and the increased level of regulatory reserves associated with some of this business, we expect the amount of our required regulatory reserves and our need to finance these reserves may continue to grow. Changes in laws and regulations and our ability to retrocede certain business may impact our reserving requirements and thus our financial condition and results of operations.

As a general matter, for us to reduce regulatory reserves on business that we retrocede, the affiliated or unaffiliated reinsurer must provide an equal amount of regulatory-compliant collateral. The availability of collateral and the related cost of such collateral in the future could affect the type and volume of business we reinsure and could increase our costs. We may need to raise additional capital to support higher regulatory reserves, which could increase our overall cost of capital. If we, or our retrocessionaires, are unable to obtain or provide sufficient collateral to support our statutory ceded reserves, we may be required to increase regulatory reserves. In turn, this reserve increase could significantly reduce our statutory capital levels and adversely affect our ability to satisfy required regulatory capital levels, unless we are able to raise additional capital to contribute to our operating subsidiaries. Furthermore, term life insurance is a particularly price-sensitive product, and any increase in insurance premiums charged on these products by life insurance companies, in order to compensate them for the increased statutory reserve requirements or higher costs of insurance they face, may result in a significant loss of volume in their life insurance operations, which could, in turn, adversely affect our life reinsurance operations. We cannot assure you that we will be able to implement actions to mitigate the effect of increasing regulatory reserve requirements.

In addition, we maintain credit and letter of credit facilities with various financial institutions as a potential source of collateral and excess liquidity. Our ability to utilize these facilities is conditioned on our satisfaction of covenants and other requirements contained in the facilities. Our ability to utilize these facilities is also subject to the continued willingness and ability of the lenders to provide funds or issue letters of credit. Our failure to comply with the covenants in these facilities, or the failure of the lenders to meet their commitments, would restrict our ability to access these facilities when needed, adversely affecting our liquidity, financial condition and results of operations.

Changes in the equity markets, interest rates and volatility affect the profitability of variable annuities with guaranteed living benefits that we reinsure, which may have a material adverse effect on our business and profitability.

We reinsure variable annuity products that include guaranteed minimum living benefits. These include guaranteed minimum withdrawal benefits, guaranteed minimum accumulation benefits and guaranteed minimum income benefits. The amount of reserves related to these benefits is based on their fair value and is affected by changes in equity markets, interest rates and volatility. Accordingly, strong equity markets, increases in interest rates and decreases in volatility will generally decrease the fair value of the liabilities underlying the benefits.

Conversely, a decrease in the equity markets along with a decrease in interest rates and an increase in volatility will generally result in an increase in the fair value of the liabilities underlying the benefits, which increases the amount of reserves that we must carry. Such an increase in reserves would result in a charge to our earnings in the quarter in which we increase our reserves. We maintain a customized dynamic hedging program that is designed to mitigate the risks associated with income volatility around the change in reserves on guaranteed benefits. However, hedge positions may not be effective to fully offset changes in the carrying value of the guarantees due to, among other things, the time lag between changes in such values and corresponding changes in the hedge positions, high levels of volatility in the equity and derivatives markets, extreme swings in interest rates, unexpected contract holder behavior, and divergence between the performance of the underlying funds and hedging indices. These factors, individually or collectively, may have a material adverse effect on our liquidity, capital levels, financial condition or results of operations.

RGA is an insurance holding company, and our ability to pay principal, interest and dividends on securities is limited.

RGA is an insurance holding company, with our principal assets consisting of the stock of our reinsurance company subsidiaries, and substantially all of our income is derived from those subsidiaries. Our ability to pay principal and interest on any debt securities or dividends on any preferred or common stock depends, in part, on the ability of our reinsurance company subsidiaries, our principal sources of cash flow, to declare and distribute dividends or advance money to RGA. We are not permitted to pay common stock dividends or make payments of interest or principal on securities that rank equal or junior to our subordinated debentures and junior subordinated debentures, until we pay any accrued and unpaid interest on such debentures. Our reinsurance company subsidiaries are subject to various statutory and regulatory restrictions, applicable to insurance companies generally, that limit the amount of cash dividends, loans and advances that those subsidiaries may pay to us. Covenants contained in certain of our debt agreements also restrict the ability of certain subsidiaries to pay dividends and make other distributions or loans to us. In addition, we cannot assure you that more stringent dividend restrictions will not be adopted, as discussed above under “Our reinsurance subsidiaries are highly regulated, and changes in these regulations could negatively affect our business.”

As a result of our insurance holding company structure, upon the insolvency, liquidation, reorganization, dissolution or other winding-up of one of our reinsurance subsidiaries, all creditors of that subsidiary would be entitled to payment in full out of the assets of such subsidiary before we, as shareholder, would be entitled to any payment. Our subsidiaries would have to pay their direct creditors in full before our creditors, including holders of common stock, preferred stock or debt securities of RGA, could receive any payment from the assets of such subsidiaries.

We are exposed to foreign currency risk.

We are a multi-national company with operations in numerous countries and, as a result, are exposed to foreign currency risk to the extent that exchange rates of foreign currencies are subject to adverse change over time. The U.S. dollar value of our net investments in foreign operations, our foreign currency transaction settlements and the periodic conversion of the foreign-denominated earnings to U.S. dollars (our reporting currency) are each subject to adverse foreign exchange rate movements. A significant portion of our revenues and our fixed maturity securities available-for-sale are denominated in currencies other than the U.S. dollar. We use hedging strategies and foreign-denominated revenues and investments to fund foreign-denominated expenses and liabilities when possible to mitigate exposure to foreign currency fluctuations, but these mitigation efforts may not be successful.

Our international operations involve inherent risks.

A significant portion of our net premiums come from our operations outside of the U.S. One of our strategies is to grow these international operations. International operations subject us to various inherent risks. We may not be able to manage the growth of these operations effectively, particularly given the recent rates of growth. Our international operations expose us

to mortality and morbidity experience, and supply and demand for our products that are specific to these markets as well as altered exposure to epidemic and pandemic risks that may be difficult to anticipate. In addition to the regulatory and foreign currency risks identified above, other related risks include uncertainty arising out of foreign government sovereignty over our international operations, potentially uncertain or adverse tax consequences (including the repatriation of earnings from our non-U.S. subsidiaries) and potential reduction in opportunities resulting from market access restrictions.

Some of our international operations are in emerging markets where these risks are heightened, and we anticipate that we will continue to do business in such markets. Our pricing assumptions may be less predictable in emerging markets, and deviations in actual experience from these assumptions could impact our profitability in these markets. Additionally, lack of legal certainty and stability in the emerging markets exposes us to increased risk of disruption and adverse or unpredictable actions by regulators and may make it more difficult for us to enforce our contracts, which may negatively impact our business.

We cannot assure you that we will be able to manage the risks associated with our international operations effectively or that they will not have an adverse effect on our business, financial condition or results of operations.

We depend on the performance of others, and their failure to perform in a satisfactory manner would negatively affect us.

In the normal course of business, we seek to limit our exposure to losses from our reinsurance contracts by ceding a portion of the reinsurance to other insurance enterprises or retrocessionaires. We cannot assure you that these insurance enterprises or retrocessionaires will be able to fulfill their obligations to us. We are also subject to the risk that our clients will be unable to fulfill their obligations to us under our reinsurance agreements with them.

We rely upon our insurance company clients to provide timely, accurate information. We may experience volatility in our earnings as a result of erroneous or untimely reporting from our clients. We also rely on original underwriting decisions made by our clients and cannot assure you that our clients' processes will adequately control business quality or establish appropriate pricing.

For some reinsurance agreements, the ceding company withholds and legally owns and manages assets equal to the net statutory reserves, and we reflect these assets as funds withheld at interest on our balance sheet. If a ceding company was to become insolvent, we would need to assert a claim on the assets supporting our reserve liabilities. We attempt to mitigate our risk of loss by offsetting amounts for claims or allowances that we owe the ceding company with amounts that the ceding company owes to us. We are subject to the investment performance on the withheld assets, although we do not directly control them. We help to set, and monitor compliance with, the investment guidelines followed by these ceding companies. However, to the extent that such investment guidelines are not appropriate, or to the extent that the ceding companies do not adhere to such guidelines, our risk of loss could increase, which could materially adversely affect our financial condition and results of operations. For additional information on funds withheld at interest, see "Investments – Funds Withheld at Interest" in Management's Discussion and Analysis of Financial Condition and Results of Operations.

We use the services of third parties such as asset managers, software vendors and administrators to perform various functions that are important to our business. For instance, we have engaged third party investment managers to manage certain assets where our investment management expertise is limited, who we rely on to provide investment advice and execute investment transactions that are within our investment policy guidelines. Our third-party service providers rely on their computer systems and their ability to maintain the security, confidentiality, integrity and privacy of those systems and the data residing on such systems. Our service providers may be subject to cybersecurity attacks and may not sufficiently protect their information technology and related data, which may impact their ability to provide us services and protect our data, which may subject us to losses and harm our reputation. Poor performance on the part of these outside vendors could negatively affect our operations and financial performance.

As with all financial services companies, our ability to conduct business depends on consumer confidence in the industry and our financial strength. Actions of competitors, and financial difficulties of other companies in the industry, and related adverse publicity, could undermine consumer confidence and harm our reputation and business.

Epidemics and pandemics, natural and man-made disasters, catastrophes and events, including terrorist attacks, could adversely affect our business, financial condition and results of operations.

Epidemics, pandemics, such as COVID-19, as well as natural disasters, climate change and terrorist attacks, and other catastrophes and events can adversely affect our business, financial condition and results of operations because they exacerbate mortality and morbidity risk. The likelihood, timing, and severity of these events cannot be predicted. A pandemic or other disaster could have a major impact on the global economy or the economies of particular countries or regions, including travel, trade, tourism, the health system, food supply, consumption, and overall economic output. Additionally, any such events could have a material negative impact on the financial markets, potentially impacting the value and liquidity of our invested assets, access to capital markets and credit, and the business of our clients. In addition, a pandemic or other disaster that affected our employees or the employees of companies with which we do business could disrupt our business operations. The effectiveness

of external parties, including governmental and non-governmental organizations, in combating the spread and severity of such an event could have a material impact on the losses we experience. These events could cause a material adverse effect on our results of operations in any period and, depending on their severity, could also materially and adversely affect our financial condition.

Additionally, the impact of an increase in global average temperatures could cause changes in weather patterns, resulting in more severe and more frequent natural disasters such as forest fires, hurricanes, tornadoes, floods and storm surges and may impact disease incidence and severity, food and water supplies and the general health of impacted populations. These climate change trends are expected to continue in the future and may impact nearly all sectors of the economy to varying degrees. We cannot predict the long-term impacts of climate change for the Company and our clients, but such events may adversely impact our mortality and morbidity rates and also may impact asset prices, financial markets and general economic conditions.

We operate in a highly competitive and dynamic industry and competition, tax law changes, an economic downturn and other factors could adversely affect our business.

The reinsurance industry is highly competitive, and we encounter significant competition in all lines of business from other reinsurance companies, as well as competition from other providers of financial services. Our competitors vary by geographic market, and many of our competitors have greater financial resources than we do. Our ability to compete depends on, among other things, pricing and other terms and conditions of reinsurance agreements, our ability to maintain strong financial strength ratings, and our service and experience in the types of business that we underwrite.

We compete based on the strength of our underwriting operations, insights on mortality trends, our ability to efficiently execute transactions, our client relationships and our responsive service. We believe our quick response time to client requests for individual underwriting quotes, our underwriting expertise and our ability to structure solutions to meet clients’ needs are important elements to our strategy and lead to other business opportunities with our clients. Our business will be adversely affected if we are unable to maintain these competitive advantages.

The insurance and reinsurance industries are subject to ongoing changes from market pressures brought about by customer demands, changes in law, changes in economic conditions such as interest rates and investment performance, technological innovation, marketing practices and new providers of insurance and reinsurance solutions. Failure to anticipate market trends or to differentiate our products and services may affect our ability to grow or maintain our current position in the industry. A failure by the insurance industry to meet evolving consumer demands, including demands to address disparate impacts that may exist against certain groups in insurers’ underwriting and sales models, could adversely affect the insurance industry and our operating results. Similarly, our failure to meet the changing demands of our insurance company clients through innovative product development, effective distribution channels and investments in technology could negatively impact our financial performance over the long-term. Additionally, our failure to adjust our strategies in response to changing economic conditions could impact our competitive position and have a material adverse effect on our business, financial condition and results of operations.

If the U.S. Internal Revenue Code is revised to reduce benefits associated with the tax-deferred status of certain life insurance and annuity products, or to increase the tax-deferred status of competing products, all life insurance companies would be adversely affected with respect to their ability to sell such products, and, depending on grandfathering provisions, by the surrenders of existing annuity contracts and life insurance policies. In addition, life insurance products are often used to fund estate tax obligations. If Congress adopts legislation in the future to reduce or eliminate the estate tax, our U.S. life insurance company customers could face reduced demand for some of their life insurance products, which in turn could negatively affect our reinsurance business. We cannot predict whether any tax legislation impacting corporate taxes or insurance products will be enacted, what the specific terms of any such legislation will be or whether any such legislation would have a material adverse effect on our business, financial condition and results of operations.

A general economic downturn or a downturn in the capital markets could adversely affect the market for many life insurance and annuity products. Factors such as consumer spending, business investment, government spending, the volatility and strength of the capital markets, deflation and inflation affect the economic environment and thus the profitability of our business. An economic downturn may yield higher unemployment and lower family income, corporate earnings, business investment and consumer spending, and could result in decreased demand for life insurance and annuity products. Because we obtain substantially all our revenues through reinsurance arrangements that cover a portfolio of life insurance products and annuities, our business would be harmed if the market for annuities or life insurance was adversely affected. Therefore, adverse changes in the economy could adversely affect our business, financial condition and results of operations.

We could be subject to additional income tax liabilities.

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Tax laws, regulations and administrative practices in various jurisdictions may be subject to significant change, with or without notice, due to economic,

political and other conditions, and significant judgment is required in evaluating and estimating our provision and accruals for these taxes.

The U.S. Treasury Department and the IRS continue to issue guidance under the U.S. Tax Cuts and Jobs Act of 2017 ("U.S. Tax Reform") that may result in interpretations different from ours. Foreign governments may enact tax laws in response to U.S. Tax Reform that could result in further changes to global taxation and materially affect our financial position and results of operations. In addition, a number of countries are actively pursuing changes to their tax laws applicable to multinational corporations.

Acquisitions and significant transactions involve varying degrees of risk that could affect our profitability.

We have made, and may in the future make, acquisitions, either of selected blocks of business or other companies. The success of these acquisitions depends on, among other factors, our ability to appropriately price and evaluate the risks of the acquired business, as well as the availability of funding sufficient to meet increased capital needs, the ability to fund cash flow shortages that may occur if anticipated revenues are not realized or are delayed and the possibility that the value of investments acquired in an acquisition may be lower than expected or may diminish due to credit defaults or changes in interest rates and that liabilities assumed may be greater than expected (due to, among other factors, less favorable than expected mortality or morbidity experience). Additionally, acquisitions may expose us to other operational challenges and various risks, including the ability to integrate the acquired business operations and data with our systems. A failure to successfully manage the operational challenges and risks associated with or resulting from significant transactions, including acquisitions, could adversely affect our business, financial condition or results of operations.

Our risk management policies and procedures could leave us exposed to unidentified or unanticipated risk, which could negatively affect our business, financial condition or results of operations.

Our risk management policies and procedures, designed to identify, monitor and manage both internal and external risks, may not adequately predict future exposures, which could be significantly greater than expected. In addition, these identified risks may not be the only risks facing us. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial, may adversely affect our business, financial condition or results of operations.

There are inherent limitations to risk management strategies because there may exist, or develop in the future, risks that we have not appropriately anticipated or identified. If our risk management framework proves ineffective, we may suffer unexpected losses and could be materially adversely affected. As our businesses change and the markets in which we operate evolve, our risk management framework may not evolve at the same pace as those changes. As a result, there is a risk that new business strategies may present risks that are not appropriately identified, monitored or managed. In times of market stress, unanticipated market movements or unanticipated claims experience resulting from adverse mortality, morbidity or policyholder behavior, the effectiveness of our risk management strategies may be limited, resulting in losses. In addition, under difficult or less liquid market conditions, our risk management strategies may be less effective and/or more expensive because other market participants may be using the same or similar strategies to manage risk under the same challenging market conditions.

Past or future misconduct by our employees or employees of our vendors could result in violations of law, regulatory sanctions and serious reputational or financial harm and the precautions we take to prevent and detect this activity may not be effective. There can be no assurance that our controls and procedures designed to monitor associates' business decisions and prevent us from taking excessive or inappropriate risks will be effective. We review our compensation policies and practices as part of our overall risk management program, but it is possible that our compensation policies and practices could inadvertently incentivize excessive or inappropriate risk taking, which could harm our reputation and have a material adverse effect on our results of operations or financial condition.

The failure in cyber or other information security systems, including a failure to maintain the security, confidentiality, integrity or privacy of sensitive data residing on such systems, as well as the occurrence of unanticipated events affecting our disaster recovery systems and business continuity planning, could impair our ability to conduct business effectively.

Our business is highly dependent upon the effective operation of our computer systems. The failure of our computer systems or disaster recovery capabilities for any reason could cause significant interruptions in our operations and result in a failure to maintain the security, confidentiality, integrity or privacy of sensitive or personal data related to our customers, insured individuals or employees. Like other global companies, we have experienced threats to our data and systems from time to time. However, we have not detected or identified any evidence to indicate we have experienced a material breach of cybersecurity. Administrative and technical controls, security measures and other preventative actions we take to reduce the risk of such incidents and protect our information technology may not be sufficient to prevent physical and electronic break-ins, and similar disruptions from unauthorized tampering with our computer systems. Such a failure could harm our reputation, subject us to investigations, litigation, regulatory sanctions and other claims and expenses, lead to loss of customers and revenues and otherwise adversely affect our business, financial condition or results of operations.

We rely on our computer systems for a variety of business functions across our global operations, including for the administration of our business, underwriting, claims, performing actuarial analysis and maintaining financial records. We depend heavily upon these computer systems to provide reliable service, data and reports. Upon a disaster such as a natural catastrophe, epidemic, industrial accident, blackout, computer virus, terrorist attack or war, unanticipated problems with our disaster recovery systems could have a material adverse impact on our ability to conduct business and on our financial condition and results of operations, particularly if those problems affect our computer-based data processing, transmission, storage and retrieval systems and destroy valuable data. While we maintain liability insurance for cybersecurity and network interruption losses, our insurance may not be sufficient to protect us against all losses. In addition, if a significant number of our managers were unavailable upon a disaster, our ability to effectively conduct business could be severely compromised. These interruptions also may interfere with our clients' ability to provide data and other information to us, and our employees' ability to perform their job responsibilities.

Failure to protect the confidentiality of information could adversely affect our reputation and have a material adverse effect on our business, financial condition and results of operations.

Many jurisdictions in which we operate have enacted laws to safeguard the privacy and security of personal information. Additionally, various government agencies have established rules protecting the privacy and security of such information. These laws and rules vary greatly by jurisdiction. Some of our employees have access to personal information of policy holders. We rely on internal controls to protect the confidentiality of this information. It is possible that an employee could, intentionally or unintentionally, disclose or misappropriate confidential information or our data could be the subject of a cybersecurity attack. If we fail to maintain adequate internal controls or if our employees fail to comply with our policies, misappropriation or intentional or unintentional inappropriate disclosure or misuse of client information could occur. Such internal control inadequacies or non-compliance could materially damage our reputation or lead to civil or criminal penalties, which, in turn, could have a material adverse effect on our business, financial condition and results of operations. In addition, we analyze customer data to better manage our business. There has been increased scrutiny, including from U.S. state regulators, regarding the use of "big data" techniques. We cannot predict what, if any, actions may be taken with regard to "big data," but any inquiries could cause reputational harm and any limitations could have a material impact on our business, financial condition and results of operations.

Managing key employee attraction, retention and succession is critical to our success.

Our success depends in large part upon our ability to identify, hire, retain and motivate highly skilled employees. We would be adversely affected if we fail to adequately plan for the succession of our senior management and other key employees. While we have succession plans and long-term compensation plans designed to retain our existing employees and attract and retain additional qualified personnel in the future, our succession plans may not operate effectively and our compensation plans cannot guarantee that the services of these employees will continue to be available to us.

Litigation and regulatory investigations and actions may result in financial losses or harm our reputation.

We are, and in the future may be, subject to litigation and regulatory investigations or actions in the ordinary course of our business. A substantial legal liability or a significant federal, state or other regulatory action against us, as well as regulatory inquiries or investigations, could harm our reputation, result in material fines or penalties, result in significant legal costs and otherwise have a material adverse effect on our business, financial condition and results of operations. Regulatory inquiries and litigation may also cause volatility in the price of stocks of companies in our industry or in our stock price. Material pending litigation and regulatory matters affecting us, if any, are discussed in Item 8. "Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Note 12 *Commitments, Contingencies and Guarantees*."

Risks Related to Our Investments

Adverse capital and credit market conditions and access to credit facilities may significantly affect our ability to meet liquidity needs, access to capital and cost of capital.

The capital and credit markets experience varying degrees of volatility and disruption. In some periods, the markets have exerted downward pressure on availability of liquidity and credit capacity for certain issuers. We need liquidity to make our benefit payments, to pay our operating expenses, interest on our debt and dividends on our capital stock and to replace certain maturing liabilities. Without sufficient liquidity, we will be forced to curtail our operations, and our business will be adversely affected. The principal sources of our liquidity are reinsurance premiums under reinsurance treaties and cash flows from our investment portfolio and other assets. Sources of liquidity in normal markets also include proceeds from the issuance of a variety of short- and long-term instruments, including medium- and long-term debt, subordinated and junior subordinated debt securities, capital securities and common stock.

If current resources do not satisfy our needs, we may have to seek additional financing. The availability of additional financing will depend on a variety of factors such as market conditions, the general availability of equity and credit, the volume of trading activities, the overall availability of credit to the financial services industry, our credit ratings and credit capacity, as

well as the possibility that customers or lenders could develop a negative perception of our long- or short-term financial prospects. Similarly, our access to funds may be impaired if regulatory authorities or rating agencies take negative actions against us. Our internal sources of liquidity may prove to be insufficient, and in such case, we may not be able to successfully obtain additional financing on favorable terms, or at all.

Disruptions, uncertainty or volatility in the capital and credit markets may limit our ability to replace maturing liabilities in a timely manner, satisfy statutory capital requirements, generate fee income and market-related revenue to meet liquidity needs and access the capital necessary to grow our business. As such, we may be forced to delay raising capital, issue shorter tenor securities than we prefer, or bear an unattractive cost of capital, which could decrease our profitability and significantly reduce our financial flexibility. Further, our ability to finance our statutory reserve requirements depends on market conditions. If market capacity is limited for a prolonged period, our ability to obtain new funding for such purposes may be hindered and, as a result, our ability to write additional business in a cost-effective manner may be limited or otherwise adversely affected.

We also rely on our unsecured credit facilities, including our $850 million syndicated credit facility, as potential sources of liquidity. Our credit facilities contain administrative, reporting, legal and financial covenants, and our syndicated credit facility includes requirements to maintain a specified minimum consolidated net worth and a minimum ratio of consolidated indebtedness to total capitalization. If we were unable to access our credit facilities it could materially impact our capital position. The availability of these facilities could be critical to our credit and financial strength ratings and our ability to meet our obligations as they come due in a market when alternative sources of credit are unavailable.

Difficult conditions in the global capital markets and the economy generally may materially adversely affect our business, financial condition and results of operations.

Our results of operations, financial condition, cash flows and statutory capital position are materially affected by conditions in the global capital markets and the economy generally, both in the U.S. and elsewhere around the world. Poor economic conditions, volatility and disruptions in capital markets or financial asset classes and geopolitical upheaval (including trade disputes) can have an adverse effect on our business because our investment portfolio and some of our liabilities are sensitive to changing market factors. Additionally, disruptions in one market or asset class can also spread to other markets or asset classes.

Concerns over U.S. fiscal policy and the trajectory of the U.S. national debt could have severe repercussions to the U.S. and global credit and financial markets, further exacerbate concerns over sovereign debt and disrupt economic activity in the U.S. and elsewhere. As a result, our access to, or cost of, liquidity may deteriorate. As a result of uncertainty regarding U.S. national debt, the market value of some of our investments may decrease, and our capital adequacy could be adversely affected. Political and economic uncertainties and weakness and disruption of the financial markets around the world, such as geopolitical upheaval (including trade disputes) and deteriorating economic and political relationships between countries, the solvency of certain European Union member states and of financial institutions that have significant direct or indirect exposure to debt issued by such countries, have led and may continue to lead to concerns over capital markets access. In addition, there are ongoing risks around the world related to interest rate fluctuations, slowing global growth, commodity prices and the devaluation of certain currencies. These events and continuing market upheavals may have an adverse effect on us, in part because we have a large investment portfolio and are also dependent upon customer behavior. Our revenues may decline in such circumstances and our profit margins may erode. In addition, upon prolonged market events, such as the global credit crisis, we could incur significant investment-related losses. Even in the absence of a market downturn, we are exposed to substantial risk of loss due to market volatility.

If our investment strategy is unsuccessful, we could suffer losses.

The success of our investment strategy is crucial to the success of our business. We structure our investments to match our anticipated liabilities under reinsurance treaties to the extent we believe necessary. If our calculations with respect to these reinsurance liabilities are incorrect, or if we improperly structure our investments to match such liabilities, we could be forced to liquidate investments prior to maturity at a significant loss.

Our investment guidelines limit non-investment grade fixed maturity securities in our investment portfolio. While any investment carries some risk, the risks associated with lower-rated securities are greater than the risks associated with investment grade securities. The risk of loss of principal or interest through default is greater because lower-rated securities are usually unsecured and are often subordinated to an issuer’s other obligations. Additionally, the issuers of these securities frequently have relatively high debt levels and are thus more sensitive to difficult economic conditions, specific corporate developments and rising interest rates, which could impair an issuer’s capacity or willingness to meet its financial commitment on such lower-rated securities. As a result, the market price of these securities may be quite volatile, and the risk of loss is greater.

The success of any investment activity is affected by general economic conditions, including the level and volatility of interest rates and the extent and timing of investor participation in such markets, which may adversely affect the markets for interest rate sensitive securities, mortgages and equity securities. Unexpected volatility or illiquidity in the markets in which we directly or indirectly hold positions could adversely affect us.

Interest rate fluctuations could negatively affect the income we derive from the difference between the interest rates we earn on our investments and interest we pay under our reinsurance contracts.

Significant changes in interest rates expose reinsurance companies to the risk of reduced investment income or actual losses based on the difference between the interest rates earned on investments and the credited interest rates paid on outstanding reinsurance contracts. Both rising and declining interest rates can negatively affect the income we derive from these interest rate spreads. During periods of rising interest rates, we may be contractually obligated to reimburse our clients for the greater amounts they credit on certain interest-sensitive products. However, we may not have the ability to immediately acquire investments with interest rates sufficient to offset the increased crediting rates on our reinsurance contracts. During periods of falling interest rates, our investment earnings will be lower because new investments in fixed maturity securities will likely bear lower interest rates. We may not be able to fully offset the decline in investment earnings with lower crediting rates on underlying annuity products related to certain of our reinsurance contracts. Our asset/liability management programs and procedures may not reduce the volatility of our income when interest rates are rising or falling, and thus we cannot assure you that changes in interest rates will not affect our interest rate spreads.

Changes in interest rates may also affect our business in other ways. Higher interest rates may result in increased surrenders on interest-based products of our clients, which may affect our fees and earnings on those products. Lower interest rates may result in lower sales of certain insurance and investment products of our clients, which would reduce the demand for our reinsurance of these products. If interest rates remain low for an extended period, it may adversely affect our cash flows, financial condition and results of operations.

The liquidity and value of some of our investments may become significantly diminished.

There may be illiquid markets for certain investments we hold in our investment portfolio. These include privately-placed fixed maturity securities, options and other derivative instruments, mortgage loans, policy loans, limited partnership interests, and real estate equity, such as real estate joint ventures and funds. Additionally, markets for certain of our investments that are currently liquid may experience reduced liquidity during periods of market volatility or disruption. If we were forced to sell certain of our investments into illiquid markets, prices may be lower than our carrying value in such investments. This could result in realized losses which could have a material adverse effect on our results of operations and financial condition, as well as our financial ratios, which could affect compliance with our credit instruments and rating agency capital adequacy measures.

We could be forced to sell investments at a loss to cover policyholder withdrawals, recaptures of reinsurance treaties or other events.

Some of the products offered by our insurance company customers allow policyholders and contract holders to withdraw their funds under defined circumstances. Our reinsurance subsidiaries manage their liabilities and configure their investment portfolios to provide and maintain sufficient liquidity to support anticipated withdrawal demands and contract benefits and maturities under reinsurance treaties with these customers. While our reinsurance subsidiaries own a significant amount of liquid assets, a portion of their assets are relatively illiquid. Unanticipated withdrawal or surrender activity could, under some circumstances, require our reinsurance subsidiaries to dispose of assets on unfavorable terms, which could have an adverse effect on us. Reinsurance agreements may provide for recapture rights on the part of our insurance company customers. Recapture rights permit these customers to reassume all or a portion of the risk formerly ceded to us after an agreed-upon time, usually ten years, subject to various conditions.

Recapture of business previously ceded does not affect premiums ceded prior to the recapture, but may result in immediate payments to our insurance company customers and a charge to income for costs that we deferred when we acquired the business but are unable to recover upon recapture. Under some circumstances, payments to our insurance company customers could require our reinsurance subsidiaries to dispose of assets on unfavorable terms.

Defaults, downgrades or other events impairing the value of our fixed maturity securities portfolio may reduce our earnings.

We are subject to the risk that the issuers, or guarantors, of fixed maturity securities we own may default on principal and interest payments they owe us. Fixed maturity securities represent a substantial portion of our total cash and invested assets. The occurrence of a major or prolonged economic downturn, acts of corporate malfeasance, widening risk spreads, or other events that adversely affect the issuers or guarantors of these securities could cause the value of our fixed maturity securities portfolio and our net income to decline and the default rate of the fixed maturity securities in our investment portfolio to increase. A ratings downgrade affecting issuers or guarantors of particular securities, or similar trends that could worsen the

credit quality of issuers, such as the corporate issuers of securities in our investment portfolio, could also have a similar effect. With economic uncertainty, credit quality of issuers or guarantors could be adversely affected. Any event reducing the value of these securities could have a material adverse effect on our business, financial condition or results of operations.

The defaults or deteriorating credit of other financial institutions could adversely affect us.

We have exposure to many different industries and counterparties, and routinely execute transactions with counterparties in the financial services industry, including brokers and dealers, insurance companies, commercial banks, investment banks, investment funds and other institutions. Many of these transactions expose us to credit risk upon default of our counterparty. In addition, with respect to secured and other transactions that provide for us to hold collateral posted by the counterparty, our credit risk may be exacerbated when the collateral we hold cannot be liquidated at prices sufficient to recover the full amount of our exposure. We also have exposure to these financial institutions in the form of unsecured debt instruments, derivative transactions and equity investments. There can be no assurance that losses or impairments to the carrying value of these assets would not materially and adversely affect our business, financial condition or results of operations.

Defaults on our mortgage loans or the mortgage loans underlying our investments in mortgage-backed securities and volatility in performance of our investments in real-estate related assets may adversely affect our profitability.

A portion of our investment portfolio consists of assets linked to real estate, including mortgage loans on commercial properties, lifetime mortgages, investments in commercial mortgage-backed securities (“CMBS”), and residential mortgage-backed securities (“RMBS”). Delinquency and defaults by third parties in the payment or performance of their obligations underlying these assets could reduce our investment income and realized investment gains or result in the recognition of investment losses. Mortgage loans are stated on our balance sheet at unpaid principal balance, adjusted for any unamortized premium or discount, deferred fees or expenses, and are net of valuation allowances established as of the balance sheet date. Such valuation allowances 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. CMBS and RMBS are stated on our balance sheet at fair value. The performance of our mortgage loan investments and our investments in CMBS and RMBS, however, may fluctuate in the future. An increase in the default rate of our mortgage loan investments or the mortgage loans underlying our investments in CMBS and RMBS could have a material adverse effect on our financial condition or results of operations.

Further, any geographic or sector concentration of our mortgage loans or the mortgage loans underlying our investments in CMBS and RMBS may have adverse effects on our investment portfolios and consequently on our consolidated results of operations or financial condition. Events or developments that have a negative effect on any particular geographic region or sector may have a greater adverse effect on our investment portfolios to the extent that the portfolios are concentrated. Moreover, our ability to sell assets relating to such particular groups of related assets may be limited if other market participants are seeking to sell at the same time.

Our valuation of fixed maturity and equity securities and derivatives include methodologies, estimations and assumptions that are subject to differing interpretations and could result in changes to investment valuations that may have a material adverse effect on our financial condition or results of operations.

Fixed maturity, equity securities and short-term investments, which are primarily reported at fair value on the consolidated balance sheets, represent the majority of our total cash and invested assets. As described in Item 8. “Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Note 6 “*Fair Value of Assets and Liabilities*”, we have categorized these securities into a three-level hierarchy, based on the priority of the inputs to the respective valuation technique.

During periods of market disruption, including periods of significantly rising or high interest rates, rapidly widening credit spreads or illiquidity, it may be difficult to value certain of our securities if trading becomes less frequent or market data becomes less observable. There may be certain asset classes that were in active markets with significant observable data that become illiquid due to the financial environment. As such, valuations may include inputs and assumptions that are less observable or require greater estimation resulting in values that may be different than the value at which the investments may be ultimately sold. Further, rapidly changing or disruptive credit and equity market conditions could materially impact the valuation of securities as reported within our consolidated financial statements and the period-to-period changes in value could vary significantly. Decreases in value may have a material adverse effect on our financial condition or results of operations.

The reported value of our investments, including our relatively illiquid asset classes and, at times, our high-quality, generally liquid asset classes, do not necessarily reflect the lowest current market price for the asset. If we were forced to sell certain of our assets in disruptive or volatile market conditions, there can be no assurance that we will be able to sell them for the prices at which we have recorded them and we may be forced to sell them at significantly lower prices.

The determination of the amount of allowances and impairments taken on our investments is highly subjective and could materially affect our financial condition or results of operations.

The determination of the amount of allowances and impairments vary by investment type and is based upon our periodic evaluation and assessment of known and inherent risks associated with the respective asset class. Such evaluations and assessments are revised as conditions change and new information becomes available. Management updates its evaluations regularly and reflects changes in allowances and impairments in operations as such evaluations are revised. For example, the cost of our fixed maturity securities is adjusted for impairments in value deemed to be impaired in the period in which the determination is made. The assessment of whether impairments have occurred is based on management's case-by-case evaluation of the underlying reasons for the decline in fair value. Inherent in management's evaluation of the security are assumptions and estimates about the operations of the issuer and its future earnings potential. There can be no assurance that our management has accurately assessed the level of impairments taken, or allowances reflected in our financial statements and their potential impact on regulatory capital. Furthermore, additional impairments or additional allowances may be needed in the future.

Our investments are reflected within the consolidated financial statements utilizing different accounting bases and accordingly we may not have recognized differences, which may be significant, between cost and fair value in our consolidated financial statements.

Certain of our principal investments are in fixed maturity securities, short-term investments, mortgage loans, policy loans, funds withheld at interest and other invested assets. The carrying value of such investments is described in "Investments" in Note 2 – "Significant Accounting Polices and Pronouncements" in the Notes to Consolidated Financial Statements. Investments not carried at fair value in our consolidated financial statements – principally, mortgage loans, policy loans, real estate joint ventures and other limited partnerships – may have fair values that are substantially higher or lower than the carrying value reflected in our consolidated financial statements. Each of such asset classes is regularly evaluated for impairment under the accounting guidance appropriate to the respective asset class.

Phasing out of London Interbank Offered Rate ("LIBOR") after 2023 may adversely affect the value of certain of our LIBOR-based assets and liabilities.

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. Subsequently, on March 5, 2021, the FCA announced that all LIBOR settings will either cease to be provided or no longer be representative, with some being discontinued after December 31, 2021 and the remaining being discontinued after June 30, 2023. At this time, it is not possible to predict how markets will respond and the effect that the discontinuation of LIBOR and the implementation of new benchmark rates will have on new or existing financial instruments to which we have exposure. Interest rates on our LIBOR-based and other floating-rate assets and liabilities may be adversely affected. Further, any uncertainty regarding replacements for LIBOR as a benchmark interest rate could adversely affect the trading market for and value of LIBOR-based and other floating-rate securities, including certain of our assets and liabilities. We do not anticipate such changes to have a material impact on our cash flows, financial condition and result of operations.

Risks Related to Ownership of Our Common Stock

We may not pay dividends on our common stock.

Our shareholders may not receive dividends. All future payments of dividends are at the discretion of our board of directors and will depend on our earnings, capital requirements, insurance regulatory conditions, operating conditions and such other factors as our board of directors may deem relevant. The amount of dividends that we can pay will depend in part on the operations of our reinsurance subsidiaries. Under certain circumstances, we may be contractually prohibited from paying dividends on our common stock due to restrictions associated with certain of our debt securities.

Certain provisions in our articles of incorporation and bylaws, in Missouri law and in applicable insurance laws, may delay or prevent a change in control, which could adversely affect the price of our common stock.

Certain provisions in our articles of incorporation and bylaws, as well as Missouri corporate law and state insurance laws, may delay or prevent a change of control of RGA, which could adversely affect the price of our common stock. Our articles of incorporation and bylaws contain some provisions that may make the acquisition of control of RGA without the approval of our board of directors more difficult, including provisions relating to the nomination, election and removal of directors and limitations on actions by our shareholders. In addition, Missouri law also imposes some restrictions on mergers and other business combinations between RGA and holders of 20% or more of our outstanding common stock. These provisions may have unintended anti-takeover effects, including to delay or prevent a change in control of RGA, which could adversely affect the price of our common stock.

Before a person can acquire control of a U.S. insurance company, prior written approval must be obtained from the insurance commission of the state where the domestic insurer is domiciled. Under U.S. state insurance laws and regulations, any person acquiring 10% or more of the outstanding voting securities of a corporation, such as our common stock, is presumed to have acquired control of that corporation and its subsidiaries. Similar laws in other countries where we operate limit our ability to effect changes of control for subsidiaries organized in such jurisdictions without the approval of local insurance regulatory officials. Prior to granting approval of an application to directly or indirectly acquire control of a domestic or foreign insurer, an insurance regulator in any jurisdiction may consider such factors as the financial strength of the applicant, the integrity of the applicant's board of directors and executive officers, the applicant's plans for the future operations of the domestic insurer and any anti-competitive results that may arise from the consummation of the acquisition of control.

Issuing additional shares may dilute the value or affect the price of our common stock.

Our board of directors has the authority, without action or vote of the shareholders, to issue any or all authorized but unissued shares of our common stock, including securities convertible into, or exchangeable for, our common stock and authorized but unissued shares under our equity compensation plans. In the future, we may issue such additional securities, through public or private offerings, in order to raise additional capital. Any such issuance will dilute the percentage ownership of shareholders and may dilute the per share projected earnings or book value of our common stock. In addition, option holders may exercise their options at any time when we would otherwise be able to obtain additional equity capital on more favorable terms.

The occurrence of various events may adversely affect the ability of RGA and its subsidiaries to fully utilize any net operating losses ("NOLs") and other tax attributes.

RGA and its subsidiaries may, from time to time, have a substantial amount of NOLs and other tax attributes, for U.S. federal income tax purposes, to offset taxable income and gains. If a corporation experiences an ownership change, it is generally subject to an annual limitation, which limits its ability to use its NOLs and other tax attributes. Events outside of our control may cause RGA (and, consequently, its subsidiaries) to experience an "ownership change" under Sections 382 and 383 of the Internal Revenue Code and the related Treasury regulations, and limit the ability of RGA and its subsidiaries to utilize fully such NOLs and other tax attributes. If we were to experience an ownership change, we could potentially have higher U.S. federal income tax liabilities than we would otherwise have had, which would negatively impact our financial condition and results of operations.

Item 1B. UNRESOLVED STAFF COMMENTS

The Company has no unresolved staff comments from the Securities and Exchange Commission.

Item 2. PROPERTIES

The Company's corporate headquarters is located at an owned site in Chesterfield, Missouri. In addition, the Company leases office space in 49 locations throughout the world. Most of the Company's leases have terms of three to five years; while some leases have longer terms, none exceed 15 years.

The Company believes that its existing facilities, including both owned and leased, are in good operating condition and suitable for the conduct of its business.

Item 3. 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 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Insurance companies are subject to statutory regulations that restrict the payment of dividends. See Item 1 under the caption Regulation – "Restrictions on Dividends and Distributions." See Item 8, Note 17 – "Equity" in the Notes to Consolidated Financial Statements for information regarding board-approved stock repurchase plans. See Item 12 for information about the Company's compensation plans.

Reinsurance Group of America, Incorporated common stock is traded on the New York Stock Exchange (NYSE) under the symbol "RGA". On January 31, 2022, there were 22,278 stockholders of record of RGA's common stock and 67 million shares outstanding.

Issuer Purchases of Equity Securities

The following table summarizes RGA's repurchase activity of its common stock during the quarter ended December 31, 2021:

	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased Under the Plan or Program
October 1, 2021 – October 31, 2021	94	$ 118.99	—	$ 121,573,425
November 1, 2021 – November 30, 2021	447,059	$ 112.01	446,393	$ 71,573,495
December 1, 2021 – December 31, 2021	8,460	$ 106.67	—	$ 71,573,495

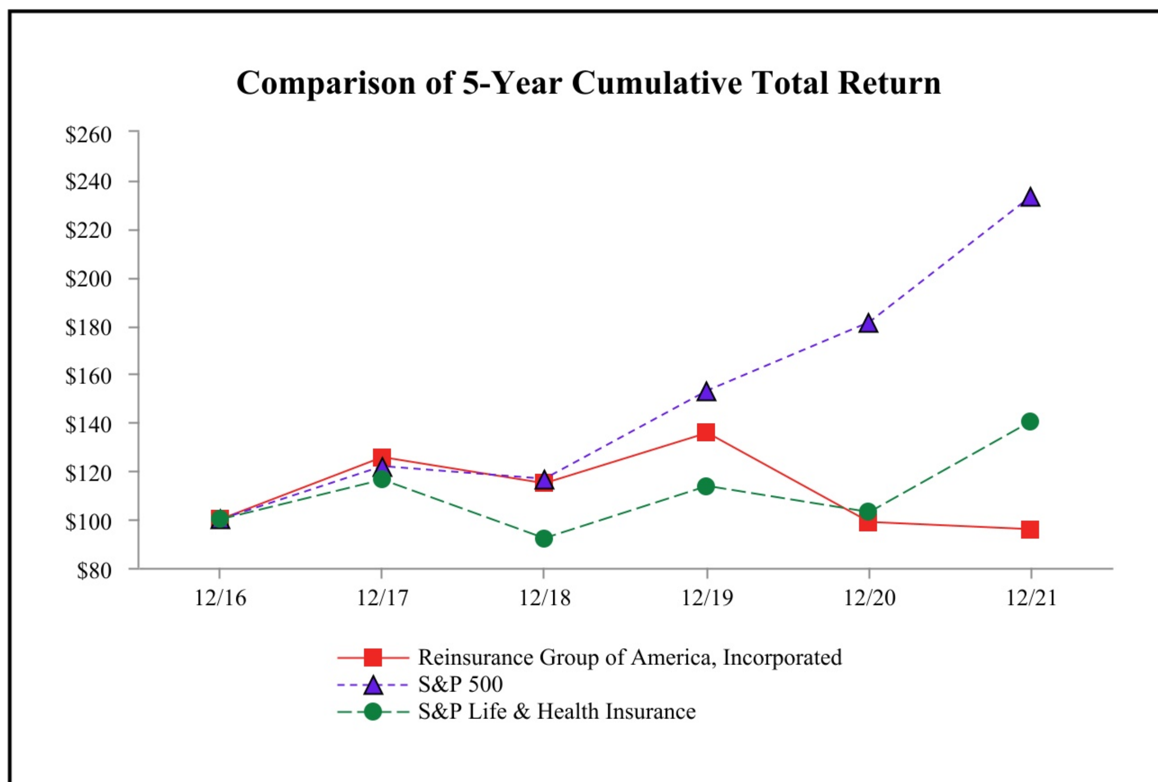
(1) RGA repurchased 0, 446,393, and 0 shares of common stock under its share repurchase program in October, November and December 2021, respectively The Company net settled – issuing 422, 2,937 and 23,162 shares from treasury and repurchased from recipients 94, 666 and 8,460 shares in October, November and December 2021, respectively, in settlement of income tax withholding requirements incurred by the recipients of equity incentive awards.

On January 24, 2019, RGA's board of directors authorized a share repurchase program for up to $400 million of RGA's outstanding common stock. During the three months ended December 31, 2021, the Company repurchased 446,393 shares of common stock under this program for $50 million, and as of December 31, 2021, approximately $72 million of RGA's common stock may still be purchased under the 2019 share repurchase program.

On February 25, 2022, RGA's board of directors authorized a share repurchase program for up to $400 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. The pace of repurchase activity depends on various factors such as the level of available cash, the impact of the ongoing COVID-19 pandemic, 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.

Comparison of 5-Year Cumulative Total Return

The graph below shows the performance of the Company's common stock for the period beginning December 31, 2016, and ending December 31, 2021, assuming $100 was invested on December 31, 2016. The graph compares the cumulative total return on the Company's common stock, based on the market price of the common stock and assuming reinvestment of dividends, with the cumulative total return of companies in the Standard & Poor's ("S&P") 500 Stock Index and the S&P's Insurance (Life/Health) Index. The indices are included for comparative purposes only. They do not necessarily reflect management's opinion that such indices are an appropriate measure of the relative performance of the Company's common stock and are not intended to forecast or be indicative of future performance of the common stock.



	Base Period	Cumulative Total Return				
	12/16	12/17	12/18	12/19	12/20	12/21
Reinsurance Group of America, Incorporated	$ 100.00	$ 125.58	$ 114.63	$ 135.60	$ 98.90	$ 95.71
S&P 500	100.00	121.83	116.49	153.17	181.35	233.41
S&P Life & Health Insurance	100.00	116.43	92.24	113.63	102.86	140.59

Item 6. (RESERVED)

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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

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

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 $92.2 billion as of December 31, 2021. 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.

The Company's underwriting expertise and industry knowledge allowed it to expand into international markets around the world including locations in Canada, the Asia Pacific region, Europe, the Middle East, Africa and Latin America. Based on the compilation of information from competitors' annual reports, the Company believes it is the second-largest global life and health reinsurer in the world based on 2020 life and health reinsurance revenues. The Company conducts business with the majority of the largest U.S. and international life insurance companies. The Company has also developed its capacity and expertise in the reinsurance of longevity risks, asset-intensive products (primarily annuities and corporate-owned life insurance) and financial reinsurance. More recently, the Company has increased its investment and expenditures in client service and technology-oriented initiatives to both support its clients and generate new future revenue streams.

The Company's traditional life reinsurance business, 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 or longer. To a lesser extent, the Company also reinsures certain health business typically reinsured for a shorter duration. 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 the insured, and the exercise of recapture options by ceding companies. The Company's financial solutions business, including significant asset-intensive and longevity risk transactions, allow its clients to take advantage of growth opportunities and manage their capital, longevity and investment risk.

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 financial reinsurance transactions, which are typically shorter duration than its traditional life reinsurance business. The Company believes its sources of liquidity are sufficient to cover potential claims payments on both a short-term and long-term basis.

Segment Presentation

The Company has geographic-based and business-based operational segments. Geographic-based operations are further segmented into traditional and financial solutions businesses. See “Business – Segments” in Item 1 for more information.

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.

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The following table sets forth the Company's premiums attributable to each of its segments for the periods indicated on both a gross assumed basis and net of premiums ceded to third parties:

Gross and Net Premiums by Segment

(in millions)

	Year Ended December 31,					
	2021		2020		2019	
	Gross	Net	Gross	Net	Gross	Net
U.S. and Latin America:						
Traditional	$ 6,716	$ 6,244	$ 6,423	$ 5,838	$ 6,320	$ 5,729
Financial Solutions	55	55	53	53	39	39
Total U.S. and Latin America	6,771	6,299	6,476	5,891	6,359	5,768
Canada:						
Traditional	1,244	1,194	1,106	1,052	1,332	1,066
Financial Solutions	90	90	83	83	89	89
Total Canada	1,334	1,284	1,189	1,135	1,421	1,155
Europe, Middle East and Africa:						
Traditional	1,770	1,738	1,579	1,555	1,494	1,442
Financial Solutions	552	350	430	252	366	218
Total Europe, Middle East and Africa	2,322	2,088	2,009	1,807	1,860	1,660
Asia Pacific:						
Traditional	2,736	2,624	2,787	2,681	2,652	2,568
Financial Solutions	218	218	180	180	146	146
Total Asia Pacific	2,954	2,842	2,967	2,861	2,798	2,714
Corporate and Other	—	—	—	—	—	—
Total	$ 13,381	$ 12,513	$ 12,641	$ 11,694	$ 12,438	$ 11,297

The following table sets forth selected information concerning assumed life reinsurance business in force and assumed new business volume by segment for the periods indicated. The terms "in force" and "new business" refer to insurance policy face amounts or net amounts at risk.

Reinsurance Business In Force and New Business by Segment

(in billions)

	As of December 31,					
	2021		2020		2019	
	In Force	New Business	In Force	New Business	In Force	New Business
U.S. and Latin America:						
Traditional	$ 1,628.4	$ 130.5	$ 1,611.6	$ 114.9	$ 1,619.6	$ 115.8
Financial Solutions	5.3	—	5.3	—	5.1	3.2
Total U.S. and Latin America	1,633.7	130.5	1,616.9	114.9	1,624.7	119.0
Canada:						
Traditional	472.6	48.8	445.2	40.8	417.1	40.4
Financial Solutions	—	—	—	—	—	—
Total Canada	472.6	48.8	445.2	40.8	417.1	40.4
Europe, Middle East and Africa:						
Traditional	861.6	198.4	864.4	184.3	776.4	147.4
Financial Solutions	—	—	—	—	—	—
Total Europe, Middle East and Africa	861.6	198.4	864.4	184.3	776.4	147.4
Asia Pacific:						
Traditional	497.4	34.2	553.7	49.6	662.0	69.7
Financial Solutions	1.7	0.2	0.5	—	—	—
Total Asia Pacific	499.1	34.4	554.2	49.6	662.0	69.7
Total	$ 3,467.0	$ 412.1	$ 3,480.7	$ 389.6	$ 3,480.2	$ 376.5

Reinsurance business in force reflects the addition or acquisition of new life reinsurance business, offset by terminations (e.g., life and group contract terminations, lapses of underlying policies, deaths of insureds, and recapture), changes in foreign currency exchange and any other changes in the amount of insurance in force. As a result of terminations, fluctuations in foreign exchange rates and other changes, assumed in force amounts at risk decreased by $425.8 billion, $389.1 billion and $225.5 billion in 2021, 2020 and 2019, respectively.

See "Results of Operations by Segment" below for further information about the Company's segments.

Industry Trends

The Company believes life and health insurance companies will continue to partner with reinsurance companies to manage risk, achieve new growth, assist with capital efficiency, develop solutions across the value chain and to help navigate through changes in regulatory and accounting standards. The COVID-19 pandemic has highlighted the importance of insurance products in general and the value of reinsurance as a risk management tool. In addition, the Company believes reinsurers will continue to be an integral part of the life and health insurance market due to their ability to efficiently aggregate a significant volume of life insurance in force, creating economies of scale and greater diversification of risk. As a result of having larger amounts of mortality and morbidity experience data at their disposal compared to primary life insurance companies, reinsurers tend to have more comprehensive insights into mortality and morbidity trends, creating more efficient pricing for mortality and morbidity risk. The Company also believes the following trends in the life and health insurance industry will continue to create demand for both traditional reinsurance and financial solutions.

Cession Rates. The percentage of new life and health business being reinsured in North America has recently begun to increase following a period of decline, due to strong recurring production coupled with in-force opportunities and an aging population, which increases the need for living benefit morbidity products. Cession rates in the Company's international markets are expected to continue increasing as middle-class growth and wealth creation drive additional insurance growth. The COVID-19 pandemic highlighted the insurance protection gap, and the strategic benefits of reinsurance, and thus may lead to increased cession rates as insurance companies address the gap.

Insured Populations. The aging population in North America and elsewhere, and the growth in the middle class in the Company's international markets, are increasing demand for insurance products and for financial products among "baby boomers" who are concerned about protecting their peak income stream and are considering retirement and estate planning. This trend is likely to result in continuing demand for annuity products and life insurance policies, larger face amounts of life insurance policies and higher mortality and longevity risk taken by life insurers, all of which should fuel the need for insurers to seek reinsurance coverage. Additionally, in many countries, companies are increasingly interested in reducing their exposure to longevity risk related to employee retirement plans, resulting in a growing demand for pension risk transfer solutions.

Economic, Regulatory and Accounting Changes. The continued low interest rate environment puts pressure on new business opportunities for asset-intensive blocks; however, the Company believes that the demand for reinsuring these blocks of business will continue. In addition, regulatory, accounting, and economic changes across the globe are creating opportunities for reinsurance and innovative capital solutions to:

- manage risk-based capital by shifting mortality and other risks to reinsurers, thereby reducing amounts of reserves and capital the life and health insurance companies need to maintain;
- release capital to pursue new business initiatives;
- unlock the capital supporting, and value embedded in, non-core product lines; and
- exit certain lines of business.

Consolidation and Reorganization within the Life Reinsurance and Life Insurance Industry. There are fewer competitors in the traditional life reinsurance industry as a result of consolidations in the industry. As a consequence, the Company believes there will be business opportunities for the remaining life reinsurers, particularly those with a significant market presence and strong ratings. However, competition from new entrants for large in-force blocks, particularly for asset-intensive blocks, has increased in recent years. Additionally, merger and acquisition and other restructuring transactions within the life insurance industry will likely continue to occur, which the Company believes will increase the demand for reinsurance products to facilitate these transactions and manage risk.

The Company's strategy is to continue to capitalize on industry trends by ensuring it is well positioned to meet its clients' needs through the following initiatives:

Leading with Expertise and Innovation

- Combine product development, innovation, and new reinsurance structures to open or expand markets.
- Leverage underwriting, data, analytics, and digital expertise to grow markets.

- Deliver unique insights to gain competitive advantage and leverage thought leadership to drive growth.

Succeeding Together

- Broaden and deepen global, regional, and local client relationships to be the preferred reinsurance partner.
- Foster third-party partnerships to accelerate innovation, capabilities, and access to efficient capital.
- Strengthen leadership in industry organizations to actively promote and advance industry purpose.

Prioritizing Agility, Impact and Scale

- Prioritize high-growth, capability-driven opportunities that best fit risk appetites.
- Prioritize opportunities that recognize competitive differentiators and value proposition.
- Capitalize on operating model to increase local markets responsiveness and agility.

Building for Future Generations

- Pursue a balanced approach to in-force management, portfolio optimization, and new business generation.
- Foster an engaging and inclusive culture to attract and retain diverse, world-class talent.
- Behave as a responsible global citizen by taking action to address social and environmental issues.

Critical Accounting Policies

The Company's accounting policies are described in Note 2 – "Significant Accounting Policies and Pronouncements" in the Notes to Consolidated Financial Statements. The Company believes its most critical accounting policies include the establishment of premiums receivable; amortization of deferred acquisition costs ("DAC"); the establishment of liabilities for future policy benefits and incurred but not reported claims; the valuation of investments and investment allowance for credit losses and impairments; the valuation of embedded derivatives; and accounting for income taxes. The balances of these accounts require extensive use of assumptions and estimates, particularly related to the future performance of the underlying business.

Differences in experience compared with the assumptions and estimates utilized in establishing premiums receivable, the justification of the recoverability of DAC, in establishing reserves for future policy benefits and claim liabilities, or in the determination of impairments to investment securities can have a material effect on the Company's results of operations and financial condition.

Premiums Receivable

Premiums are accrued when due and in accordance with information received from the ceding company. When the Company enters into a new reinsurance agreement, it records accruals based on the terms of the reinsurance treaty. Similarly, when a ceding company fails to report information on a timely basis, the Company records accruals based on the terms of the reinsurance treaty as well as historical experience. Other management estimates include adjustments for increased insurance in force on existing treaties, lapsed premiums given historical experience, the financial health of specific ceding companies, collateral value and the legal right of offset on related amounts (i.e., allowances and claims) owed to the ceding company. Under the legal right of offset provisions in its reinsurance treaties, the Company can withhold payments for allowances and claims from unpaid premiums.

Deferred Acquisition Costs

Costs of acquiring new business, which vary with and are directly related to the production of new business, have been deferred to the extent that such costs are deemed recoverable from future premiums or gross profits. Such costs include commissions and allowances as well as certain costs of policy issuance and underwriting. Non-commission costs related to the acquisition of new and renewal insurance contracts may be deferred only if they meet the following criteria:

- Incremental direct costs of a successful contract acquisition.
- Portions of employees' salaries and benefits directly related to time spent performing specified acquisition activities for a contract that has been acquired or renewed.
- Other costs directly related to the specified acquisition or renewal activities that would not have been incurred had that acquisition contract transaction not occurred.

The Company tests the recoverability for each year of business at issue before establishing additional DAC. The Company also performs annual tests to establish that DAC remain recoverable at all times, and if financial performance

significantly deteriorates to the point where a deficiency exists, a cumulative charge to current operations will be recorded. No such adjustments related to DAC recoverability were made in 2021, 2020 and 2019.

DAC related to traditional life insurance contracts are amortized with interest over the premium-paying period of the related policies in proportion to the ratio of individual period premium revenues to total anticipated premium revenues over the life of the policy. Such anticipated premium revenues are estimated using the same assumptions used for computing liabilities for future policy benefits.

DAC related to interest-sensitive life and investment-type contracts is amortized over the lives of the contracts, in relation to the present value of estimated gross profits (“EGP”) from mortality, investment income, and expense margins. The EGP for asset-intensive products include the following components: (1) estimates of fees charged to policyholders to cover mortality, surrenders and maintenance costs, less amount of risk upon death; (2) expected interest rate spreads between income earned and amounts credited to policyholder accounts; and (3) estimated costs of administration. EGP is also reduced by the Company’s estimate of future losses due to defaults in fixed maturity securities as well as the change in reserves for embedded derivatives. DAC is sensitive to changes in assumptions regarding these EGP components, and any change in such assumptions could have an effect on the Company’s profitability.

The Company periodically reviews the EGP valuation model and assumptions so that the assumptions reflect best estimates of future experience. Two assumptions are considered to be most significant: (1) estimated interest spread, and (2) estimated future policy lapses. As of December 31, 2021, the Company had $264 million of DAC related to asset-intensive products, within the U.S. and Latin America and Asia Pacific Financial Solutions segments. The following table reflects the possible change, as a percentage of current DAC related to asset-intensive products, that would occur in a given year if assumptions are changed as illustrated:

Quantitative Change in Significant Assumptions	One-Time Increase in DAC	One-Time Decrease in DAC
Estimated interest spread increasing (decreasing) 25 basis points from the current spread	6.96%	(8.94)%
Estimated future policy lapse rates decreasing (increasing) 20% on a permanent basis (including surrender charges)	3.17%	(2.94)%

In general, a change in assumption that improves the Company’s expectations regarding EGP is going to have the effect of deferring the amortization of DAC into the future, thus increasing earnings and the current DAC balance. DAC can be no greater than the initial DAC balance plus interest and would be subject to recoverability testing, which is ignored for purposes of this analysis. Conversely, a change in assumption that decreases EGP will have the effect of speeding up the amortization of DAC, thus reducing earnings and lowering the DAC balance. The Company also adjusts DAC to reflect changes in the unrealized gains and losses on available-for-sale fixed maturity securities since these changes affect EGP. This adjustment to DAC is reflected in accumulated other comprehensive income.

The DAC associated with the Company’s non-asset-intensive business is less sensitive to changes in estimates for investment yields, mortality and lapses. In accordance with generally accepted accounting principles, the estimates include provisions for the risk of adverse deviation and are not adjusted unless experience significantly deteriorates to the point where a premium deficiency exists.

The following table summarizes the DAC balances for the Traditional and Financial Solutions segments as of December 31, 2021:

(dollars in millions)	Traditional	Financial Solutions	Other	Total
U.S. and Latin America	$ 1,926	$ 190	$ —	$ 2,116
Canada	192	—	—	192
Europe, Middle East and Africa	253	—	—	253
Asia Pacific	1,052	74	—	1,126
Corporate	—	—	3	3
Total	$ 3,423	$ 264	$ 3	$ 3,690

As of December 31, 2021, the Company estimates that all of its DAC balance is collateralized by surrender fees due to the Company and the reduction of policy liabilities, in excess of termination values, upon surrender or lapse of a policy.

Liabilities for Future Policy Benefits and Incurred but not Reported Claims

Liabilities for future policy benefits under long-duration life insurance policies (policy reserves) are computed based upon expected investment yields, mortality and withdrawal (lapse) rates, and other assumptions, including a provision for

adverse deviation from expected claim levels. Liabilities for use policy claims and benefits for short-duration contracts are accounted for based on actuarial estimates of the amount of loss inherent in that period's claims, including losses incurred for which claims have not been reported. Short-duration contract loss estimates rely on actuarial observations of ultimate loss experience for similar historical events. The Company primarily relies on its own valuation and administration systems to establish policy reserves. The policy reserves the Company establishes may differ from those established by the ceding companies due to the use of different mortality and other assumptions. However, the Company relies upon its ceding company clients to provide accurate data, including policy-level information, premiums and claims, which is the primary information used to establish reserves. The Company's administration departments work directly with clients to help ensure information is submitted in accordance with the reinsurance contracts. Additionally, the Company performs periodic audits of the information provided by clients. The Company establishes reserves for processing backlogs with a goal of clearing all backlogs within a ninety-day period. The backlogs are usually due to data errors the Company discovers or computer file compatibility issues, since much of the data reported to the Company is in electronic format and is uploaded to its computer systems.

The Company periodically reviews actual historical experience and relative anticipated experience compared to the assumptions used to establish aggregate policy reserves. Further, the Company establishes premium deficiency reserves if actual and anticipated experience indicates that existing aggregate policy reserves, together with the present value of future gross premiums, are not sufficient to cover the present value of future benefits, settlement and maintenance costs and to recover unamortized acquisition costs. The premium deficiency reserve is established through a charge to income, as well as a reduction to unamortized acquisition costs and, to the extent there are no unamortized acquisition costs, an increase to future policy benefits. Because of the many assumptions and estimates used in establishing reserves and the long-term nature of the Company's reinsurance contracts, the reserving process, while based on actuarial science, is inherently uncertain. If the Company's assumptions, particularly on mortality, are inaccurate, its reserves may be inadequate to pay claims and there could be a material adverse effect on its results of operations and financial condition.

Claims payable for incurred but not reported losses for long-duration life policies are determined using case-basis estimates and lag studies of past experience. The time lag from the date of the claim or death to the date when the ceding company reports the claim to the Company can be several months and can vary significantly by ceding company, business segment and product type. Incurred but not reported claims are estimates on an undiscounted basis, using actuarial estimates of historical claims expense, adjusted for current trends and conditions. These estimates are continually reviewed and the ultimate liability may vary significantly from the amount recognized, which are reflected in net income in the period in which they are determined.

Claims payable for incurred but not reported losses for disability, medical and other short-duration contracts are determined using actuarial methods based on historical claim patterns as well as estimated changes in cost trends. The Company also reviews and evaluates how prior periods' estimates are developed when estimating the accrual for the current period. To the extent appropriate, changes in such development are recorded as a change to the current period expense. Historically, the amount of the claim development adjustment made in subsequent reporting periods for prior period estimates has been in a reasonable range given the Company's normal claim fluctuations.

Valuation of Investments, Allowance for Credit Losses and Impairments

The Company primarily invests in fixed maturity securities, mortgage loans, short-term investments, and other invested assets. For investments reported at fair value, the Company utilizes, when available, fair values based on quoted prices in active markets that are regularly and readily obtainable. Generally, these are very liquid investments and the valuation does not require management judgment. When quoted prices in active markets are not available, fair value is based on market valuation techniques, market comparable pricing and the income approach. The Company may utilize information from third parties, such as pricing services and brokers, to assist in determining the fair value for certain investments; however, management is ultimately responsible for all fair values presented in the Company's consolidated financial statements. This includes responsibility for monitoring the fair value process, ensuring objective and reliable valuation practices and pricing of assets and liabilities, and approving changes to valuation methodologies and pricing sources. The selection of the valuation technique(s) to apply considers the definition of an exit price and the nature of the investment being valued and significant expertise and judgment is required.

In addition, investments are subject to impairment reviews to identify when a decline in value necessitates the recording of an allowance for credit losses or an impairment for non-credit factors. Impairment losses for non-credit factors are recognized in AOCI whereas allowances for credit losses are recognized in investment related gains (losses), net. See "Allowance for Credit Losses and Impairments" in Note 2 – "Significant Accounting Policies and Pronouncements" in the Notes to Consolidated Financial Statements for a discussion of the policies regarding allowance for credit losses and impairments.

Fixed maturity securities are classified as available-for-sale and are carried at fair value. Unrealized gains and losses on fixed maturity securities classified as available-for-sale, less applicable deferred income taxes as well as related adjustments

to deferred acquisition costs, if applicable, are reflected as a direct charge or credit to accumulated other comprehensive income ("AOCI") in stockholders' equity on the consolidated balance sheets.

See "Investments" in Note 2 – "Significant Accounting Policies and Pronouncements" and Note 6 – "Fair Value of Assets and Liabilities" in the Notes to Consolidated Financial Statements for additional information regarding the valuation of the Company's investments.

Mortgage loans on real estate are carried at unpaid principal balances, net of any unamortized premium or discount and valuation allowances. For a discussion regarding the valuation allowance for mortgage loans see "Allowance for Credit Losses and Impairments" in Note 2 – "Significant Accounting Policies and Pronouncements" in the Notes to Consolidated Financial Statements.

Valuation of Embedded Derivatives

The Company reinsures certain annuity products that contain terms that are deemed to be embedded derivatives, primarily equity-indexed annuities and variable annuities with guaranteed minimum benefits. The Company assesses each identified embedded derivative to determine whether it is required to be bifurcated under the general accounting principles for *Derivatives and Hedging*. If the instrument would not be reported in its entirety at fair value and it is determined that the terms of the embedded derivative are not clearly and closely related to the economic characteristics of the host contract, and that a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is bifurcated from the host contract and accounted for as a freestanding derivative. Such embedded derivatives are carried on the consolidated balance sheets at fair value with the host contract.

Additionally, reinsurance treaties written on a modified coinsurance or funds withheld basis are subject to the general accounting principles for *Derivatives and Hedging* related to embedded derivatives. The majority of the Company's funds withheld at interest balances are associated with its reinsurance of annuity contracts, the majority of which are subject to the general accounting principles for *Derivatives and Hedging* related to embedded derivatives. Management believes the embedded derivative feature in each of these reinsurance treaties is similar to a total return swap on the assets held by the ceding companies.

The valuation of the various embedded derivatives requires complex calculations based on actuarial and capital markets inputs and assumptions related to estimates of future cash flows and interpretations of the primary accounting guidance continue to evolve in practice. The valuation of embedded derivatives is sensitive to the investment credit spread environment. Changes in investment credit spreads are also affected by the application of a credit valuation adjustment ("CVA"). The fair value calculation of an embedded derivative in an asset position utilizes a CVA based on the ceding company's credit risk. Conversely, the fair value calculation of an embedded derivative in a liability position utilizes a CVA based on the Company's credit risk. Generally, an increase in investment credit spreads, ignoring changes in the CVA, will have a negative impact on the fair value of the embedded derivative (decrease in income). See "Derivative Instruments" in Note 2 – "Significant Accounting Policies and Pronouncements" and Note 6 – "Fair Value of Assets and Liabilities" in the Notes to Consolidated Financial Statements for additional information regarding the valuation of the Company's embedded derivatives.

Income Taxes

The U.S. consolidated tax return includes the operations of RGA and all eligible subsidiaries. The Company's foreign subsidiaries are taxed under applicable local statutes.

The Company provides for federal, state and foreign income taxes currently payable, as well as those deferred due to temporary differences between the tax basis of assets and liabilities and the reported amounts, and are recognized in net income or in certain cases in other comprehensive income. The Company's accounting for income taxes represents management's best estimate of various events and transactions considering the laws enacted as of the reporting date.

Deferred tax assets and liabilities are measured by applying the relevant jurisdictions' enacted tax rate for the period in which the temporary differences are expected to reverse to the temporary difference change for that period. The Company will establish a valuation allowance if management determines, based on available information, that it is more likely than not that deferred income tax assets will not be realized. The Company has deferred tax assets including those related to foreign tax credits, net operating and capital losses. The Company has projected its ability to utilize its deferred tax assets and established a valuation allowance on the portion of the deferred tax assets the Company believes more likely than not will not be realized.

Significant judgment is required in determining whether valuation allowances should be established as well as the amount of such allowances. When making such a determination, consideration is given to, among other things, the following:

(i) taxable income in prior carryback years

(ii) future reversals of existing taxable temporary differences;

(iii) future taxable income exclusive of reversing temporary differences and carryforwards; and

(iv) tax planning strategies.

Any such changes could significantly affect the amounts reported in the consolidated financial statements in the year these changes occur.

The Company made a policy election to account for global intangible low-taxed income ("GILTI") as a period cost.

The Company reports uncertain tax positions in accordance with generally accepted accounting principles. In order to recognize the benefit of an uncertain tax position, the position must meet the more likely than not criteria of being sustained. Unrecognized tax benefits due to tax uncertainties that do not meet the more likely than not criteria are included within liabilities and are charged to earnings in the period that such determination is made. The Company classifies interest related to tax uncertainties as interest expense whereas penalties related to tax uncertainties are classified as a component of income tax.

See Note 9 – "Income Tax" for further discussion.

Consolidated Results of Operations

Impacts of the COVID-19 Pandemic

The COVID-19 global pandemic continues to cause increases in the Company's claims costs, primarily relating to its mortality business. However, the Company cannot reliably predict the future impact of the pandemic on its business, results of operations and financial condition as the impact will largely depend on, among other factors, the impact of new variants of the virus, vaccination effectiveness and take-up rates, development and deployment of new antiviral therapeutics, country-specific circumstances, measures by public and private institutions, and COVID-19's indirect impact on mortality and morbidity.

The ultimate amount and timing of claims the Company will experience as a result of the COVID-19 pandemic will depend on many variables and uncertainties. These variables and uncertainties include those discussed above, in addition to 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; however, more recently, many populations have seen an increase in younger age deaths, particularly in areas where healthcare facilities were unable to provide adequate care. The Company's insured population has lower exposure to older ages than the general population and covers a generally healthier population due to underwriting and socioeconomic factors of those purchasing insurance. In addition, the Company's longevity business may act as a modest offset to excess life insurance claims at older ages.

The Company's COVID-19 projection and financial impact models continue to be updated and refined based on updated external data and the Company's claim experience to date and are subject to the many variables and uncertainties noted above. The U.S. is the key driver of mortality claim costs followed by India, South Africa, the UK and Canada. For the year ended December 31, 2021, the Company estimates it has incurred approximately $1.4 billion of COVID-19 related life and health claim costs, including amounts incurred but not reported, with approximately $850 million of that amount being associated with the U.S. and Latin America Traditional segment. The Company has maintained the range of COVID-19 mortality claim cost estimates relative to the level of general population deaths for the U.S., the UK and Canada although short-term experience may be at the higher end of those ranges, reflecting mortality that is still driven in part by the Delta variant. The Company estimates that every additional 10,000 population deaths in the U.S., UK, or Canada as a result of COVID-19 would result in the following corresponding excess mortality claims of approximately

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

The global financial markets have stabilized since the beginning of the pandemic; however, they continue to be in a state of uncertainty due to COVID-19, including supply chain issues and the impact of historically large and rapid central bank actions and fiscal policies meant to offset the economic impact of the pandemic. The economic 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 level of potential impairments will depend on broad economic conditions and the pace at which global economies recover from the effects of COVID-19 and the response thereto. See "Investments" for more information.

The safety and well-being of the Company's employees and clients continues to be a priority. The Company's business continuity plans remain activated and the actions taken during 2020 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 largely 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 experienced any significant disruptions to its daily operations, despite most of its workforce working remotely. However, COVID-19 heightened operational risks and related impacts, which may include 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. Similar to other reinsurers, the Company is heavily reliant on timely reporting from its clients and other third parties. The Company continues to emphasize awareness and training regarding operational risks, including privacy and cybersecurity risks, as such risks are heightened during remote working situations. In addition, the Company continues to monitor its programs, processes and procedures designed to manage these risks.

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 the Company's consolidated Own Risk and Solvency Assessment.

Results of Operations – 2021 compared to 2020

A discussion regarding our financial condition and results of operations for the year ended December 31, 2021, compared to the year ended December 31, 2020, is presented below. A discussion regarding our financial condition and results of operations for year ended December 31, 2020, compared to the year ended December 31, 2019, can be found under Item 7 in our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 26, 2021, which is available free of charge on the SEC's website at www.sec.gov and our Investor Relations website at www.rgare.com. Information provided on such websites does not constitute part of this Annual Report on Form 10-K.

The following table summarizes net income for the periods presented.

	For the years ended December 31,		
	2021	2020	2021 vs 2020
Revenues	(Dollars in millions, except per share data)		
Net premiums	$ 12,513	$ 11,694	$ 819
Investment income, net of related expenses	3,138	2,575	563
Investment related gains (losses), net	560	(33)	593
Other revenues	447	360	87
Total revenues	16,658	14,596	2,062
Benefits and expenses			
Claims and other policy benefits	12,776	11,075	1,701
Interest credited	700	704	(4)
Policy acquisition costs and other insurance expenses	1,416	1,261	155
Other operating expenses	936	816	120
Interest expense	127	170	(43)
Collateral finance and securitization expense	12	17	(5)
Total benefits and expenses	15,967	14,043	1,924
Income before income taxes	691	553	138
Provision for income taxes	74	138	(64)
Net income	$ 617	$ 415	$ 202
Earnings per share			
Basic earnings per share	$ 9.10	$ 6.35	
Diluted earnings per share	9.04	6.31	

The increase in income in 2021 was primarily the result of the following:

- $234 million, pre-tax, of capital gains included in other investment related gains (losses), net associated with portfolio repositioning.
- A one-time adjustment of $162 million, pre-tax, associated with prior periods that includes $92 million, pre-tax, to correct the accounting for equity method limited partnerships to reflect unrealized gains in investment income, net of related expenses that were previously included in accumulated other comprehensive income, and a $70 million, pre-tax, correction reflected in other investment related gains (losses), net to adjust the carrying value of certain limited partnerships from cost less impairments to a fair value approach, using the net asset value ("NAV") per share or its equivalent.

- Changes in fair value of embedded derivatives, associated with modco/funds withheld treaties, increased investment related gains by $107 million in 2021, compared to a decrease of $62 million in 2020.
- As discussed in “Impacts of the COVID-19 Pandemic” above, the Company estimates it has incurred approximately $1.4 billion of COVID-19 related life and health claim costs, including amounts incurred but not reported, with approximately $850 million of the current year amount being associated with the U.S. and Latin America Traditional segment.

Foreign currency fluctuations can result in variances in the financial statement line items. Foreign currency exchange fluctuation increased income before taxes by $13 million due to the strengthening of the Great British Pound, Canadian Dollar and South Africa Rand compared to the U.S. Dollar. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Premiums and business growth

The increase in premiums is primarily due to an increase in new business production, measured by the face amount of insurance in force, of $412.1 billion during 2021 compared to $389.6 billion during 2020. Consolidated assumed life insurance in force decreased to $3,467.0 billion as of December 31, 2021, from $3,480.7 billion as of December 31, 2020, due to lapses and mortality claims in the current year of $391.7 billion, primarily attributable to the COVID-19 pandemic and changes in foreign exchange, which decreased assumed life insurance in force by $34.1 billion.

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

The increase in investment income, net of related expenses is primarily attributable to an increase in the average invested asset base, and increase in investment yield and an increase in variable investment income associated with joint venture and limited partnership investments:

- The average invested assets at amortized cost, excluding spread related business, totaled $33.0 billion and $30.8 billion in 2021 and 2020, respectively.
- The average yield earned on investments, excluding spread related business, was 4.99% and 4.00% in 2021 and 2020, respectively.
- Excluding the previously mentioned correction recorded in the first quarter of 2021 of $92 million, variable investment income associated with joint venture and limited partnership investments was $341 million and $63 million in 2021 and 2020, respectively.

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

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

- During 2021, the Company repositioned select portfolios generating net realized gains of $234 million compared to $32 million of net realized gains in 2020.
- Changes in the fair value of embedded derivatives associated with modco/funds withheld treaties, increased and (decreased) investment related gains (losses) by $107 million and $(62) million in 2021 and 2020, respectively.
- During 2021, the Company recognized a gain of $17 million related to changes in allowance for credit losses and impairments on fixed maturity securities, mortgage loans, and limited partnerships compared to a loss of $77 million during 2020.
- Unrealized gains of $194 million, including the previously mentioned correction recorded in the first quarter of 2021 of $70 million, due to the change in fair value of certain cost method limited partnerships were recognized during 2021 compared to $24 million in 2020.
- See the Investment section within Management Discussion and Analysis, Note 4 – “Investments” and Note 5 – “Derivative Instruments” in the Notes to Consolidated Financial Statements for additional information on the changes in allowance for credit losses, impairment losses and derivatives.

The effective tax rate on a consolidated basis was 10.6% and 24.9% for 2021 and 2020, respectively. The effective tax rate for 2021 was lower than the U.S. Statutory rate of 21.0% as result of the release of uncertain tax positions in the amount of $124 million due to the expiration of statute of limitations, partially offset by income earned in jurisdictions with tax rates

higher than the U.S. See Note 9 – “Income Tax” in the Notes to Consolidated Financial Statements for additional information on the Company’s consolidated effective tax rate.

Impact of certain derivatives

The Company recognizes in consolidated income, any changes in the fair value of embedded derivatives on modco or funds withheld treaties, 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):

	Twelve months ended December 31,		
	2021	2020	2021 vs 2020
Modco/Funds withheld:			
Unrealized gains (losses)	$ 107	$ (62)	$ 169
Deferred acquisition costs/retrocession	(36)	22	(58)
Net effect	71	(40)	111
EIAs:			
Unrealized gains (losses)	45	(20)	65
Deferred acquisition costs/retrocession	(23)	8	(31)
Net effect	22	(12)	34
Guaranteed minimum benefit riders:			
Unrealized gains (losses)	(7)	9	(16)
Related freestanding derivatives, net of deferred acquisition costs/retrocession	(47)	1	(48)
Net effect	(54)	10	(64)
Net effect after related freestanding derivatives	$ 39	$ (42)	$ 81

Results of Operations by Segment

U.S. and Latin America Operations

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

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

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 6,299	$ 5,891	$ 408
Investment income, net of related expenses	2,019	1,713	306
Investment related gains (losses), net	78	(50)	128
Other revenues	294	226	68
Total revenues	8,690	7,780	910
Benefits and expenses:			
Claims and other policy benefits	6,886	6,107	779
Interest credited	635	636	(1)
Policy acquisition costs and other insurance expenses	988	871	117
Other operating expenses	206	169	37
Total benefits and expenses	8,715	7,783	932
Loss before income taxes	$ (25)	$ (3)	$ (22)

The increase in loss before income taxes in 2021 was the result of an increase in claims in the U.S. Traditional segment primarily attributable to COVID-19 related factors, partially offset by an increase in variable investment income and improved results in the Financial Solutions segment primarily due to increased investment related gains (losses), net in coinsurance portfolios, transaction fees and the net increase in fair value of the embedded derivatives.

Traditional Reinsurance

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 6,244	$ 5,838	$ 406
Investment income, net of related expenses	930	714	216
Investment related gains (losses), net	6	(11)	17
Other revenues	18	19	(1)
Total revenues	7,198	6,560	638
Benefits and expenses:			
Claims and other policy benefits	6,720	5,906	814
Interest credited	70	73	(3)
Policy acquisition costs and other insurance expenses	792	748	44
Other operating expenses	156	131	25
Total benefits and expenses	7,738	6,858	880
Loss before income taxes	$ (540)	$ (298)	$ (242)
Key metrics:			
Life insurance in force	$1,628.4 billion	$1,611.6 billion	
Claims and other policy benefits as a percentage of net premiums (“loss ratios”)	107.6 %	101.2 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	12.7 %	12.8 %	
Other operating expenses as a percentage of net premiums	2.5 %	2.2 %	

The increase in loss before income taxes for the U.S. and Latin America Traditional segment was primarily due to unfavorable claims experience within the individual mortality line of business primarily attributable to COVID-19, which was partially offset by higher variable investment income.

Revenues

- The increase in net premiums was primarily due to organic growth as well as new sales. The segment added new life business production, measured by face amount of insurance in force, of $130.5 billion, and $114.9 billion during 2021 and 2020, respectively.
- The increase in net investment income was due to an increase in variable investment income associated with investments in real estate joint ventures and an increase in realized and unrealized gains associated with investments in limited partnerships and private equity funds.

Benefits and expenses

- The increase in the loss ratio for 2021 was primarily due to unfavorable claims experience in the individual mortality line of business, attributed primarily to the COVID-19 pandemic. While the cause of death is not yet available for all claims, the Company estimates that approximately $850 million of claims for the year ended December 31, 2021, were attributable to COVID-19 related factors.
- The increase in other operating expenses was primarily due to an increase in incentive-based compensation expense.

Financial Solutions

For the year ended December 31,	2021			2020			2021 vs 2020		
	Asset-Intensive	Capital Solutions	Total	Asset-Intensive	Capital Solutions	Total	Asset-Intensive	Capital Solutions	Total
(dollars in millions)									
Revenues:									
Net premiums	$ 55	$ —	$ 55	$ 53	$ —	$ 53	$ 2	$ —	$ 2
Investment income, net of related expenses	1,087	2	1,089	994	5	999	93	(3)	90
Investment related gains (losses), net	72	—	72	(39)	—	(39)	111	—	111
Other revenues	168	108	276	103	104	207	65	4	69
Total revenues	1,382	110	1,492	1,111	109	1,220	271	1	272
Benefits and expenses:									
Claims and other policy benefits	166	—	166	201	—	201	(35)	—	(35)
Interest credited	565	—	565	563	—	563	2	—	2
Policy acquisition costs and other insurance expenses	192	4	196	118	5	123	74	(1)	73
Other operating expenses	37	13	50	28	10	38	9	3	12
Total benefits and expenses	960	17	977	910	15	925	50	2	52
Income before income taxes	$ 422	$ 93	$ 515	$ 201	$ 94	$ 295	$ 221	$ (1)	$ 220

Asset-intensive

The increase in income before income taxes for the U.S. and Latin America Financial Solutions' Asset-intensive segment was primarily due to higher investment related gains (losses), net primarily due to an increase in the fair value of embedded derivatives reflected in investment related gains (losses), net.

The invested asset base supporting this segment increased to $24.1 billion as of December 31, 2021, from $23.5 billion as of December 31, 2020.

- The increase in the asset base was primarily due to an increase in fixed annuity account values due to new transactions.
- As of December 31, 2021 and 2020, $4.7 billion and $3.2 billion, respectively, of the invested assets were funds withheld at interest, of which greater than 90% is associated with two clients.

Impact of certain derivatives

Income from the asset-intensive business tends to be volatile due to changes in the fair value of certain derivatives, including embedded derivatives associated with reinsurance treaties structured on a modco or funds withheld basis, as well as embedded derivatives associated with the Company's reinsurance of EIAs 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.

For the year ended December 31,	2021	2020	2021 vs 2020
(dollars in millions)			
Revenues:			
Total revenues	$ 1,382	$ 1,111	$ 271
Less:			
Embedded derivatives – modco/funds withheld treaties	101	(51)	152
Guaranteed minimum benefit riders and related free standing derivatives	(78)	47	(125)
Revenues before certain derivatives	1,359	1,115	244
Benefits and expenses:			
Total benefits and expenses	960	910	50
Less:			
Embedded derivatives – modco/funds withheld treaties	36	(22)	58
Guaranteed minimum benefit riders and related free standing derivatives	(24)	37	(61)
Equity-indexed annuities	(22)	12	(34)
Benefits and expenses before certain derivatives	970	883	87
Income (loss) before income taxes:			
Income before income taxes	422	201	221
Less:			
Embedded derivatives – modco/funds withheld treaties	65	(29)	94
Guaranteed minimum benefit riders and related free standing derivatives	(54)	10	(64)
Equity-indexed annuities	22	(12)	34
Income before income taxes and certain derivatives	$ 389	$ 232	$ 157

Embedded Derivatives – Modco/Funds Withheld Treaties – Represents the change in the fair value of embedded derivatives on funds withheld at interest associated with treaties written on a modco or funds withheld basis. The fair value changes of embedded derivatives are reflected in revenues, while the related impact on deferred acquisition expenses is reflected in benefits and expenses. The Company's utilization of a credit valuation adjustment did not have a material effect on the change in fair value of these embedded derivatives for the years ended December 31, 2021 and 2020.

The change in fair value of the embedded derivatives – modco/funds withheld treaties increased income before income taxes by $65 million in 2021. The increase in 2021 was primarily the result of tightening credit spreads.

Guaranteed Minimum Benefit Riders – Represents the impact related to guaranteed minimum benefits associated with the Company's reinsurance of variable annuities. The fair value changes of the guaranteed minimum benefits along with the changes in fair value of the free standing derivatives (interest rate swaps, financial futures and equity options), purchased by the Company to substantially hedge the liability are reflected in revenues, while the related impact on deferred acquisition expenses is reflected in benefits and expenses. Changes in fair values of the embedded derivatives on guaranteed minimum benefits are net of an increase (decrease) in investment related gains (losses), net of $(41) million and $77 million for 2021 and 2020, respectively, associated with the Company's utilization of a credit valuation adjustment.

The change in fair value of the guaranteed minimum benefits, after allowing for changes in the associated free standing derivatives, decreased income before income taxes by $54 million in 2021. The decrease in income for 2021 is primarily due to a decrease in the credit valuation adjustment, which has the impact of increasing the fair value of the guaranteed minimum benefit liability, net of related impact on deferred acquisition expenses and the annual update of best estimate actuarial assumptions for future mortality improvement.

Equity-Indexed Annuities – Represents changes in the liability for equity-indexed annuities in excess of changes in account value, after adjustments for related deferred acquisition expenses. The change in fair value of embedded derivative liabilities associated with equity-indexed annuities increased income before income taxes by $22 million in 2021, primarily due to an increase in risk free interest rates which has the impact of lowering the fair value of the liability.

The changes in derivatives discussed above are considered unrealized by management and do not affect current cash flows, crediting rates or spread performance on the underlying treaties. Fluctuations occur period to period primarily due to changing investment conditions including, but not limited to, interest rate movements (including benchmark rates and credit spreads), credit valuation adjustments, implied volatility and equity market performance, all of which are factors in the calculation 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 increased by $157 million in 2021, which was primarily due to contributions from new transactions, favorable policyholder experience and higher investment related gains (losses), net in coinsurance and funds withheld portfolios.
- Revenue before certain derivatives increased by $244 million in 2021, primarily due to the revenue associated with transactions executed during the year, increases in fair value of equity options associated with the reinsurance of EIAs and higher investment related gains (losses), net in coinsurance portfolios. The effect on investment income related to equity options is substantially offset by a corresponding change in interest credited.
- Benefits and expenses before certain derivatives increased by $87 million in 2021, primarily resulting from an increase in interest credited associated with the reinsurance of EIAs due to equity market performance and benefits associated with transactions executed during the year, partially offset by the expected run-off from closed block transactions. The effect on interest credited related to equity options is substantially offset by a corresponding increase in investment income.

Capital Solutions

Income before income taxes for the U.S. and Latin America Capital Solutions' business decreased $1 million for the year ended December 31, 2021. The decrease was primarily due to the termination of certain transactions, partially offset by growth from new transactions and 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.

- At December 31, 2021 and 2020, the amount of business assumed from client companies, as measured by pre-tax statutory surplus, risk based capital and other financial reinsurance structures, was $22.7 billion and $19.9 billion, respectively.

Canada Operations

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

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 1,284	$ 1,135	$ 149
Investment income, net of related expenses	248	208	40
Investment related gains (losses), net	3	—	3
Other revenues	14	9	5
Total revenues	1,549	1,352	197
Benefits and expenses:			
Claims and other policy benefits	1,175	977	198
Interest credited	—	—	—
Policy acquisition costs and other insurance expenses	190	181	9
Other operating expenses	41	39	2
Total benefits and expenses	1,406	1,197	209
Income before income taxes	$ 143	$ 155	$ (12)

- The decrease in income before income taxes in 2021 is primarily due to unfavorable individual life mortality experience compared to 2020 attributed primarily to the COVID-19 pandemic, partially offset by increased investment income.
- While foreign currency fluctuations can result in variances in the financial statement line items, fluctuation in the Canadian dollar did not result in a material change in income before income taxes in 2021. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

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Traditional Reinsurance

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 1,194	$ 1,052	$ 142
Investment income, net of related expenses	248	207	41
Investment related gains (losses), net	3	—	3
Other revenues	3	1	2
Total revenues	1,448	1,260	188
Benefits and expenses:			
Claims and other policy benefits	1,096	909	187
Interest credited	—	—	—
Policy acquisition costs and other insurance expenses	187	180	7
Other operating expenses	37	37	—
Total benefits and expenses	1,320	1,126	194
Income before income taxes	$ 128	$ 134	$ (6)
Key metrics:			
Life insurance in force	$472.6 billion	$445.3 billion	
Loss ratios	91.8 %	86.4 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	15.7 %	17.1 %	
Other operating expenses as a percentage of net premiums	3.1 %	3.5 %	

The decrease in income before income taxes in 2021 is primarily due to unfavorable individual life mortality experience compared to 2020 and the impact of COVID-19 related claims.

Revenues

- The increase in net premiums was primarily due to a new transaction completed in the second half of the year for group business and an increase in business volume under existing treaties.
- The segment added new life business production, measured by face amount of insurance in force, of $48.8 billion and $40.8 billion during 2021 and 2020, respectively.
- The increase in net investment income was primarily due to increased variable investment income and an increase in the invested asset base due to growth in the underlying business volume partially offset by a decline in interest rates.

Benefits and expenses

- The increase in the loss ratio for 2021 was primarily due to unfavorable claims experience in the individual mortality line of business, attributed primarily to the COVID-19 pandemic. In addition, while the cause of death is not yet available for all claims, the Company estimates that approximately $60 million of claims for the year ended December 31, 2021, were attributable to COVID-19 related factors.

Financial Solutions

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 90	$ 83	$ 7
Investment income, net of related expenses	—	1	(1)
Investment related gains (losses), net	—	—	—
Other revenues	11	8	3
Total revenues	101	92	9
Benefits and expenses:			
Claims and other policy benefits	79	68	11
Interest credited	—	—	—
Policy acquisition costs and other insurance expenses	3	1	2
Other operating expenses	4	2	2
Total benefits and expenses	86	71	15
Income before income taxes	$ 15	$ 21	$ (6)

The decrease in income before income taxes in 2021 was primarily a result of less favorable mortality experience on longevity business in 2021 as compared to 2020.

Europe, Middle East and Africa Operations

The Europe, Middle East and Africa ("EMEA") operations 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.

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 2,088	$ 1,807	$ 281
Investment income, net of related expenses	293	265	28
Investment related gains (losses), net	49	15	34
Other revenues	13	17	(4)
Total revenues	2,443	2,104	339
Benefits and expenses:			
Claims and other policy benefits	2,083	1,541	542
Interest credited	4	11	(7)
Policy acquisition costs and other insurance expenses	135	123	12
Other operating expenses	157	144	13
Total benefits and expenses	2,379	1,819	560
Income before income taxes	$ 64	$ 285	$ (221)

- The decrease in income before income taxes in 2021 was primarily due to unfavorable mortality experience attributed primarily to COVID-19. The unfavorable mortality experience was partially offset by increases in net premiums, investment income and investment related gains.
- Foreign currency fluctuations can result in variances in the financial statement line items. Foreign currency fluctuations resulted in a $2 million decrease in income before income taxes in 2021. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Traditional Reinsurance

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 1,738	$ 1,555	$ 183
Investment income, net of related expenses	88	72	16
Investment related gains (losses), net	—	—	—
Other revenues	1	6	(5)
Total revenues	1,827	1,633	194
Benefits and expenses:			
Claims and other policy benefits	1,829	1,389	440
Interest credited	—	—	—
Policy acquisition costs and other insurance expenses	125	119	6
Other operating expenses	112	98	14
Total benefits and expenses	2,066	1,606	460
Income (loss) before income taxes	$ (239)	$ 27	$ (266)
Key metrics:			
Life insurance in force	$861.6 billion	$864.3 billion	
Loss ratios	105.2 %	89.3 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	7.2 %	7.7 %	
Other operating expenses as a percentage of net premiums	6.4 %	6.3 %	

The decrease in income before income taxes in 2021 is primarily due to less favorable individual life mortality experience, as well as poor morbidity experience, driven in part by COVID-19 related claims. The decrease in income was partially offset by an increase in net premiums.

Revenues

- The increase in net premiums was primarily due to an increase in business volume from new and existing treaties.
- The segment added new life business production, measured by face amount of insurance in force, of $198.4 billion and $184.3 billion during 2021 and 2020, respectively.

Benefits and expenses

- The increase in the loss ratio was due to unfavorable mortality experience, primarily attributable to COVID-19. While the cause of death is not available for all claims, the Company estimates that approximately $265 million of claims, were attributable to COVID-19 related factors, of which approximately $150 million were incurred in South Africa and $105 million were incurred in the UK.
- The increase in other operating expenses was primarily due to an increase in incentive compensation expenses.

Financial Solutions

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 350	$ 252	$ 98
Investment income, net of related expenses	205	193	12
Investment related gains (losses), net	49	15	34
Other revenues	12	11	1
Total revenues	616	471	145
Benefits and expenses:			
Claims and other policy benefits	254	152	102
Interest credited	4	11	(7)
Policy acquisition costs and other insurance expenses	10	4	6
Other operating expenses	45	46	(1)
Total benefits and expenses	313	213	100
Income before income taxes	$ 303	$ 258	$ 45

The increase in income before income taxes is primarily due to an increase in new business activity and an increase in investment related gains on investments supporting annuity business.

Revenues

- The increase in net premiums was primarily due to an increase in new business volumes of closed longevity business.
- The increase in investment related gains (losses), net was primarily due to fluctuations in the fair market value of CPI swap derivatives due to changes in future inflation expectations and higher investment related gains on fixed-income securities, respectively.

Benefits and expenses

- The increase in claims and other policy benefits was the result of increased volumes of closed longevity block business.

Asia Pacific Operations

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

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 2,842	$ 2,861	$ (19)
Investment income, net of related expenses	274	192	82
Investment related gains (losses), net	18	13	5
Other revenues	61	49	12
Total revenues	3,195	3,115	80
Benefits and expenses:			
Claims and other policy benefits	2,632	2,450	182
Interest credited	57	49	8
Policy acquisition costs and other insurance expenses	215	198	17
Other operating expenses	203	185	18
Total benefits and expenses	3,107	2,882	225
Income before income taxes	$ 88	$ 233	$ (145)

- The decrease in income before income taxes as compared to the same period in 2020 was due to unfavorable claims experience in Asia compared to the prior period, partially offset by continued growth of Financial Solutions Reinsurance in Asia and increases in investment income, net and investment related gains.
- Foreign currency fluctuations can result in variances in the financial statement line items, foreign currency fluctuations resulted in a $3 million decrease in income before income taxes in 2021. Unless otherwise stated, all amounts discussed below are net of foreign currency fluctuations.

Traditional Reinsurance

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 2,624	$ 2,681	$ (57)
Investment income, net of related expenses	136	107	29
Investment related gains (losses), net	(1)	3	(4)
Other revenues	19	15	4
Total revenues	2,778	2,806	(28)
Benefits and expenses:			
Claims and other policy benefits	2,445	2,293	152
Interest credited	—	—	—
Policy acquisition costs and other insurance expenses	159	167	(8)
Other operating expenses	184	172	12
Total benefits and expenses	2,788	2,632	156
Income before income taxes	$ (10)	$ 174	$ (184)
Key metrics:			
Life insurance in force	$497.4 billion	$553.7 billion	
Loss ratios	93.2 %	85.5 %	
Policy acquisition costs and other insurance expenses as a percentage of net premiums	6.1 %	6.2 %	
Other operating expenses as a percentage of net premiums	7.0 %	6.4 %	

The decrease in income before income taxes is primarily the result of net unfavorable claims experience across the segment, primarily attributable to COVID-19 related claims in India, and a decrease in net premiums in Australia.

Revenues

- The decrease in net premiums was primarily due to new business growth in Asia, partially offset by premium reductions in Australia group business as a result of the non-renewal of two large group treaties effective June 30, 2020.
- The segment added new life business production, measured by face amount of insurance in force, of $34.2 billion and $49.6 billion during 2021 and 2020, respectively, due to new business production and in force transactions.

Benefits and expenses

- The increase in the loss ratio for 2021 was primarily due to unfavorable claims experience in Asia, primarily in India. While the cause of death is not yet available for all claims, the Company estimates that approximately $240 million of claims, of which $220 million were incurred in India, for the year ended December 31, 2021, were attributable to COVID-19 related factors.

Financial Solutions

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ 218	$ 180	$ 38
Investment income, net of related expenses	138	85	53
Investment related gains (losses), net	19	10	9
Other revenues	42	34	8
Total revenues	417	309	108
Benefits and expenses:			
Claims and other policy benefits	187	157	30
Interest credited	57	49	8
Policy acquisition costs and other insurance expenses	56	31	25
Other operating expenses	19	13	6
Total benefits and expenses	319	250	69
Income before income taxes	$ 98	$ 59	$ 39

The increase in income before income taxes is primarily due to the contributions from asset-intensive transactions executed during 2021, in addition to organic growth, in Asia. The invested asset base supporting asset-intensive transactions increased to $8.6 billion as of December 31, 2021, from $4.4 billion as of December 31, 2020, primarily as a result of asset-intensive transactions executed during the year.

Revenues

- The increase in net premiums is primarily due to contributions from new single premium asset-intensive transactions.
- The increase in net investment income is due to the growth in the invested asset base supporting asset-intensive transactions in Asia.

Benefits and expenses

- The increase in claims and other policy benefits and policy acquisition costs is the result of increased production from single premium asset-intensive transactions.

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. 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 and hence generate new future revenue streams.

For the year ended December 31, (dollars in millions)	2021	2020	2021 vs 2020
Revenues:			
Net premiums	$ —	$ —	$ —
Investment income, net of related expenses	304	197	107
Investment related gains (losses), net	412	(11)	423
Other revenues	65	59	6
Total revenues	781	245	536
Benefits and expenses:			
Claims and other policy benefits	—	—	—
Interest credited	4	8	(4)
Policy acquisition costs and other insurance income	(112)	(112)	—
Other operating expenses	329	279	50
Interest expense	127	170	(43)
Collateral finance and securitization expense	12	17	(5)
Total benefits and expenses	360	362	(2)
Income/(loss) before income taxes	$ 421	$ (117)	$ 538

The increase in income before income taxes in 2021 is primarily due to an increase in total revenues and a decrease in interest expense, offset by increases in other operating expenses.

- The increase in net investment income is primarily due to higher variable investment income associated with investments in limited partnerships generated from unrealized gains in the underlying investments. The increase includes a reclassification recorded in the first quarter of approximately $92 million of pre-tax unrealized gains on certain limited partnerships, for which the Company uses the equity method of accounting, from AOCI to net investment income that should have been recognized in net investment income in the same prior periods they were reported as earnings by the investees.
- The increase in investment related gains (losses), net includes changes in the carrying value of investments in limited partnerships considered to be investment companies of $169 million of which $70 million relates to a prior period adjustment recorded in the first quarter of 2021 to adjust the carrying value from cost less impairments to fair value, using NAV per share or its equivalent. The remaining increase is attributable to an increase of $197 million of gains on sales of fixed maturity securities, a decrease in the allowance for credit losses on mortgage loans as a result of assumption updates due to the improving view of the impact of the COVID-19 pandemic, and changes in the fair value of derivatives.
- The increase in other operating expenses is primarily due to higher incentive-based compensation expense.
- The decrease in interest expense is due to the reversal of approximately $32 million of accrued interest associated with the recognition of uncertain tax positions due to the expiration of the statute of limitations.

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 COVID-19. The Company is currently holding higher cash and cash equivalents levels in response to COVID-19. The Company performs periodic liquidity stress testing to ensure its asset portfolio includes sufficient high quality liquid assets that could be utilized to bolster its liquidity position under stress scenarios. These assets could be utilized as collateral for secured borrowing transactions with various third parties or by selling the securities in the open market if needed. The Company's liquidity requirements have been and will continue to be funded through net cash flows from operations. However, in the event of significant unanticipated cash requirements beyond normal liquidity needs, the Company has multiple liquidity alternatives available based on market conditions and the amount and timing of the liquidity need. These alternatives include the sale of invested assets subject to market conditions, borrowings under committed credit facilities, secured borrowings, and if necessary issuing long-term debt, preferred securities or common equity.

Current Market Environment

The Company's average investment yield, excluding spread related business, for 2021 was at 4.99%, 99 basis points above the comparable 2020 rate due to higher variable investment income. However, the current interest rate environment continues to put downward pressure on the Company's investment yield. The Company's insurance liabilities, in particular its annuity products, are sensitive to changing market factors. Due to increases in risk free interest rates, gross unrealized gains on fixed maturity securities available-for-sale decreased from $7.4 billion at December 31, 2020, to $5.3 billion at December 31, 2021. Gross unrealized losses increased from $197 million at December 31, 2020 to $349 million at December 31, 2021.

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 investment securities of $5.3 billion remain well in excess of gross unrealized losses of $349 million as of December 31, 2021. 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 and results of operations are not overly sensitive to these risks. Mortality and morbidity risks continue to be the most significant risk for the Company. Although management believes the Company's current capital base is adequate to support its business at current operating levels, it continues to monitor new business opportunities and any associated new capital needs that could arise from the changing financial landscape.

The Holding Company

RGA is an insurance holding company whose primary uses of liquidity include, but are not limited to, the immediate capital needs of its operating companies, dividends paid to its shareholders, repurchase of common stock and interest payments on its indebtedness. The primary sources of RGA's liquidity include proceeds from its capital-raising efforts, interest income on undeployed corporate investments, interest income received on surplus notes with RGA Reinsurance, RCM and Rockwood Re and dividends from operating subsidiaries. As the Company continues its growth efforts, RGA will continue to be dependent upon these sources of liquidity. See "Part IV – Item 15(a)(2) Financial Statement Schedules – Schedule II – Condensed Financial Information of Registrant" for more information regarding RGA's financial information.

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). The third-parties have recourse to RGA should the subsidiary fail to provide the required funding, however, as of December 31, 2021, 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. See Note 12 – "Commitments, Contingencies and Guarantees" in the Notes to Consolidated Financial Statements for a table that presents these commitments by period and maximum obligation.

RGA established an intercompany revolving credit facility where certain subsidiaries can lend to or borrow from each other and from RGA in order to manage capital and liquidity more efficiently. The intercompany revolving credit facility, which is a series of demand loans among RGA and its affiliates, is permitted under applicable insurance laws. This facility reduces overall borrowing costs by allowing RGA and its operating companies to access internal cash resources instead of

incurring third-party transaction costs. The statutory borrowing and lending limit for RGA's Missouri-domiciled insurance subsidiaries is currently 3% of the insurance company's admitted assets as of its most recent year-end. There were borrowings of $192 million and $153 million outstanding under the intercompany revolving credit facility as of December 31, 2021 and 2020, respectively. In addition to loans associated with the intercompany revolving credit facility, RGA and its subsidiaries, RGA Americas and RGA International Division Sydney Office Pty Limited, provided loans to RGA Australian Holdings Pty Limited with a total outstanding balance of $44 million and $46 million as of December 31, 2021 and 2020, respectively.

During 2020, RGA established an intercompany derivative cash collateral pool where RGA and certain subsidiaries pool derivative cash collateral into a single concentration account. This derivative cash collateral pool allows RGA and its affiliates to lend or borrow cash from the concentration account in order to more efficiently meet its collateral obligations under their respective derivative transactions. Cash surplus in RGA or its affiliates accounts is transferred to the concentration account and any deficit is funded by the concentration account, thereby creating a loan balance. RGA and its subsidiaries participating in the pool are paid or charged an arm's length interest rate based on its net loan balance with the concentration account.

Undistributed earnings of the Company's foreign subsidiaries are generally targeted for reinvestment outside of the U.S. As of December 31, 2021, the amount of cash and cash equivalents and short-term investments held by the Company's subsidiaries that are taxed in a foreign jurisdiction was $1,032 million. The Global Intangible Low-Taxed Income ("GILTI") and Subpart F provisions of U.S. Tax Reform generally eliminate U.S. federal income tax deferral on earnings of foreign subsidiaries, while the dividend received deduction generally allows for tax-free repatriation of any untaxed earnings. Therefore, the Company does not expect to incur any material incremental U.S. federal income tax on repatriation of these earnings. Incremental foreign withholding taxes are not expected to be material.

RGA endeavors to maintain a capital structure that provides financial and operational flexibility to its subsidiaries, credit ratings that support its competitive position in the financial services marketplace, and shareholder returns. As part of the Company's capital deployment strategy, it has in recent years repurchased shares of RGA common stock and paid dividends to RGA shareholders, as authorized by the board of directors. On January 24, 2019, RGA's board of directors authorized a share repurchase program for up to $400 million of RGA's outstanding common stock. As of December 31, 2021, approximately $72 million of RGA's common stock may still be purchased under the 2019 share repurchase program.

On February 25, 2022, RGA's board of directors authorized a share repurchase program for up to $400 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. The pace of repurchase activity depends on various factors such as the level of available cash, the impact of the ongoing COVID-19 pandemic, 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):

	2021	2020	2019
Dividends to shareholders	$ 194	$ 182	$ 163
Purchase of common stock [(1)]	96	153	80
Total amount paid to shareholders	$ 290	$ 335	$ 243
Number of common shares purchased [(1)]	852,037	1,074,413	546,614
Average price per share	$ 112.67	$ 142.05	$ 146.00

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

RGA declared dividends totaling $2.86 per share in 2021. 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 13 – "Debt" and Note 17 – "Equity" in the Notes to Consolidated Financial Statements for additional information regarding the Company's securities transactions.

Statutory Dividend Limitations

RCM, RGA Reinsurance and Chesterfield Re are subject to Missouri statutory provisions that restrict the payment of dividends. They may not pay dividends in any 12-month period in excess of the greater of the prior year's statutory net gain from operations or 10% of statutory capital and surplus at the preceding year-end, without regulatory approval. Aurora National is subject to California statutory provisions that are identical to those imposed by Missouri regarding the ability of Aurora National to pay dividends to RGA Reinsurance. The applicable statutory provisions only permit an insurer to pay a shareholder

dividend from unassigned surplus. Any dividends paid by RGA Reinsurance would be paid to RCM, its parent company, which in turn has restrictions related to its ability to pay dividends to RGA. Chesterfield Re would pay dividends to its immediate parent Chesterfield Financial, which would in turn pay dividends to RCM. The MDCI allows RCM to pay a dividend to RGA to the extent RCM received the dividend from its subsidiaries, without limitation related to the level of unassigned surplus. Dividend payments from other subsidiaries are subject to regulations in the jurisdiction of domicile, which are generally based on their earnings and/or capital level.

The dividend limitations for RCM, RGA Reinsurance and Chesterfield Re are based on statutory financial results. Statutory accounting practices differ in certain respects from accounting principles used in financial statements prepared in conformity with GAAP. Significant differences include the treatment of deferred acquisition costs, deferred income taxes, required investment reserves, reserve calculation assumptions and surplus notes.

Dividend payments from non-U.S. operations are subject to similar restrictions established by local regulators. The non-U.S. regulatory regimes also commonly limit the dividend payments to the parent to a portion of the prior year's statutory income, as determined by the local accounting principles. The regulators of the Company's non-U.S. operations may also limit or prohibit profit repatriations or other transfers of funds to the U.S. if such transfers are deemed to be detrimental to the solvency or financial strength of the non-U.S. operations, or for other reasons. Most of the non-U.S. operating subsidiaries are second tier subsidiaries that are owned by various non-U.S. holding companies. The capital and rating considerations applicable to the first tier subsidiaries may also impact the dividends paid to RGA.

Debt

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

As of December 31, 2021 and 2020, the Company had $3.7 billion and $3.6 billion, respectively, in outstanding borrowings under its debt agreements and was in compliance with all covenants under those agreements. As of December 31, 2021 and 2020, the average interest rate on long-term debt outstanding was 4.42% and 4.54%, respectively. The ability of the Company to make debt principal and interest payments depends on the earnings and surplus of its subsidiaries, investment earnings on undeployed capital proceeds, available liquidity at the holding company, and the Company's ability to raise additional funds.

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

On June 9, 2020, the Company 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 were used in part to repay the Company's $400 million 5.00% Senior Notes due in 2021, and the remainder was 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, 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 syndicated revolving credit facility that matures in August 2023. As of December 31, 2021, the Company had no cash borrowings outstanding and $21 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 twelve months.

Letters of Credit

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 December 31, 2021, there were approximately $53 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 December 31, 2021, $1.4 billion in letters of credit from various banks were outstanding, but undrawn, backing reinsurance between the various subsidiaries of the Company. See Note 13 – “Debt” in the Notes to Consolidated Financial Statements for information regarding the Company’s letter of credit facilities.

Collateral Finance and Securitization Notes and Statutory Reserve Funding

The Company uses various internal and third-party reinsurance arrangements and funding sources to manage statutory reserve strain, including reserves associated with the U.S. Valuation of Life Policies Model Regulation (commonly referred to as Regulation XXX) and principles-based reserves (commonly referred to PBR), and the associated collateral requirements. Assets in trust and letters of credit are often used as collateral in these arrangements.

Regulation XXX, implemented in the U.S. for various types of life insurance business beginning January 1, 2000, significantly increased the level of reserves that U.S. life insurance and life reinsurance companies must hold on their statutory financial statements for various types of life insurance business, primarily certain level premium term life products. The reserve levels required under Regulation XXX increase over time and are normally in excess of reserves required under GAAP. In situations where primary insurers have reinsured business to reinsurers that are unlicensed and unaccredited in the U.S., the reinsurer must provide collateral equal to its reinsurance reserves in order for the ceding company to receive statutory financial statement credit. In order to manage the effect of Regulation XXX on its statutory financial statements, RGA Reinsurance has retroceded a majority of Regulation XXX reserves to unaffiliated and affiliated reinsurers, both licensed and unlicensed.

Effective in 2017, PBR is permitted in the U.S. During 2016, the NAIC amended the standard valuation law to adopt life PBR that was effective January 1, 2017, allowing a three-year adoption period. The Company adopted PBR in 2020. Under PBR, reserves are determined based on terms of the reinsurance agreement which may differ from those of the direct policies.

RGA Reinsurance’s statutory capital may be significantly reduced if the unlicensed unaffiliated or affiliated reinsurer is unable to provide the required collateral to support RGA Reinsurance’s statutory reserve credits and RGA Reinsurance cannot find an alternative source for collateral.

The Company has issued both collateral finance and securitization notes. The consolidated balance sheets include outstanding notes of $180 million and $388 million as of December 31, 2021 and 2020, respectively. During 2021, the Company called and fully redeemed the notes issued by the Company’s subsidiary, Chesterfield Financial Holdings, LLC. See Note 14 – “Collateral Finance and Securitization Notes” in the Notes to Consolidated Financial Statements for additional information regarding the Company’s collateral finance and securitization notes.

The demand for financing of the ceded reserve credits associated with the Company’s assumed term life business has grown at a slower rate in recent years. The Company has been able to utilize its certified reinsurer, RGA Americas, as a means of reducing the burden of financing PBR, Regulation XXX and other types of reserves. The Company’s PBR and Regulation XXX statutory reserve requirements associated with term life business and other statutory reserve requirements continues to require the Company to obtain additional letters of credit, put additional assets in trust, or utilize other funding mechanisms to support reserve credits. If the Company is unable to support the reserve credits, the regulatory capital levels of several of its subsidiaries may be significantly reduced, while the regulatory capital requirements for these subsidiaries would not change. The reduction in regulatory capital would not directly affect the Company’s consolidated shareholders’ equity under GAAP; however, it could affect the Company’s ability to write new business and retain existing business.

Affiliated captives are commonly used in the insurance industry to help manage statutory reserve and collateral requirements. The NAIC analyzed the insurance industry’s use of affiliated captive reinsurers to satisfy certain reserve requirements and in 2014 adopted measures to promote uniformity in both the approval and supervision of such captives reinsuring business subject to Regulation XXX, allowing current captives to continue in accordance with their currently approved plans. Reinsuring business subject to the additional provisions of Actuarial Guideline 48 increases costs and adds complexity.

In the U.S., the introduction of the certified reinsurer has provided an alternative way to manage collateral requirements. In 2014, RGA Americas was designated as a certified reinsurer by the MDCI. This designation allows the Company to retrocede business to RGA Americas in lieu of using captives for collateral requirements. Therefore, the Company has chosen not to establish captives subject to Actuarial Guideline 48.

It is also possible that the NAIC could place limits on the recognition of the Company's capital held in related party captives when adopting its group capital calculation. Doing so would adversely impact the amount of capital that the group would otherwise be able to recognize and report as capital resident in the group, potentially requiring the Company to restructure or change the financing of its captives.

Assets in Trust

The Company enters into reinsurance treaties in the ordinary course of business. In some cases, if the credit rating and/or defined statutory measures of the Company declines to certain levels, the reinsurance treaty would require the Company to post collateral or additional collateral to secure the Company's obligations under such reinsurance treaty, obtain guarantees, permit the ceding company to recapture such reinsurance treaty, or some other negotiated remedy. As of December 31, 2021, neither the Company nor its subsidiaries have been required to post additional collateral or have had a reinsurance treaty recaptured as a result of a credit downgrade or a defined statutory measure decline.

In addition, certain reinsurance treaties require the Company to place assets in trust at the time of closing to collateralize its obligations to the ceding company. Assets placed in trust continue to be owned by the Company, but their beneficial ownership and use are restricted based on the terms of the trust agreement. Securities with an amortized cost of $3.8 billion were held in trust for the benefit of the Company's subsidiaries to satisfy collateral requirements for reinsurance business at December 31, 2021. Additionally, securities with an amortized cost of $28.7 billion as of December 31, 2021, were held in trust to satisfy collateral requirements under certain third-party reinsurance treaties. Under certain conditions, the Company may be obligated to move reinsurance from one subsidiary to another subsidiary, post additional collateral or make payments under a given reinsurance treaty. These conditions include change in control or ratings of the subsidiary, insolvency, nonperformance under a reinsurance treaty, or loss of license or other regulatory authorization of such subsidiary. If the Company was ever required to move reinsurance from one subsidiary to another subsidiary, the risk to the Company on a consolidated basis under the reinsurance treaties would not change; however, additional collateral may need to be posted or additional capital may be required due to the change in jurisdiction of the subsidiary reinsuring the business, which could lead to a strain on liquidity.

Proceeds from the notes issued by Timberlake Financial and RGA's direct investment in Timberlake Financial were deposited into a series of trust accounts as collateral and are not available to satisfy the general obligations of the Company. As of December 31, 2021, the Company held deposits in trust and in custody of $426 million for this purpose, which is not included in the figures in the paragraph above. A reserve account has been established to cover interest payments on notes issued by Timberlake Financial that are not available to satisfy the general obligations of the Company. At December 31, 2021, the Company held deposits in trust of $39 million for this purpose, which is not included in the figures in the paragraph above. See "Collateral Finance and Securitization Notes and Statutory Reserve Funding" above for additional information on the Timberlake Financial notes.

Reinsurance Operations

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'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 Company's financial strength rating falls five notches from its current rating of "AA-" to the "BBB" level on the S&P scale. Recapture of business previously ceded does not affect premiums ceded prior to the recapture of such business, but would reduce premiums 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.

Guarantees

The Company has issued guarantees to third parties on behalf of its subsidiaries for the payment of amounts due under certain reinsurance treaties, securities borrowing arrangements, financing arrangements and office lease obligations, whereby if a subsidiary fails to meet an obligation, the Company or one of its other subsidiaries will make a payment to fulfill the obligation. In limited circumstances, treaty guarantees are granted to ceding companies in order to provide additional security,

particularly in cases where the Company's subsidiary is relatively new, unrated, or not of significant size, relative to the ceding company. Potential guaranteed amounts of future payments will vary depending on production levels and underwriting results. Guarantees related to borrowed securities provide additional security to third parties should a subsidiary fail to return the borrowed securities when due. The Company has issued payment guarantees on behalf of two of its subsidiaries in the event the subsidiaries fail to make payment under their office lease obligations. See Note 12 – "Commitments, Contingencies and Guarantees" in the Notes to Consolidated Financial Statements for a table that presents the amounts for guarantees, by type, issued by the Company.

In addition, the Company indemnifies its directors and officers pursuant to 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.

Off-Balance Sheet Arrangements

The Company has commitments to fund investments in limited partnerships, joint ventures, commercial mortgage loans, lifetime mortgages, private placement investments and bank loans, including revolving credit agreements. See Note 12 – "Commitments, Contingencies and Guarantees" in the Notes to Consolidated Financial Statements for additional information on the Company's commitments to fund investments and other off-balance sheet arrangements.

The Company has not engaged in trading activities involving non-exchange-traded contracts reported at fair value, nor has it engaged in relationships or transactions with persons or entities that derive benefits from their non-independent relationship with 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 also includes drawing funds under a syndicated revolving credit facility, under which the Company had availability of $829 million as of December 31, 2021. The Company also has $755 million of funds available through collateralized borrowings from the Federal Home Loan Bank of Des Moines ("FHLB") as of December 31, 2021. As of December 31, 2021, 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). The Company performs annual financial reviews of its retrocessionaires to evaluate financial stability and performance. The Company has never experienced a material default in connection with retrocession arrangements, nor has it experienced any difficulty in collecting claims recoverable from retrocessionaires; however, no assurance can be given as to the future performance of such retrocessionaires nor to the recoverability of future claims. The Company's management believes its cash and cash equivalents along with its current sources of liquidity are adequate to meet its cash requirements for the next twelve months, despite the uncertainty associated with the pandemic.

Summary of Primary Sources and Uses of Liquidity and Capital

The Company’s primary sources and uses of liquidity and capital are summarized as follows (dollars in millions):

	For the years ended December 31,		
	2021	2020	2019
Sources:			
Net cash provided by operating activities	$ 4,182	$ 3,322	$ 2,307
Proceeds from offering of common stock, net	—	481	—
Proceeds from long-term debt issuance	500	598	599
Exercise of stock options, net	—	1	6
Change in cash collateral for derivative positions and other arrangements	31	—	—
Change in deposit asset on reinsurance	91	—	—
Net deposits from investment-type policies and contracts	308	773	200
Effect of exchange rate changes on cash	—	63	11
Total sources	5,112	5,238	3,123
Uses:			
Net cash used in investing activities	4,628	2,680	2,638
Dividends to stockholders	194	182	163
Repayment of collateral finance and securitization notes	208	214	91
Debt issuance costs	6	5	5
Principal payments of long-term debt	403	3	403
Purchases of treasury stock	99	163	101
Change in cash collateral for derivative positions and other arrangements	—	32	163
Effect of exchange rate changes on cash	34	—	—
Total uses	5,572	3,279	3,564
Net change in cash and cash equivalents	$ (460)	$ 1,959	$ (441)

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 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 sales and maturities 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 debt and equity securities, and deposit funds associated with universal life and other investment type policies and contracts. The principal financing cash outflows are the repayments of debt and securitization notes, 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 following table summarizes the Company's contractual obligations, including obligations arising from its reinsurance business (in millions):

	Payment Due by Period				
	Total	Less than 1 Year	1-3 Years	4-5 Years	After 5 Years
Future policy benefits(1)	$ 19,079	$ (89)	$ (1,209)	$ (1,069)	$ 21,446
Interest-sensitive contract liabilities(2)	43,388	3,453	5,953	5,202	28,780
Long-term debt, including interest	7,052	173	727	708	5,444
Collateral finance and securitization notes, including interest	185	52	61	8	64
Other policy claims and benefits	6,993	6,993	—	—	—
Operating leases	92	14	28	21	29
Limited partnership interests and joint ventures	1,031	1,031	—	—	—
Payables for collateral received under derivative transactions	149	149	—	—	—
Other investment related commitments	961	961	—	—	—
Total	$ 78,930	$ 12,737	$ 5,560	$ 4,870	$ 55,763

(1) Future policy benefits are primarily related to the Company's reinsurance of life and health insurance products. The amounts presented in the table above represent the estimated benefit obligations as they become due, and also include estimated future premiums on policies in force, allowances and other amounts due to or from the ceding companies as the result of the Company's assumptions of mortality, morbidity, policy lapse and surrender risk as appropriate to the respective product. All estimated cash payments presented in the table above are undiscounted as to interest and gross of any reinsurance recoverable. The discounted liability amount of $35.8 billion included on the consolidated balance sheets exceeds the sum of the undiscounted estimated cash flows of $19.1 billion shown above. The difference is substantially due to net obligations including estimated future premiums exceeding estimated policy benefit payments and allowances due to the nature of certain reinsurance treaties, which generally have increasing premium rates that exceed the increasing benefit payments. In addition, differences will arise due to changes in the projection of future benefit payments compared with those developed when the reserve was established. Total payments may vary materially from prior years due to the assumption of new reinsurance treaties or as a result of changes in projections of future experience.

(2) Interest-sensitive contract liabilities include amounts related to the Company's reinsurance of asset-intensive products, primarily deferred annuities and corporate-owned life insurance. The amounts in the table above represent the estimated obligations as they become due both to and from ceding companies relating to activity of the underlying policyholders. All amounts presented above are undiscounted as to interest, and include assumptions related to surrenders, withdrawals, premium persistency, partial withdrawals, surrender charges, annuitizations, mortality, future interest credited rates and policy loan utilization. The sum of the obligations shown for all years in the table of $43.4 billion exceeds the liability amount of $26.4 billion included on the consolidated balance sheets, and the difference is primarily related to the lack of discounting and to liabilities related to accounting conventions, which are not contractually due and are therefore excluded.

Excluded from the table above are net deferred income tax liabilities, unrecognized tax benefits, and accrued interest related to unrecognized tax benefits of $2.8 billion, for which the Company cannot reliably determine the timing of payment.

The net funded status of the Company's qualified and nonqualified pension and other postretirement liabilities included within other liabilities has been excluded from the amounts presented in the table above. As of December 31, 2021, the Company had a net unfunded balance of $152 million related to qualified and nonqualified pension and other postretirement liabilities. See Note 10 – "Employee Benefit Plans" in the Notes to Consolidated Financial Statements for information related to the Company's obligations and funding requirements for pension and other postretirement benefits.

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

The Company’s liquidity position (cash and cash equivalents and short-term investments) was $3.0 billion and $3.6 billion at December 31, 2021 and 2020, respectively. Given the uncertainty associated with the COVID-19 pandemic and the related volatility in the financial markets, the Company increased its liquidity position at the onset of the pandemic. Liquidity needs are determined from valuation analysis 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 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 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 $70 million of FHLB common stock, which is included in other invested assets on the Company’s 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 $1.4 billion and $1.9 billion at December 31, 2021 and 2020, respectively, which is included in interest sensitive contract liabilities on the Company’s consolidated balance sheets. The advances on these agreements are collateralized primarily by commercial and residential mortgage-backed securities, commercial mortgage loans, and U.S. Treasury and government agency securities. The amount of collateral exceeds the liability and is dependent on the type of assets collateralizing the guaranteed investment contracts.

Investments

Management of Investments

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

Effects of COVID-19

Credit markets continued to recover during 2021 following the disruption in the global financial markets caused by the COVID-19 pandemic. 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 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 $81.5 billion and $75.8 billion as of December 31, 2021 and 2020, respectively, as illustrated below (dollars in millions):

	2021	% of Total	2020	% of Total
Fixed maturity securities, available-for-sale	$ 60,749	74.6 %	$ 56,735	74.8 %
Equity securities	151	0.2	132	0.2
Mortgage loans on real estate	6,283	7.7	5,787	7.6
Policy loans	1,234	1.5	1,258	1.7
Funds withheld at interest	6,954	8.5	5,432	7.2
Short-term investments	87	0.1	227	0.3
Other invested assets	3,070	3.8	2,829	3.7
Cash and cash equivalents	2,948	3.6	3,408	4.5
Total cash and invested assets	$ 81,476	100.0 %	$ 75,808	100.0 %

Investment Yield

The following table presents consolidated average invested assets, excluding spread related business, at amortized cost, net investment income, investment yield, variable investment income ("VII"), and investment yield excluding VII, which can vary significantly from period to period (dollars in millions) for the years ended December 31, 2021, 2020 and 2019. 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.

	2021	2020	2019	2021 vs 2020	2020 vs 2019
Average invested assets at amortized cost	$ 33,040	$ 30,787	$ 28,300	$ 2,253	$ 2,487
Net investment income	$ 1,648	$ 1,231	$ 1,291	$ 417	$ (60)
Annualized investment yield (ratio of net investment income to average invested assets at amortized cost)	4.99 %	4.00 %	4.56 %	99 bps	(56) bps
VII (included in net investment income) [1]	$ 433	$ 63	$ 132	$ 370	$ (69)
Annualized investment yield excluding VII (ratio of net investment income, excluding VII, to average invested assets, excluding assets with only VII, at amortized cost)	3.81 %	3.93 %	4.23 %	(12) bps	(30) bps

(1) VII for 2021 includes an accounting correction of $92 million related to prior periods recorded in 2021. See "Investment Income and Investment Related Gains (Losses), Net – Accounting Correction" in Note – 4 "Investments" in the Notes to the Consolidated Financial Statements for additional information regarding the correction recorded in 2021.

Investment yield increased between 2020 and 2021 primarily due to increased variable income from limited partnerships and real estate joint ventures, which are included in other invested assets on the consolidated balance sheets, partially offset by decreased yield from the continued low interest rate environment. Investment yield decreased between 2019 and 2020 primarily due to the low interest rate environment combined with higher cash and cash equivalents balances held by the Company during the COVID-19 pandemic as well as decreased income from joint ventures and limited partnerships.

Fixed Maturity Securities Available-for-Sale

See "Fixed Maturity Securities Available-for-Sale" in Note 4 – "Investments" in the Notes to Consolidated Financial Statements for tables that provide the amortized cost, allowance for credit losses, unrealized gains and losses and estimated fair value of these securities by type as of December 31, 2021 and 2020.

The Company holds various types of fixed maturity securities available-for-sale and classifies them as corporate securities ("Corporate"), Canadian and Canadian provincial government securities ("Canadian government"), residential mortgage-backed securities ("RMBS"), asset-backed securities ("ABS"), commercial mortgage-backed securities ("CMBS"), U.S. government and agencies ("U.S. government"), state and political subdivisions, and other foreign government, supranational and foreign government-sponsored enterprises ("Other foreign government"). RMBS, ABS and CMBS are collectively "structured securities." As of December 31, 2021 and 2020, approximately 94.0% 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 5.3% and 5.6% of the total fixed maturity securities as of December 31, 2021 and 2020, 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 62.8% and 63.9% of total fixed maturity securities as of December 31, 2021 and 2020, respectively. See “Corporate Fixed Maturity Securities” in Note 4 – “Investments” in the Notes to Consolidated Financial Statements for tables showing the major sector types, which comprise the corporate fixed maturity holdings as of December 31, 2021 and 2020.

As of December 31, 2021 and 2020, the Company’s investments in Canadian government securities represented 8.1% and 9.1%, respectively, of the fair value of total fixed maturity securities. These assets are primarily high quality, long duration provincial strip bonds, the valuation of which is closely linked to the interest rate curve. These assets are longer in duration and held primarily for asset/liability management to meet Canadian regulatory requirements.

The Company references rating agency designations in some of its investments disclosures. These designations are based on the ratings from nationally recognized statistical rating organizations, primarily Moody’s, S&P and Fitch. Structured securities held by the Company’s insurance subsidiaries that maintain the NAIC statutory basis of accounting utilize the NAIC rating methodology. The NAIC assigns designations to publicly traded as well as privately placed securities. The designations assigned by the NAIC range from class 1 to class 6, with designations in classes 1 and 2 generally considered investment grade (BBB or higher rating agency designation). NAIC designations in classes 3 through 6 are generally considered below investment grade (BB or lower rating agency designation).

The quality of the Company’s available-for-sale fixed maturity securities portfolio, as measured at fair value and by the percentage of fixed maturity securities invested in various ratings categories, relative to the entire available-for-sale fixed maturity securities portfolio as of December 31, 2021 and 2020 was as follows (dollars in millions):

		2021			2020		
NAIC Designation	Rating Agency Designation	Amortized Cost	Estimated Fair Value	% of Total	Amortized Cost	Estimated Fair Value	% of Total
1	AAA/AA/A	$ 33,540	$ 36,725	60.5 %	$ 29,770	$ 34,589	60.9 %
2	BBB	18,684	20,379	33.5	16,440	18,751	33.1
3	BB	2,620	2,668	4.4	2,480	2,588	4.6
4	B	876	863	1.4	713	697	1.2
5	CCC and lower	96	79	0.1	131	102	0.2
6	In or near default	57	35	0.1	14	8	—
	Total	$ 55,873	$ 60,749	100.0 %	$ 49,548	$ 56,735	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 December 31, 2021 and 2020 (dollars in millions):

	2021			2020		
	Amortized Cost	Estimated Fair Value	% of Total	Amortized Cost	Estimated Fair Value	% of Total
RMBS:						
Agency	$ 551	$ 582	8.4 %	$ 686	$ 744	11.0 %
Non-agency	469	468	6.8	1,049	1,073	15.8
Total RMBS	1,020	1,050	15.2	1,735	1,817	26.8
ABS:						
Collateralized loan obligations (“CLOs”)	1,761	1,752	25.4	1,707	1,689	24.9
ABS, excluding CLOs	2,263	2,253	32.6	1,392	1,403	20.7
Total ABS	4,024	4,005	58.0	3,099	3,092	45.6
CMBS	1,790	1,849	26.8	1,790	1,868	27.6
Total	$ 6,834	$ 6,904	100.0 %	$ 6,624	$ 6,777	100.0 %

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

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

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

As of December 31, 2021 and 2020, the Company had $349 million and $197 million, respectively, of gross unrealized losses related to its fixed maturity securities. The Company monitors its fixed maturity securities to determine impairments in value and evaluates factors such as financial condition of the issuer, payment performance, compliance with covenants, general market and industry sector conditions, current intent and ability to hold securities, and various other subjective factors. Based on management's judgment, an allowance for credit losses in the amount that fair value is less than the amortized cost is recorded for securities determined to have expected credit losses.

Mortgage Loans on Real Estate

The Company's mortgage loan portfolio consists of U.S., Canada and UK based investments primarily in commercial offices, light industrial properties and retail locations. The mortgage loan portfolio is diversified by geographic region and property type as discussed further under "Mortgage Loans on Real Estate" in Note 4 – "Investments" in the Notes to Consolidated Financial Statements. Most of the mortgage loans in the Company's portfolio range in size up to $30 million, with the average mortgage loan investment as of December 31, 2021, totaling approximately $9 million. For the year ended December 31, 2021, the Company decreased its allowance for credit losses on its commercial mortgage loan portfolio by approximately $29 million reflecting the impact of the updated outlook from the COVID-19 pandemic 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. See Note 4 – "Investments" in the Notes to Consolidated Financial Statements for information on mortgage loan term modifications resulting from the COVID-19 pandemic.

As of December 31, 2021 and 2020, the Company's recorded investment in mortgage loans, gross of unamortized deferred loan origination fees and expenses and allowance for credit losses, were distributed geographically as follows (dollars in millions):

	2021		2020	
	Recorded Investment	% of Total	Recorded Investment	% of Total
U.S. Region:				
West	$ 2,270	36.0 %	$ 2,253	38.5 %
South	2,135	33.7	2,040	34.8
Midwest	1,166	18.4	1,027	17.5
Northeast	419	6.6	277	4.7
Subtotal - U.S.	5,990	94.7	5,597	95.5
Canada	193	3.0	188	3.2
United Kingdom	144	2.3	76	1.3
Other	2	—	—	—
Total	$ 6,329	100.0 %	$ 5,861	100.0 %

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

Allowance for Credit Losses and Impairments

The Company's determination of whether a decline in value necessitates the recording of an allowance for credit losses includes an analysis of whether the issuer is current on its contractual payments, evaluating whether it is probable that the Company will be able to collect all amounts due according to the contractual terms of the security and analyzing the overall

ability of the Company to recover the amortized cost of the investment. See “Allowance for Credit Losses and Impairments” in Note 2 – “Significant Accounting Policies and Pronouncements” for additional information. The table below summarizes investment related (gains) losses, net, related to allowances for credit losses and impairments for the years ended December 31, 2021, 2020 and 2019 (dollars in millions):

	2021	2020	2019
Change in allowance for credit losses and impairments on fixed maturity securities	$ 12	$ 21	$ 31
Other impairment losses and changes in provision	—	18	11
Change in mortgage loan allowance for credit losses	(29)	38	1
Total	$ (17)	$ 77	$ 43

The change in allowance for credit losses and impairments on fixed maturity securities during 2021 and 2020 was primarily related to high-yield securities reflecting the continued impact of the COVID-19 pandemic. The impairments on fixed maturity securities for 2019 was primarily due to emerging market and high-yield debt exposures. The other impairment losses and changes in provision in 2020 were primarily due to impairments on limited partnerships. The other impairment losses and changes in provision in 2019 were primarily due to impairments on real estate joint ventures and limited partnerships. The decrease in mortgage loan allowance for credit losses occurring during 2021, was primarily due to the updated outlook from the COVID-19 pandemic. The increase in mortgage loan allowance for credit losses in 2020 was primarily due to the estimated impact from the COVID-19 pandemic.

See “Unrealized Losses for Fixed Maturity Securities Available-for-Sale” in Note 4 – “Investments” in the Notes to Consolidated Financial Statements for tables that present the estimated fair value and gross unrealized losses for securities that have estimated fair values below amortized cost by class and grade, as well as the length of time the related estimated fair value has remained below amortized cost as of December 31, 2021 and 2020.

As of December 31, 2021 and 2020, the Company classified approximately 8.5% and 5.9%, 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 Consolidated Financial Statements for additional information). These securities primarily consist of private placement corporate and asset-backed securities.

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

Funds Withheld at Interest

For reinsurance agreements written on a modified coinsurance basis and certain agreements written on a coinsurance basis, assets equal to the net statutory reserves are withheld and legally owned and managed by the ceding company, and are reflected as funds withheld at interest on the Company’s 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 December 31, 2021 and 2020. Certain ceding companies maintain segregated portfolios for the benefit of the Company.

The majority of the Company’s funds withheld at interest balances are associated with its reinsurance of annuity contracts. The funds withheld receivable balance for segregated portfolios is subject to the general accounting principles for Derivatives and Hedging related to embedded derivatives.

Under these principles, the Company’s funds withheld receivable under certain reinsurance arrangements incorporate credit risk exposures that are unrelated or only partially related to the creditworthiness of the obligor and include an embedded derivative feature that is not clearly and closely related to the host contract. Therefore, the embedded derivative feature must be measured at fair value on the consolidated balance sheets and changes in fair value reported in income. See “Embedded Derivatives” in Note 2 – “Significant Accounting Policies and Pronouncements” in the Notes to Consolidated Financial Statements for further discussion.

Based on data provided by ceding companies as of December 31, 2021 and 2020, funds withheld at interest totaled (dollars in millions):

	2021		2020	
Underlying Security Type:	Carrying Value	Estimated Fair Value	Carrying Value	Estimated Fair Value
Segregated portfolios	$ 4,515	$ 4,843	$ 3,097	$ 3,481
Non-segregated portfolios	2,315	2,315	2,251	2,251
Embedded derivatives(1)	124	—	84	—
Total funds withheld at interest	$ 6,954	$ 7,158	$ 5,432	$ 5,732

(1) Represents the fair value of embedded derivatives related to reinsurance written on a modco or funds withheld basis and subject to the general accounting principles for Derivatives and Hedging related to embedded derivatives for the segregated portfolios. When the segregated portfolios are presented on a fair value basis in the "Estimated Fair Value" column, the calculation of a separate embedded derivative is not applicable.

Based on data provided by the ceding companies as of December 31, 2021 and 2020, segregated portfolios contained investments similar to those directly owned by the Company; primarily fixed maturity securities, as well as commercial mortgage loans and derivative securities. These assets pose risks similar to the investments the Company directly owns. Derivatives consist primarily of S&P 500 options that are used to hedge liabilities and interest credited for EIAs reinsured by the Company. The securities held within the segregated portfolios are primarily investment-grade, with an average rating of "A." The average maturity for investments held within the segregated portfolios of funds withheld at interest is ten years or more. Interest accrues to the total funds withheld at interest assets at rates defined by the treaty terms and the Company estimated the yields were approximately 6.34%, 5.40% and 5.59% for the years ended December 31, 2021, 2020 and 2019, respectively. Changes in these estimated yields are affected by changes in the fair value of equity options held in the funds withheld portfolio associated with EIAs. Additionally, under certain treaties the Company is subject to the investment performance on the withheld assets, although it does not directly control them. To mitigate this risk, the Company helps set the investment guidelines followed by the ceding companies and monitors compliance.

Other Invested Assets

Other invested assets include limited partnership interests, joint ventures (other than operating joint ventures), lifetime mortgages, derivative contracts, fair value option ("FVO") contractholder-directed unit-linked investments and FHLB common stock. See "Other Invested Assets" in Note 4 – "Investments" in the Notes to Consolidated Financial Statements for a table that presents the carrying value of the Company's other invested assets by type as of December 31, 2021 and 2020.

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 Consolidated Financial Statements for a table that presents the notional amounts and fair value of investment related derivative instruments held as of December 31, 2021 and 2020.

The Company may be exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments. Generally, the credit exposure of the Company's derivative contracts is limited to the fair value and accrued interest of non-collateralized derivative contracts in an asset position at the reporting date. As of December 31, 2021, the Company had credit exposure of $18 million.

The Company manages its credit risk related to over-the-counter derivatives by entering into transactions with creditworthy counterparties, maintaining collateral arrangements and through the use of master agreements that provide for a single net payment to be made by one counterparty to another at each due date and upon termination. As exchange-traded futures are affected through regulated exchanges, and positions are marked to market on a daily basis, the Company has minimal exposure to credit-related losses in the event of nonperformance by counterparties. See Note 5 – "Derivative Instruments" in the Notes to Consolidated Financial Statements for more information regarding the Company's derivative instruments.

The Company holds $758 million and $935 million of beneficial interest in lifetime mortgages in the UK, net of allowance for credit losses, as of December 31, 2021 and 2020, respectively. Investment income includes $52 million, $44 million and $34 million in interest income earned on lifetime mortgages for the years ended December 31, 2021, 2020 and 2019, respectively. Lifetime mortgages represent loans provided to individuals 55 years of age and older secured by the borrower's residence. Lifetime mortgages are comparable to a home equity loan by allowing the borrower to utilize the equity in their home as collateral. The amount of the loan is dependent on the appraised value of the home at the time of origination,

the borrower's age and interest rate. Unlike a home equity loan, no payment of principal or interest is required until the death of the borrower or sale of the home. Lifetime mortgages may also be either fully funded at origination, or the borrower can request periodic funding similar to a line of credit. Lifetime mortgages are subject to risks, including market, credit, interest rate, liquidity, operational, reputational and legal risks.

Enterprise Risk Management

RGA maintains a dedicated Enterprise Risk Management ("ERM") function that is responsible for analyzing and reporting the Company's risks on an aggregated basis; facilitating monitoring to ensure the Company's risks remain within its appetites and limits; and ensuring, on an ongoing basis, that RGA's ERM objectives are met. This includes ensuring proper risk controls are in place; risks are effectively identified, assessed, and managed; and key risks to which the Company is exposed are disclosed to appropriate stakeholders. The ERM function plays an important role in fostering the Company's risk management culture and practices.

Enterprise Risk Management Structure and Governance

The board of directors ("the Board") oversees enterprise risk through its Risk Committee, which oversees the management of the Company's ERM program and policies. The Risk Committee receives regular reports and assessments that describe the Company's key risk exposures and include quantitative and qualitative assessments and information about breaches, exceptions, and waivers.

The Company's Global Chief Risk Officer ("CRO") reports to the Chief Executive Officer ("CEO") and has direct access to the Board through the Risk Committee with formal reporting occurring quarterly. The CRO leads the dedicated ERM function and is supported by a dedicated risk management staff as well as a network of Business Unit Chief Risk Officers and Risk Owners throughout the business unit who are responsible for the analysis and management of risks within their scope. A Lead Risk Owner is assigned to each risk to take overall responsibility to monitor and assess the risk consistently across all markets.

In addition to leading the ERM function, the CRO also chairs the Company's Risk Management Steering Committee ("RMSC"), which includes senior management executives, including the CEO, the Chief Financial Officer ("CFO"), and the Chief Investment Officer, among others. The RMSC provides oversight for the Insurance, Market and Credit, Capital, and Operational risk committees and retains direct risk oversight responsibilities for the following:

- Company's global ERM framework, activities, and issues.
- Identification, assessments, and management of all established and emerging strategic risk exposures.
- Risk appetite statement, including the ongoing alignment of the risk appetite statement with the Company's strategy and capital plans.
- Review, revise and approve RGA group-level strategic risk limits consistent with the risk appetite statement

The Insurance, Market and Credit, Capital, and Operational risk committees have direct oversight accountability for their respective risk areas including the identification, assessments, and management of established and emerging risk exposures and the review and approval of RGA group-level risk limits

To ensure appropriate oversight of enterprise-wide risk management issues without unnecessary duplication, as well as to foster cross-committee communication and coordination regarding risk issues, chairs of the risk committees attend the RMSC meetings. In addition to the risk committees, their sub-committees and working groups, some RGA operating entities have risk management committees that oversee relevant risks related to segment-level risk limits.

Enterprise Risk Management Framework

RGA's ERM framework provides a platform to assess the risk / return profiles of risks throughout the organization to enable enhanced decision making by business leaders. The ERM framework also guides the development and implementation of mitigation strategies to reduce exposures to these risks to acceptable levels.

RGA's ERM framework includes the following elements:

- Risk Culture: Risk management is an integral part of the Company's culture and is embedded in RGA's business processes in accordance with RGA's risk philosophy. As the cornerstone of the ERM framework, a culture of prudent risk management reinforced by senior management plays a preeminent role in the effective management of risks assumed by RGA.
- Risk Appetite Statement: A general and high level overview of the risk profile RGA aims to achieve to meet its strategic objectives. This statement is then supported by more granular risk limits guiding the businesses to achieve this Risk Appetite Statement.

- Risk Limits: Risk Limits establish the maximum amount of defined risk that the Company is willing to assume to remain within the Company's overall risk appetite. These risks have been identified by the management of the Company as relevant to manage the overall risk profile of the Company while allowing achievement of strategic objectives.
- Risk Assessment Process: RGA uses qualitative and quantitative methods to assess key risks through a portfolio approach, which analyzes established and emerging risks in conjunction with other risks.
- Business Specific Limits/Controls: These limits/controls provide additional safeguards against undesired risk exposures and are embedded in business processes. Examples include maximum retention limits, pricing and underwriting reviews, per issuer limits, concentration limits, and standard treaty language.

Proactive risk monitoring and reporting enable early detection and mitigation of emerging risks. The RMSC and its subcommittees monitor adherence to risk limits through the ERM function, which reports regularly to the RMSC and the Risk Committee. The frequency of monitoring is tailored to the volatility assessment and relative priority of each risk. Risk escalation channels coupled with open communication lines enhance the mitigations explained above. The Company has devoted significant resources to developing its ERM program and expects to continue to do so in the future. Nonetheless, the Company's policies and procedures to identify, manage, and monitor risks may not be fully effective. Many of the Company's methods for managing risk are based on historical information, which may not be a good predictor of future risk exposures, such as the risk of a pandemic causing a large number of deaths. Management of operational, legal, and regulatory risk relies on policies and procedures that may not be fully effective under all scenarios.

Risk Categories – The Company groups its risks into the following categories: Insurance risk, Market and Credit risk, Capital risk, Operational risk and Strategic risk. Specific risk assessments and descriptions can be found below and in Item 1A – "Risk Factors."

Insurance Risk

Insurance risk is the risk of lower or negative earnings and potentially a reduction in enterprise value due to a greater amount of benefits and related expenses paid than expected, or from non-market related adverse policyholder or client behavior. The Company uses multiple approaches to managing insurance risk: active insurance risk assessment and pricing appropriately for the risks assumed, transferring undesired risks, and managing the retained exposure prudently. These strategies are explained below.

The global impact of the COVID-19 pandemic and the response thereto has had a material adverse effect on the Company's earnings and continues to develop rapidly. While COVID-19 vaccines have been widely distributed in some countries, the Company's future results may continue to be adversely impacted by COVID-19, with the extent influenced by the speed of vaccination, measures by public and private institutions, and timing and adoption of effective treatments, among other factors. The Company continues to actively assess the impacts of COVID-19 on its business and update and refine its COVID-19 projection and financial impact models to manage its insurance risk through the pandemic.

The Company has developed extensive expertise in assessing insurance risks that ultimately forms an integral part of ensuring that it is compensated commensurately for the risks it assumes and that it does not overpay for the risks it transfers to third parties. This expertise includes a vast array of market and product knowledge supported by a large information database of historical experience that is closely monitored. Analysis and experience studies derived from this database help form the basis for the Company's pricing assumptions that are used in developing rates for new risks. If actual mortality or morbidity experience is materially adverse, some reinsurance treaties allow for increases to future premium rates.

Misestimation of any key risk can threaten the long term viability of the enterprise. Further, the pricing process is a key operational risk and significant effort is applied to ensuring the appropriateness of pricing assumptions. Some of the safeguards the Company uses to ensure proper pricing are: experience studies, strict underwriting, sensitivity and scenario testing, pricing guidelines and controls, authority limits and internal and external pricing reviews. In addition, the ERM function provides pricing oversight that includes periodic pricing audits.

To minimize volatility in financial results and reduce the impact of large losses, the Company transfers some of its insurance risk to third parties using vehicles such as retrocession and catastrophe coverage.

In the normal course of business, the Company seeks to limit its exposure to loss on any single insured and to recover a portion of claims paid by ceding reinsurance to other insurance enterprises (or retrocessionaires) under excess coverage and coinsurance contracts. In individual life markets, the Company retains a maximum of $8 million of coverage per individual life. In certain limited situations the Company has retained more than $8 million per individual life. The Company enters into agreements with other reinsurers to mitigate the residual risk related to the over-retained policies. Additionally, due to some lower face amount reinsurance coverages provided by the Company in addition to individual life, such as group life, disability and health, under certain circumstances, the Company could potentially incur claims totaling more than $8 million per individual life.

The Company seeks to limit its exposure to loss on its assumed catastrophic excess of loss reinsurance agreements by ceding a portion of its exposure to multiple retrocessionaires through retrocession line slips or directly to retrocession markets. The Company's policy is to retain a maximum of $30 million of catastrophic loss exposure per agreement and to retrocede up to $40 million additional loss exposures to the retrocession markets. The Company limits its exposure on a country-by-country (and state-by-state in the U.S.) basis by managing its total exposure to all catastrophic excess of loss agreements bound within a given country to established maximum aggregate exposures. The maximum exposures are established and managed both on gross amounts issued prior to including retrocession and for amounts net of exposures retroceded.

The Company accesses the markets each year for annual catastrophic coverages and reviews current coverage and pricing of current and alternate designs. The coverage may vary from year to year based on the Company's perceived value of such protection. The current policy covers events involving 5 or more insured deaths from a single occurrence and covers $100 million of claims in excess of the Company's $25 million deductible.

The Company retains most of the inbound insurance risk. The Company manages the retained exposure proactively using various mitigating factors such as diversification and limits. Diversification is the primary mitigating factor of short term volatility risk, but it also mitigates adverse impacts of changes in long term trends and catastrophic events. The Company's insured populations are dispersed globally, diversifying the insurance exposure because factors that cause actual experience to deviate materially from expectations do not affect all areas uniformly and synchronously or in close sequence. A variety of limits mitigate retained insurance risk. Examples of these limits include geographic exposure limits, which set the maximum amount of business that can be written in a given country, and jumbo limits, which prevent excessive coverage on a given individual.

In the event that mortality or morbidity experience develops in excess of expectations, some reinsurance treaties allow for increases to future premium rates. Other treaties include experience refund provisions, which may also help reduce RGA's mortality risk.

RGA has various methods to manage its insurance risks, including access to the capital and reinsurance markets.

Market and Credit Risk

Market and Credit risk is the risk of lower or negative earnings and potentially a reduction in enterprise value due to changes in the market prices of asset and liabilities.

Interest Rate Risk. Interest Rate risk is the risk that changes in the level and volatility of nominal interest rates affect the profitability, value or solvency position of the Company. This includes credit spread changes and inflation but excludes credit quality deterioration. This risk arises from many of the Company's primary activities, as the Company invests substantial funds in interest-sensitive assets, primarily fixed maturity securities, and also has certain interest-sensitive contract liabilities. A prolonged period where market yields are significantly below the book yields of the Company's asset portfolio puts downward pressure on portfolio book yields. The Company has been proactive in its investment strategies, reinsurance structures and overall asset-liability management practices to reduce the risk of unfavorable consequences in this type of environment.

The Company manages interest rate risk to optimize the return on the Company's capital and to preserve the value created by its business operations within certain constraints. For example, certain management and monitoring processes are designed to minimize the effect of sudden and/or sustained changes in interest rates on fair value, cash flows, and net investment income. The Company manages its exposure to interest rates principally by managing the relative matching of the cash flows of its liabilities and assets.

The following table presents the account values, the weighted average interest-crediting rates and minimum guaranteed rate ranges for the contracts containing guaranteed rates by major class of interest-sensitive product as of December 31, 2021 and 2020 (dollars in millions):

Interest Sensitive Contract Liability	Account Value		Current Weighted-Average Interest Crediting Rate		Minimum Guaranteed Rate Ranges	
	2021	2020	2021	2020	2021	2020
Traditional individual fixed annuities	$ 15,094	$ 11,493	3.22%	3.16%	0.01 – 5.50%	0.01 – 5.50%
Equity-indexed annuities	3,117	3,398	2.10	2.76	0.10 – 3.00	0.10 – 3.00
Individual variable annuity contracts	116	120	2.98	2.99	1.50 – 3.00	1.50 – 3.00
Guaranteed investment contracts	1,406	1,886	0.76	1.44	0.31 – 3.32	0.34 – 3.48
Universal life – type policies	4,303	4,313	3.76	3.78	2.00 – 6.00	2.00 – 6.00
Funding agreement backed notes	500	—	2.00	—	2.00 – 2.00	NA

The following table presents the account values by each minimum guaranteed rate, rounded to the nearest percentage, by class of interest-sensitive product as of December 31, 2021 and 2020 (dollars in millions):

Interest Sensitive Contract Liability	Account Value as of December 31, 2021						
	1%	2%	3%	4%	5%	6%	Total
Traditional individual fixed annuities	$ 2,109	$ 1,057	$ 4,384	$ 5,106	$ 2,419	$ 19	$ 15,094
Equity-indexed annuities	943	1,614	560	—	—	—	3,117
Individual variable annuity contracts	—	1	115	—	—	—	116
Guaranteed investment contracts	1,202	138	66	—	—	—	1,406
Universal life – type policies	—	736	318	3,185	53	11	4,303
Funding agreement backed notes	—	500	—	—	—	—	500

Interest Sensitive Contract Liability	Account Value as of December 31, 2020						
	1%	2%	3%	4%	5%	6%	Total
Traditional individual fixed annuities	$ 1,424	$ 864	$ 4,733	$ 2,104	$ 2,348	$ 20	$ 11,493
Equity-indexed annuities	946	1,807	645	—	—	—	3,398
Individual variable annuity contracts	—	2	118	—	—	—	120
Guaranteed investment contracts	1,541	187	158	—	—	—	1,886
Universal life – type policies	—	724	317	3,204	58	10	4,313

The spread profits on the Company's fixed annuity and interest-sensitive whole life, universal life ("UL") and fixed portion of variable universal life insurance policies are at risk if interest rates decline and remain relatively low for a period of time, which has generally been the case in recent years. Should interest rates remain at current levels, which are significantly lower than those existing prior to the declines of recent years, the average earned rate of return on the Company's annuity and UL investment portfolios will continue to decline. Declining portfolio yields may cause the spreads between investment portfolio yields and the interest rate credited to contract holders to deteriorate as the Company's ability to manage spreads can become limited by minimum guaranteed rates on annuity and UL policies. In 2021, minimum guaranteed rates on non-variable annuity and UL policies generally ranged from 0.01% to 6.00%, with an average guaranteed rate of approximately 3.05%. In 2020, minimum guaranteed rates on non-variable annuity and UL policies generally ranged from 0.01% to 6.00%, with an average guaranteed rate of approximately 2.94%.

Interest rate spreads are managed for near term income through a combination of crediting rate actions and portfolio management. Certain annuity products contain crediting rates that reset annually, of which $13 billion of account balances are not subject to surrender charges as of both December 31, 2021 and 2020, with substantially all of these already at their minimum guaranteed rates. As such, certain management and monitoring processes are designed to minimize the effect of sudden and/or sustained changes in interest rates on fair value, cash flows, and net investment income.

The Company's exposure to interest rate price risk and interest rate cash flow risk is reviewed on a quarterly basis. Interest rate price risk exposure is measured using interest rate sensitivity analysis to determine the change in fair value of the Company's financial instruments in the event of a hypothetical change in interest rates. Interest rate cash flow risk exposure is measured using interest rate sensitivity analysis to determine the Company's variability in cash flows in the event of a hypothetical change in interest rates.

Interest rate sensitivity analysis is used to measure the Company's interest rate price risk by computing estimated changes in fair value of fixed rate assets and liabilities in the event of a hypothetical 100 basis point change (increase or decrease) in market interest rates. The Company does not have fixed rate instruments classified as trading securities. The

Company's projected net decrease in fair value of financial instruments in the event of a 100 basis point increase in market interest rates at its fiscal years ended December 31, 2021 and 2020 was $1.4 billion and $0.9 billion, respectively.

The calculation of fair value is based on the net present value of estimated discounted cash flows expected over the life of the market risk sensitive instruments, using market prepayment assumptions and market rates of interest provided by independent broker quotations and other public sources, with adjustments made to reflect the shift in the treasury yield curve as appropriate.

The interest rate sensitivity relating to the Company's fixed maturity securities is assessed using hypothetical scenarios that assume positive and negative 50 and 100 basis point parallel shifts in the yield curves. This analysis assumes that the U.S., Canada and other pertinent countries' yield curve shifts are of equal direction and magnitude. Change in value of individual securities is estimated consistently under each scenario using a commercial valuation tool. The Company's actual experience may differ from the results noted below particularly due to assumptions utilized or if events differ from those included in the methodology. The following tables summarize the results of this analysis for fixed maturity securities in the Company's investment portfolio as of the dates indicated (dollars in millions):

Interest Rate Analysis of Estimated Fair Value of Fixed Maturity Securities

December 31, 2021:	-100 bps	-50 bps	—	+50 bps	+100 bps
Total estimated fair value	$ 66,926	$ 63,711	$ 60,749	$ 58,042	$ 55,588
% Change in estimated fair value from base	10.2 %	4.9 %	— %	(4.5)%	(8.5)%
$ Change in estimated fair value from base	$ 6,177	$ 2,962	$ —	$ (2,707)	$ (5,161)

December 31, 2020:	-100 bps	-50 bps	—	+50 bps	+100 bps
Total estimated fair value	$ 62,286	$ 59,404	$ 56,735	$ 54,278	$ 52,033
% Change in estimated fair value from base	9.8 %	4.7 %	— %	(4.3)%	(8.3)%
$ Change in estimated fair value from base	$ 5,551	$ 2,669	$ —	$ (2,457)	$ (4,702)

Interest rate sensitivity analysis is also used to measure the Company's interest rate cash flow risk by computing estimated changes in the expected cash flows for floating rate assets and liabilities over a one year period following an instantaneous, parallel, hypothetical 100 basis point change (increase or decrease) in market interest rates. The Company does not have variable rate instruments classified as trading securities. The Company's projected decrease in cash flows associated with floating rate instruments in the event of an instantaneous 100 basis point decrease in market interest rates for its fiscal years ended December 31, 2021 and 2020 was $34 million.

Computations of prospective effects of hypothetical interest rate changes are based on numerous assumptions, and should not be relied on as indicative of future results. Further, the computations do not contemplate any actions management could undertake in response to changes in interest rates. Certain shortcomings are inherent in the method of analysis presented in the computation of the estimated fair value of fixed maturity securities and the estimated cash flows of floating rate instruments, which constitute forward-looking statements. Actual values may differ materially from those projections presented due to a number of factors, including, without limitation, market conditions varying from assumptions used in the calculation of the fair value.

In order to reduce the exposure to changes in fair values from interest rate fluctuations, the Company has developed strategies to manage the net interest rate sensitivity of its assets and liabilities. In addition, from time to time, the Company has utilized the swap market to manage the sensitivity of fair values to interest rate fluctuations.

Inflation can also have direct effects on the Company's assets and liabilities. The primary direct effect of inflation is the increase in operating expenses. A large portion of the Company's operating expenses consists of salaries, which are subject to wage increases at least partly affected by the rate of inflation.

The Company reinsures annuities with benefits indexed to the cost of living. Some of these benefits are hedged with a combination of CPI swaps and indexed bonds when material.

Long-term care products have an inflation component linked to the future cost of such services. If health care costs increase at a much larger rate than what is prevalent in the nominal interest rates available in the markets, the Company may not earn enough investment yield to pay future claims on such products.

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. Subsequently, on March 5, 2021, the FCA announced that all LIBOR settings will either cease to be provided or no longer be representative, with some being discontinued after December 31, 2021, and the remaining being discontinued after June 30, 2023. Workstreams have been established in several markets to reform existing reference rates and provide a fall back rate upon discontinuation of LIBOR. 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 and have proposed potential replacement rates, as necessary. The Company is currently assessing the effects of the discontinuation of LIBOR on existing contracts by analyzing contractual fallback provisions, evaluating alternative rate ramifications, and assessing the effects on current hedging strategies.

Real Estate Risk. Real estate risk is the risk that changes in the level and volatility of real estate market valuations may impact the profitability, value or solvency position of the Company. The Company has investments in direct real estate equity and debt instruments collateralized by real estate ("real estate loans"). Real estate equity risks include significant reduction in valuations, which could be caused by downturns in the broad economy or in specific geographic regions or sectors. In addition, real estate loan risks include defaults, borrower or tenant bankruptcy and reduced liquidity. Real estate loan risks are partially mitigated by the excess of the value of the property over the loan principle, which provides a buffer should the value of the real estate decrease. The Company manages its real estate loan risk by diversifying by property type and geography and through exposure limits.

Equity Risk. Equity risk is the risk that changes in the level and volatility of equity market valuations affect the profitability, value or solvency position of the Company. This risk includes variable annuity and other equity linked exposures and asset related equity exposure. The Company assumes equity risk from alternative investments, fixed indexed annuities and variable annuities. The Company uses derivatives to hedge its exposure to movements in equity markets that have a direct correlation with certain of its reinsurance products.

Alternative investments are investments in non-traditional asset classes that primarily back the Company's capital and surplus as well as certain long-term illiquid liability portfolios. Alternative investments generally include: hedge funds, emerging markets debt, distressed debt, commodities, infrastructure, tax credits, and equities, both public and private. The Company mitigates its exposure to alternative investments by limiting the size of the alternative investments holding and using per-issuer investment limits.

The Company reinsures fixed indexed annuities ("FIAs"). Credits to FIA contracts are affected by changes in equity markets. Thus the fair value of the benefit is primarily a function of index returns and volatility. The Company hedges most of the underlying FIA equity exposure with derivatives.

The Company reinsures variable annuities including those with guaranteed minimum death benefits ("GMDB"), guaranteed minimum income benefits ("GMIB"), guaranteed minimum accumulation benefits ("GMAB") and guaranteed minimum withdrawal benefits ("GMWB"). Strong equity markets, increases in interest rates and decreases in equity market volatility will generally decrease the fair value of the liabilities underlying the benefits. Conversely, a decrease in the equity markets along with a decrease in interest rates and an increase in equity market volatility will generally result in an increase in the fair value of the liabilities underlying the benefits, which has the effect of increasing reserves and lowering earnings. The Company maintains a customized dynamic hedging program that is designed to substantially mitigate the risks associated with income volatility around the change in reserves on guaranteed benefits, ignoring the Company's own credit risk assessment. However, the hedge positions may not fully offset the changes in the carrying value of the guarantees due to, among other things, time lags, high levels of volatility in the equity and derivative markets, extreme changes in interest rates, unexpected contract holder behavior, and divergence between the performance of the underlying funds and hedging indices. These factors, individually or collectively, may have a material adverse effect on the Company's net income, financial condition or liquidity. The table below provides a summary of variable annuity account values and the fair value of the guaranteed benefits as December 31, 2021 and 2020.

	December 31,	
(dollars in millions)	2021	2020
No guaranteed minimum benefits	$ 844	$ 665
GMDB only	960	872
GMIB only	25	24
GMAB only	3	4
GMWB only	1,130	1,132
GMDB / WB	264	275
Other	19	18
Total variable annuity account values	$ 3,245	$ 2,990
Fair value of liabilities associated with living benefit riders	$ 162	$ 155

Credit risk, which includes default risk, is risk of loss due to credit quality deterioration of an individual financial asset, derivative or non-derivative contract or instrument. Credit quality deterioration may or may not be accompanied by a ratings downgrade. Generally, the credit exposure for an asset is limited to the fair value, net of any collateral received, at the reporting date.

Investment credit risk is credit risk related to invested assets. The Company manages investment credit risk using per-issuer investment limits. In addition to per-issuer limits, the Company also limits the total amounts of investments per rating category. An automated compliance system checks for compliance for all investment positions and sends warning messages when there is a breach. 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 futures are transacted 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 to such derivative instruments.

The Company enters into various collateral arrangements, which require both the posting and accepting of collateral in connection with its derivative instruments. Collateral agreements contain attachment thresholds that vary depending on the posting party's financial strength ratings. Additionally, a decrease in the Company's financial strength rating to a specified level results in potential settlement of the derivative positions under the Company's agreements with its counterparties. A committee is responsible for setting rules and approving and overseeing all transactions requiring collateral. See "Credit Risk" in Note 5 – "Derivative Instruments" in the Notes to Consolidated Financial Statements for additional information on credit risk related to derivatives.

Counterparty risk is the potential for the Company to incur losses due to a client, retrocessionaire, or partner becoming distressed or insolvent. This includes run-on-the-bank risk and collection risk.

Run-on-the-Bank is the potential risk that a client's in force block incurs substantial surrenders and/or lapses due to credit impairment, reputation damage or other market changes affecting the counterparty. Policyholder surrenders and/or lapses substantially higher than expected could result in inadequate in force business to recover cash paid out for acquisition costs.

For clients and retrocessionaires, collection risk includes their inability to satisfy a reinsurance agreement because the right of offset is disallowed by the receivership court; the reinsurance contract is rejected by the receiver, resulting in a premature termination of the contract; and/or the security supporting the transaction becomes unavailable to the Company.

The Company manages counterparty risk by limiting the total exposure to a single counterparty and by only initiating contracts with creditworthy counterparties. In addition, some of the counterparties have set up trusts and letters of credit, reducing the Company's exposure to these counterparties.

Generally, the Company's insurance subsidiaries retrocede amounts in excess of their retention to the Company's other insurance subsidiaries. External retrocessions are arranged through the Company's retrocession pools for amounts in excess of its retention. As of December 31, 2021, all retrocession pool members in this excess retention pool rated by the A.M. Best Company were rated "A-" or better. A rating of "A-" is the fourth highest rating out of sixteen possible ratings. For a majority of the retrocessionaires that were not rated, letters of credit or trust assets have been received by the Company as additional security. In addition, the Company performs annual financial and in force 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 material difficulty in collecting claims recoverable from retrocessionaires; however, no assurance can be given as to the future performance of such retrocessionaires or as to the recoverability of any such claims.

In addition to investment credit limits and counterparty limits, the Company maintains aggregate counterparty risk limits that include counterparty exposures from reinsurance, financing and investment activities at an aggregated level to control total exposure to a single counterparty. Counterparty risk aggregation is important because it enables the Company to capture risk exposures at a comprehensive level and under more extreme circumstances compared to analyzing the components individually.

All counterparty exposures are calculated on a quarterly basis, reviewed by management and monitored by the ERM function.

Capital Risk

Capital risk is the risk of lower/negative earnings, potential reduction in enterprise value, and/or the loss of ability to conduct business due to insufficient financial capacity, including not having the appropriate amount of group or entity-level capital to conduct business today or in the future. The Company monitors capital risk exposure using relevant bases of measurement including but not limited to economic, rating agency, and regulatory methodologies. Additionally, the Company regularly assesses risk related to collateral, foreign currency, financing, liquidity and tax.

Collateral Risk. Collateral risk is the risk that collateral will not be available at expected costs or in the capacity required to meet current and future needs. The Company monitors risks related to interest rate movement, collateral requirements and position and capital markets environment. Collateral demands and resources continue to be actively managed with available collateral sources being more than sufficient to cover stress level collateral demands.

Foreign Currency Risk. Foreign currency risk is the risk of changes in level and volatility of currency exchange rates affect the profitability, value or solvency position of the Company. The Company manages its exposure to foreign currency risk principally by currency matching invested assets with the underlying liabilities to the extent practical. The Company has in place net investment hedges for a portion of its investments in its Canadian operations to reduce excess exposure to that currency. Translation differences resulting from translating foreign subsidiary balances to U.S. dollars are reflected in stockholders' equity on the consolidated balance sheets.

The Company generally does not hedge the foreign currency exposure of its subsidiaries transacting business in currencies other than their functional currency (transaction exposure). However, the Company has entered into cross currency swaps to manage exposure to specific currencies. The majority of the Company's foreign currency transactions are denominated in Australian dollars, British pounds, Canadian dollars, Euros, Japanese yen, Korean won, and the South African rand. The maximum amount of assets held in a specific currency (with the exception of the U.S. dollar) is measured relative to risk targets and is monitored regularly.

The Company does not hedge the income statement risk associated with translating foreign currencies. The foreign exchange risk sensitivity of the Company's consolidated pre-tax income is assessed using hypothetical test scenarios. Actual results may differ from the results noted below particularly due to assumptions utilized or if events occur that were not included in the methodology. For more information on this risk, see "Item 1A – Risk Factors – Risks Related to Our Business." In general, a weaker U.S. dollar relative to foreign currencies has a favorable impact on the Company's income before income taxes. The following tables summarize the impact on the Company's reported income before income taxes of an immediate favorable or unfavorable change in each of the foreign exchange rates to which the Company has exposure (dollars in millions):

	Unfavorable			Favorable	
Year Ended December 31, 2021	-10%	-5%	—	+5%	+10%
Income before income taxes	$ 645	$ 668	691	$ 713	$ 736
% change of income before income taxes from base	(6.6)%	(3.3)%	— %	3.3 %	6.6 %
$ change of income before income taxes from base	$ (45)	$ (23)	$ —	$ 23	$ 45

	Unfavorable			Favorable	
Year Ended December 31, 2020	-10%	-5%	—	+5%	+10%
Income before income taxes	$ 494	$ 523	553	$ 583	$ 612
% change of income before income taxes from base	10.7 %	5.4 %	— %	5.4 %	10.7 %
$ change of income before income taxes from base	$ (59)	$ (30)	$ —	$ 30	$ 59

Financing Risk. Financing risk is the risk that capital will not be available at expected costs or in the capacity required. The Company continues to monitor financing risks related to regulatory financing, contingency financing, and debt capital and sees no immediate issues with its current structures, capacity and plans.

Liquidity Risk. Liquidity risk is the risk that the Company is unable to meet payment obligations at expected costs or in the capacity required. The Company's traditional liquidity demands include items such as claims, expenses, debt financing and investment purchases, which are largely known or can be reasonably forecasted. The Company regularly performs liquidity risk modeling, including both market and Company specific stresses, to assess the sufficiency of available resources.

Tax Risk. Tax risk is the risk that current and future tax positions are different than expected. The Company monitors tax risks related to the evolving tax and regulatory environment, business transactions, legal entity reorganizations, tax compliance obligations, and financial reporting.

Operational Risk

Operational risk is the risk of lower/negative earnings and a potential reduction in enterprise value caused by unexpected losses associated with inadequacy or failure on the part of internal processes, people and systems, or from external events. The Company regularly monitors and assesses the risks related to business conduct and governance, fraud, privacy, and cybersecurity, business disruption, and business operations. Various insurance, market and credit, capital, and strategy risk obligations and concerns often intersect with the Company's core operational process risk areas. Given the scope of the Company's business and the number of countries in which it operates, this set of risks has the potential to affect the business locally, regionally, or globally. Operational risks are core to managing the Company's brand and market confidence as well as maintaining its ability to acquire and retain the appropriate expertise to execute and operate the business.

Business Conduct and Governance Risk. Business conduct and governance is the risk related to management oversight, compliance, market conduct, and legal matters. The Company's Compliance Risk Management Program facilitates a proactive evaluation of present and potential compliance risks associated with both local and enterprise-wide regulatory requirements as well as compliance with Company policies and procedures.

Fraud Risk. Fraud risk is the risk related to the deliberate abuse of and/or taking of Company assets in order to secure gain for the perpetrator or inflict harm on the Company or other victim. Ongoing monitoring and an annual fraud risk assessment enables the Company to continually evaluate potential fraud risks within the organization.

Privacy Risk. Privacy risk is the risk of non-compliance with privacy regulations and laws. The Company's privacy program, processes, and procedures are designed to protect personal information related to its customers, insured individuals or its employees. The Company's privacy program facilitates a proactive evaluation of present and potential privacy risks associated with both local and enterprise-wide regulatory requirements as well as compliance with Company policies and procedures.

Cybersecurity Risk. Cybersecurity risk is the risk of theft, loss, unauthorized disclosure, or unauthorized use of physical or electronic assets resulting in a loss of confidentiality, loss of revenue, poor reputational exposure, or regulatory fines. The Company's cybersecurity program, processes, and procedures are designed to prevent unauthorized physical and electronic theft and the disclosure of confidential and personal data related to its customers, insured individuals or its employees. The Company employs technology, administrative related processes and procedural controls, security measures and other preventative actions to reduce the risk of such incidents.

Business Disruption Risk. Business disruption risk is the risk of impairment to operational capabilities due to the unavailability of people, systems, and/or facilities. The Company's global business continuity process enables associates to identify potential impacts that threaten operations by providing the framework, policies and procedures and required recurring training for how the Company will recover and restore interrupted critical functions, within a predetermined time, after a disaster or extended disruption, until its normal facilities are restored.

Business Operations Risk. Business operations risk is the risk related to business processes and procedures. Business operations risk includes risk associated with the processing of transactions, data use and management, monitoring and reporting, the integrity and accuracy of models, the use of third parties, and the delivery of advisory services.

Human Capital Risk. Human capital risk is related to workforce management, including talent acquisition, development, retention, and employment relations/regulations. The Company actively monitors human capital risks using multiple practices that include but are not limited to human resource and compliance policies and procedures, regularly reviewing key risk indicators, performance evaluations, compensation and benefits benchmarking, succession planning, employee engagement surveys and associate exit interviews.

Strategic Risk

Strategic risk relates to the planning, implementation, and management of the Company's business plans and strategies, including the risks associated with: the global environment in which it operates; future law and regulation changes; political risks; and relationships with key external parties.

Strategy Risk. Strategy risk is the risk related to the design and execution of the Company's strategic plan, including risks associated with merger and acquisition activity. Strategy risks are addressed by a robust multi-year planning process, regular business unit level assessments of strategy execution and active benchmarking of key performance and risk indicators across the Company's portfolios of businesses. The Company's risk appetites and limits are set to be consistent with strategic objectives.

External Environment Risk

External environment risk relates to external competition, macro trends, and client needs. Macro characteristics that drive market opportunities, risk and growth potential, the competitive landscape and client feedback are closely monitored.

Key Relationships Risk. Key relationships risk relates to areas of important interactions with parties external to the Company. The Company's reputation is a critical asset in successfully conducting business and therefore relationships with its primary stakeholders (including but not limited to business partners, shareholders, clients, rating agencies, and regulators) are all carefully monitored.

Political and Regulatory Risk. Political and regulatory risk relates to future law and regulation changes and the impact of political changes or instability on the Company's ability to achieve its objectives. Regulatory and political developments and related risks that may affect the Company are identified, assessed and monitored as part of regular oversight activities.

New Accounting Standards

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

Financial Services – Insurance

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

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

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

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

See “New Accounting Pronouncements” in Note 2 – “Significant Accounting Policies and Pronouncements” in the Notes to Consolidated Financial Statements for additional information on new accounting pronouncements and their impact, if any, on the Company’s results of operations and financial position.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Information required by Item 7A is contained in Item 7 under the caption “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Market and Credit Risk”.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES

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REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in millions, except share data)

	December 31, 2021	December 31, 2020
Assets		
Fixed maturity securities:		
Available-for-sale at fair value (amortized cost of $55,873 and $49,548; allowance for credit losses of $31 and $20)	$ 60,749	$ 56,735
Equity securities, at fair value	151	132
Mortgage loans on real estate (net of allowance for credit losses of $35 and $64)	6,283	5,787
Policy loans	1,234	1,258
Funds withheld at interest	6,954	5,432
Short-term investments	87	227
Other invested assets	3,070	2,829
Total investments	78,528	72,400
Cash and cash equivalents	2,948	3,408
Accrued investment income	533	511
Premiums receivable and other reinsurance balances	2,888	2,842
Reinsurance ceded receivables and other	2,580	983
Deferred policy acquisition costs	3,690	3,616
Other assets	1,008	896
Total assets	$ 92,175	$ 84,656
Liabilities and Stockholders' Equity		
Future policy benefits	$ 35,782	$ 31,453
Interest-sensitive contract liabilities	26,377	23,276
Other policy claims and benefits	6,993	6,413
Other reinsurance balances	613	598
Deferred income taxes	2,886	3,263
Other liabilities	2,663	1,340
Long-term debt	3,667	3,573
Collateral finance and securitization notes	180	388
Total liabilities	79,161	70,304
Commitments and contingent liabilities (See Note 12)		
Stockholders' Equity:		
Preferred stock (par value $.01 per share; 10,000,000 shares authorized; no shares issued or outstanding)	—	—
Common stock (par value $0.01 per share; 140,000,000 shares authorized; shares issued: 85,310,598 at both December 31, 2021 and December 31, 2020)	1	1
Additional paid-in-capital	2,461	2,406
Retained earnings	8,563	8,148
Treasury stock, at cost – 18,139,868 and 17,353,697 shares	(1,653)	(1,562)
Accumulated other comprehensive income	3,642	5,359
Total stockholders' equity	13,014	14,352
Total liabilities and stockholders' equity	$ 92,175	$ 84,656

See accompanying notes to consolidated financial statements.

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

	For the years ended December 31,		
	2021	2020	2019
Revenues			
Net premiums	$ 12,513	$ 11,694	$ 11,297
Investment income, net of related expenses	3,138	2,575	2,520
Investment related gains (losses), net	560	(33)	91
Other revenues	447	360	392
Total revenues	16,658	14,596	14,300
Benefits and expenses			
Claims and other policy benefits	12,776	11,075	10,197
Interest credited	700	704	697
Policy acquisition costs and other insurance expenses	1,416	1,261	1,204
Other operating expenses	936	816	868
Interest expense	127	170	173
Collateral finance and securitization expense	12	17	29
Total benefits and expenses	15,967	14,043	13,168
Income before income taxes	691	553	1,132
Provision for income taxes	74	138	262
Net income	$ 617	$ 415	$ 870
Earnings per share			
Basic earnings per share	$ 9.10	$ 6.35	$ 13.88
Diluted earnings per share	9.04	6.31	13.62

See accompanying notes to consolidated financial statements.

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

	For the years ended December 31,		
	2021	2020	2019
Comprehensive income (loss)			
Net Income	$ 617	$ 415	$ 870
Other comprehensive income, net of tax:			
Foreign currency translation adjustments	60	23	77
Net unrealized investment gains (losses)	(1,799)	2,201	2,443
Defined benefit pension and postretirement plan adjustments	22	(2)	(19)
Total other comprehensive income (loss), net of tax	(1,717)	2,222	2,501
Total comprehensive income (loss)	$ (1,100)	$ 2,637	$ 3,371

See accompanying notes to consolidated financial statements.

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

	Common Stock	Additional Paid In Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income	Total
Balance, December 31, 2018	1	1,899	7,285	(1,371)	636	$ 8,450
Adoption of new accounting standards						—
Net income			870			870
Total other comprehensive income (loss)					2,501	2,501
Dividends to stockholders, $2.60 per share			(163)			(163)
Issuance of common stock, net of expenses						—
Purchase of treasury stock				(101)		(101)
Reissuance of treasury stock		38	(40)	46		44
Balance, December 31, 2019	1	1,937	7,952	(1,426)	3,137	11,601
Adoption of new accounting standards			(12)			(12)
Net income			415			415
Total other comprehensive income (loss)					2,222	2,222
Dividends to stockholders, $2.80 per share			(182)			(182)
Issuance of common stock, net of expenses		481				481
Purchase of treasury stock				(163)		(163)
Reissuance of treasury stock		(12)	(25)	27		(10)
Balance, December 31, 2020	1	2,406	8,148	(1,562)	5,359	14,352
Adoption of new accounting standards						—
Net income			617			617
Total other comprehensive income (loss)					(1,717)	(1,717)
Dividends to stockholders, $2.86 per share			(194)			(194)
Issuance of common stock, net of expenses						—
Purchase of treasury stock				(99)		(99)
Reissuance of treasury stock		55	(8)	8		55
Balance, December 31, 2021	$ 1	$ 2,461	$ 8,563	$ (1,653)	$ 3,642	$ 13,014

See accompanying notes to consolidated financial statements.

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOW
(in millions)

	For the years ended December 31,		
	2021	2020	2019
Cash flows from operating activities			
Net income	$ 617	$ 415	$ 870
Adjustments to reconcile net income to net cash provided by operating activities:			
Change in operating assets and liabilities:			
Accrued investment income	(15)	(11)	(4)
Premiums receivable and other reinsurance balances	(100)	162	110
Deferred policy acquisition costs	(71)	(95)	(198)
Reinsurance ceded receivable balances	(107)	(115)	(178)
Future policy benefits, other policy claims and benefits and other reinsurance balances	5,062	2,819	1,537
Deferred income taxes	(89)	(16)	211
Other assets and other liabilities, net	(97)	225	113
Amortization of net investment premiums, discounts and other	(54)	(46)	(55)
Depreciation and amortization expense	43	49	49
Investment related (gains) losses, net	(560)	33	(91)
Gain on sale of businesses	(11)	—	—
Other, net	(436)	(98)	(57)
Net cash provided by operating activities	4,182	3,322	2,307
Cash flows from investing activities			
Sales of fixed maturity securities available-for-sale	12,142	6,514	13,214
Maturities of fixed maturity securities available-for-sale	887	973	907
Sales of equity securities	30	181	98
Principal payments on mortgage loans on real estate	991	661	490
Principal payments on policy loans	57	102	82
Purchases of fixed maturity securities available-for-sale	(18,071)	(9,619)	(15,664)
Purchases of equity securities	(22)	(22)	(312)
Cash invested in mortgage loans on real estate	(1,155)	(780)	(1,216)
Cash invested in policy loans	(32)	(41)	(42)
Cash invested in funds withheld at interest	(67)	(131)	(60)
Purchase of businesses, net of cash acquired of $53 and $27	(156)	—	4
Proceeds from sale of businesses, net of cash transferred of $43	19	—	—
Purchases of property and equipment	(19)	(28)	(34)
Change in short-term investments	371	(155)	199
Change in other invested assets	397	(335)	(304)
Net cash used in investing activities	(4,628)	(2,680)	(2,638)
Cash flows from financing activities			
Dividends to stockholders	(194)	(182)	(163)
Proceeds from issuance of common stock, net	—	481	—
Repayment of collateral finance and securitization notes	(208)	(214)	(91)
Proceeds from long-term debt issuance	500	598	599
Debt issuance costs	(6)	(5)	(5)
Principal payments of long-term debt	(403)	(3)	(403)
Purchases of treasury stock	(99)	(163)	(101)
Exercise of stock options, net	—	1	6
Change in cash collateral for derivative positions and other arrangements	31	(32)	(163)
Change in deposit asset on reinsurance	91	—	—
Deposits on investment-type policies and contracts	1,729	1,576	1,309
Withdrawals on investment-type policies and contracts	(1,421)	(803)	(1,109)
Net cash provided by (used in) financing activities	20	1,254	(121)
Effect of exchange rate changes on cash	(34)	63	11
Change in cash and cash equivalents	(460)	1,959	(441)
Cash and cash equivalents, beginning of period	3,408	1,449	1,890
Cash and cash equivalents, end of period	$ 2,948	$ 3,408	$ 1,449

REINSURANCE GROUP OF AMERICA, INCORPORATED AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOW
(in millions)

	For the years ended December 31,		
	2021	2020	2019
Supplemental disclosures of cash flow information:			
Interest paid	$ 160	$ 166	$ 180
Income taxes paid (received), net of refunds	$ 368	$ 108	$ 44
Non-cash investing activities:			
Transfer of invested assets	$ 1,798	$ 93	$ 6,275
Right-of-use assets acquired through operating leases	$ —	$ 23	$ 1
Non-cash financing activities:			
Non-cash deposits on reinsurance	$ 1,581	$ —	$ —
Purchase of a business:			
Assets acquired, excluding cash acquired	$ 847	$ —	$ 8
Liabilities assumed	$ (691)	$ —	$ (12)
Sale of businesses:			
Assets disposed, net of cash transferred	$ (512)	$ —	$ —
Liabilities disposed	$ 504	$ —	$ —

See accompanying notes to consolidated financial statements.

Reinsurance Group of America, Incorporated
Notes to consolidated financial statements
For the years ended December 31, 2021, 2020 and 2019

Note 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. The consolidated financial statements herein include the assets, liabilities, and results of operations of RGA and its subsidiaries, all of which are wholly owned (collectively, the "Company").

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.

Reinsurance is an arrangement under which an insurance company, the reinsurer, agrees to indemnify another insurance company, the ceding company, for all or a portion of the insurance risks underwritten by the ceding company. Reinsurance is designed to:

(i) reduce the net amount at risk on individual risks, thereby enabling the ceding company to increase the volume of business it can underwrite, as well as increase the maximum risk it can underwrite on a single risk;

(ii) enhance the ceding company's financial strength and surplus position;

(iii) stabilize operating results by leveling fluctuations in the ceding company's loss experience; and

(iv) assist the ceding company in meeting applicable regulatory requirements.

Basis of Presentation

The consolidated financial statements of the Company have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosures of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The most significant estimates include those used in determining deferred policy acquisition costs, premiums receivable, future policy benefits, incurred but not reported claims, income taxes, valuation of investments and investment impairments, and valuation of embedded derivatives. Actual results could differ materially from the estimates and assumptions used by management.

The accompanying consolidated financial statements include the accounts of RGA and its subsidiaries, all of which are wholly owned, and any variable interest entities where the Company is the primary beneficiary. The Company evaluates variable interest entities in accordance with the general accounting principles for *Consolidation*. 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. Intercompany balances and transactions have been eliminated.

There were no subsequent events that would require disclosure or adjustments to the accompanying consolidated financial statements through the date the consolidated financial statements were issued.

Note 2 SIGNIFICANT ACCOUNTING POLICIES AND PRONOUNCEMENTS

Investments

Fixed Maturity Securities

Fixed maturity securities classified as available-for-sale are reported at fair value and are so classified based upon the possibility that such securities could be sold prior to maturity if that action enables the Company to execute its investment philosophy and appropriately match investment results to operating and liquidity needs.

Unrealized gains and losses on fixed maturity securities classified as available-for-sale, less applicable deferred income taxes as well as related adjustments to deferred acquisition costs, if applicable, are recorded in other comprehensive income ("OCI").

Investment income is recognized as it accrues or is legally due. Realized gains and losses on sales of investments are included in investment related gains (losses), net, as are change in allowance for credit losses and impairments. The cost of investments sold is primarily determined based upon the specific identification method.

Equity Securities

Equity securities are carried at fair value and realized and unrealized gains and losses are included in investment related gains (losses), net.

Mortgage Loans on Real Estate

Mortgage loans on real estate are carried at unpaid principal balances, net of any unamortized premium or discount, unamortized balance of loan origination fees and expenses, and allowance for credit losses. Interest income is accrued on the principal amount of the mortgage loan based on its contractual interest rate. Amortization of premiums, discounts, and loan origination fees are 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, amortization of loan origination fees and prepayment fees are reported in investment income, net of related expenses.

Policy Loans

Policy loans are reported at the unpaid principal balance. Interest income on such loans is recorded as earned using the contractually agreed-upon interest rate. These policy loans present no credit risk because the amount of the loan cannot exceed the obligation due the ceding company upon the death of the insured or surrender of the underlying policy.

Funds Withheld at Interest

Funds withheld at interest represent amounts contractually withheld by ceding companies in accordance with reinsurance agreements. For agreements written on a modified coinsurance (“modco”) basis and agreements written on a coinsurance funds withheld basis, assets that support the net statutory reserves or as defined in the treaty, are withheld and legally owned by the ceding company. Interest, recorded in investment income, net of related expenses, accrues to these assets at calculated rates as defined by the treaty terms. Changes in the value of the equity options held within the funds withheld portfolio associated with equity-indexed annuity treaties are reflected in investment income, net of related expenses.

Short-term Investments

Short-term investments represent investments with remaining maturities of one year or less, but greater than three months, at the time of acquisition and are stated at estimated fair value or amortized cost, which approximates estimated fair value. Interest on short-term investments is recorded in investment income, net of related expenses.

Other Invested Assets

In addition to derivative contracts discussed below, other invested assets include Federal Home Loan Bank of Des Moines (“FHLB”) common stock, limited partnership interests, joint ventures (other than operating joint ventures), lifetime mortgages and fair value option (“FVO”) contractholder-directed investments. FHLB common stock is carried at cost.

Joint ventures and limited partnerships, in which the Company has more than a minor influence over the investee’s operations, are reported using the equity method of accounting. The Company generally recognizes its share of the investee’s earnings in net investment income on a three-month lag in instances where the investee’s financial information is not sufficiently timely or when the investee’s reporting period differs from the Company’s reporting period.

Limited partnership interests, in which the Company has a minor ownership interest in or virtually no influence over the investee’s operations, are primarily carried at estimated fair value. If a readily determinable fair value is not available, the Company uses the net asset value ("NAV") per share. Changes in estimated fair value are included in investment related gains (losses), net. Certain other limited partnership interests are carried at cost less impairment.

Lifetime mortgages are carried at unpaid principal balances, net of any unamortized premium or discount, unamortized balance of loan origination fees and expenses, and allowance for credit losses. Interest income is accrued on the principal amount of the lifetime mortgage based on its contractual interest rate.

The fair value option (“FVO”) was elected for contractholder-directed investments supporting unit-linked variable annuity type liabilities that do not qualify for presentation and reporting as separate accounts. Changes in estimated fair value of these securities are included in investment income, net of related expenses.

Securities Borrowing, Lending and Repurchase Agreements

The Company participates in securities borrowing programs whereby securities, which are not reflected on the Company’s consolidated balance sheets, are borrowed from third parties. The borrowed securities are used to provide collateral under affiliated reinsurance transactions. The Company is generally required to maintain a minimum of 103% to 110% of the fair value, or par value under certain programs, of the borrowed securities as collateral. The collateral generally consists of rights to reinsurance treaty cash flows. If cash flows from the reinsurance treaties are insufficient to maintain the minimum collateral requirement, the Company may substitute cash or securities to meet the requirement.

The Company participates in securities lending and repurchase/reverse repurchase programs whereby securities, reflected as investments on the Company's consolidated balance sheets, are loaned or pledged to a third party. In return, the Company receives securities as collateral from the third parties, generally in an amount equal to a minimum of 100% to 105% of the fair value of the securities lent or pledged. The securities received as collateral are not reflected on the Company's consolidated balance sheets.

Allowance for Credit Losses and Impairments

Fixed Maturity Securities

The Company identifies fixed maturity securities that could result in a credit loss 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 to determine whether a decline in fair value below amortized cost has resulted from a credit loss and whether an allowance for credit loss should be recognized. In making this determination, the Company considers relevant facts and circumstances including: (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.

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 for the difference between amortized cost and fair value.

Credit impairments and changes in the allowance for credit losses on fixed maturity securities are reflected in investment related gains (losses), net, while non-credit impairment losses are recognized in accumulated other comprehensive income ("AOCI").

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 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.

Mortgage Loans on Real Estate

Allowance for credit losses 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. Within the reasonable and supportable forecast period (i.e. typically two years), the allowance for credit losses for mortgage loans is 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 evaluation 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. When individual loans no longer have similar credit risk characteristics of the commercial mortgage loan pool, they are removed from the pool and are evaluated individually for an allowance.

Any interest accrued or received on the net carrying amount of the impaired loan is included in investment income, net of related expenses, 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 allowance for credit losses and subsequent recoveries, if any, are credited to the allowance for credit losses. Changes in allowance for credit losses are reported in investment related gains (losses), net.

The Company evaluates whether a mortgage loan modification represents a troubled debt restructuring and does not meet the criteria established in the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"). 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 changes in allowance for credit losses recorded in connection with the troubled debt restructuring. Through the continuous monitoring process, the Company may have recorded a specific allowance for credit loss prior to when the mortgage loan is modified in a troubled debt restructuring. Accordingly, the carrying value (after specific allowance for credit loss) 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.

Other Invested Assets

The Company considers its limited partnership investments that are carried at cost for impairment when the carrying value of these investments exceeds the fair value. The Company takes into consideration the severity and duration of this excess when deciding if the 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.

Derivative Instruments

Overview

The Company utilizes a variety of derivative instruments including swaps, options, forwards and futures, primarily to manage or hedge interest rate risk, credit risk, inflation risk, foreign currency risk, market volatility and various other market risks associated with its business. The Company does not invest in derivatives for speculative purposes. It is the Company’s policy to enter into derivative contracts primarily with highly rated parties. See Note 5 – “Derivative Instruments” for additional detail on the Company’s derivative positions.

Accounting and Financial Statement Presentation of Derivatives

Derivatives are carried on the Company’s consolidated balance sheets primarily in other invested assets or other liabilities, at fair value. Certain derivatives are subject to master netting provisions and reported as a net asset or liability. On the date a derivative contract is executed, the Company designates the derivative as (1) a fair value hedge, (2) a cash flow hedge, (3) a net investment hedge in a foreign operation or (4) free-standing derivatives held for other risk management purposes, which primarily involve managing asset or liability risks associated with the Company’s reinsurance treaties that do not qualify for hedge accounting.

Changes in the fair value of free-standing derivative instruments, which do not receive accounting hedge treatment, are primarily reflected in investment related gains (losses), net.

Hedge Documentation and Hedge Effectiveness

To qualify for hedge accounting, at the inception of the hedging relationship, the Company formally documents its risk management objective and strategy for undertaking the hedging transaction, as well as its designation of the hedge as either (i) a fair value hedge; (ii) a cash flow hedge; or (iii) a hedge of a net investment in a foreign operation. In this documentation, the Company sets forth how the hedging instrument is expected to hedge the designated risks related to the hedged item and sets forth the method that will be used to retrospectively and prospectively assess the hedging instrument’s effectiveness and the method that will be used to measure ineffectiveness. A derivative designated as a hedging instrument must be assessed as being highly effective in offsetting the designated risk of the hedged item. Hedge effectiveness is formally assessed at inception and periodically throughout the life of the designated hedging relationship.

Under a fair value hedge, changes in the fair value of the hedging derivative, including amounts measured as ineffective, and changes in the fair value of the hedged item related to the designated risk being hedged, are reported within investment related gains (losses), net. The fair values of the hedging derivatives are exclusive of any accruals that are separately reported within investment income or interest expense to match the location of the hedged item.

Under a cash flow hedge, changes in the fair value of the hedging derivative measured as effective are reported within AOCI and the deferred gains or losses on the derivative are reclassified into the consolidated statements of income when the Company’s earnings are affected by the variability in cash flows of the hedged item. The fair values of the hedging derivatives are exclusive of any accruals that are separately reported within investment income or interest expense to match the location of the hedged item.

In a hedge of a net investment in a foreign operation, changes in the fair value of the hedging derivative that are measured as effective are reported within AOCI consistent with the translation adjustment for the hedged net investment in the foreign operation. Changes in the fair value of the hedging instrument measured as ineffective are reported within investment related gains (losses), net.

The Company discontinues hedge accounting prospectively when: (i) it is determined that the derivative is no longer highly effective in offsetting changes in the estimated fair value or cash flows of a hedged item; (ii) the derivative expires, is sold,

terminated, or exercised; (iii) it is no longer probable that the hedged forecasted transaction will occur; or (iv) the derivative is de-designated as a hedging instrument.

When hedge accounting is discontinued because it is determined that the derivative is not highly effective, the derivative continues to be carried in the consolidated balance sheets at fair value, with changes in fair value recognized in investment related gains (losses), net. The carrying value of the hedged asset or liability under a fair value hedge is no longer adjusted for changes in its estimated fair value due to the hedged risk, and the cumulative adjustment to its carrying value is amortized into income over the remaining life of the hedged item. Provided the hedged forecasted transaction occurrence is still probable, the changes in estimated fair value of derivatives recorded in other comprehensive income (loss) ("OCI") related to discontinued cash flow hedges are released into the consolidated statements of income when the Company's earnings are affected by the variability in cash flows of the hedged item.

When hedge accounting is discontinued because it is no longer probable that the forecasted transactions will occur on the anticipated date or within two months of that date, the derivative continues to be carried in the consolidated balance sheets at its estimated fair value, with changes in estimated fair value recognized currently in investment related gains (losses), net. Deferred gains and losses of a derivative recorded in OCI pursuant to the discontinued cash flow hedge of a forecasted transaction that is no longer probable are recognized immediately in investment related gains (losses), net.

In all other situations in which hedge accounting is discontinued, the derivative is carried at its estimated fair value in the consolidated balance sheets, with changes in its estimated fair value recognized in the current period as investment related gains (losses), net.

Embedded Derivatives

The Company reinsures certain annuity products that contain terms that are deemed to be embedded derivatives, primarily equity-indexed annuities and variable annuities with guaranteed minimum benefits. The Company assesses reinsurance contract terms to identify embedded derivatives, which are required to be bifurcated under the general accounting principles for *Derivatives and Hedging*. If the contract is not reported for in its entirety at fair value and it is determined that the terms of the embedded derivative are not clearly and closely related to the economic characteristics of the host contract, and that a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is bifurcated from the host contract and accounted for separately.

Embedded derivatives are carried on the consolidated balance sheets at fair value in the same line item as the host contract. Changes in the fair value of embedded derivatives associated with equity-indexed annuities are reflected in interest credited on the consolidated statements of income and changes in the fair value of embedded derivatives associated with variable annuity guaranteed minimum benefits are reflected in investment related gains (losses), net. See "Interest-Sensitive Contract Liabilities" below for additional information on embedded derivatives related to equity-indexed and variable annuities. The Company has implemented an economic hedging strategy to mitigate the volatility associated with its reinsurance of variable annuity guaranteed minimum benefits. The hedging strategy is designed such that changes in the fair value of the hedge contracts, primarily futures, swap contracts and options, move in the opposite direction of changes in the fair value of the embedded derivatives. While the Company actively manages its hedging program, the hedges that are in place may not be totally effective in offsetting the embedded derivative changes due to the many variables that must be managed and the Company may see a corresponding increase or decrease in the net liability. The Company has elected not to assess this hedging strategy for hedge accounting treatment.

Additionally, reinsurance treaties written on a modco or funds withheld basis are subject to the general accounting principles for *Derivatives and Hedging* related to embedded derivatives. The Company's funds withheld at interest balances are primarily associated with its reinsurance treaties structured on a modco or funds withheld basis, the majority of which were subject to the general accounting principles for *Derivatives and Hedging* related to embedded derivatives. Management believes the embedded derivative feature in each of these reinsurance treaties is similar to a total return swap on the assets held by the ceding companies. The valuation of embedded derivatives is sensitive to the investment credit spread environment. Changes in investment credit spreads are also affected by the application of a credit valuation adjustment ("CVA"). The fair value calculation of an embedded derivative in an asset position utilizes a CVA based on the ceding company's credit risk. Conversely, the fair value calculation of an embedded derivative in a liability position utilizes a CVA based on the Company's credit risk. Generally, an increase in investment credit spreads, ignoring changes in the CVA, will have a negative impact on the fair value of the embedded derivative (decrease in income). The fair value of the embedded derivative assets and liabilities are included in the funds withheld at interest and other liabilities, respectively. The change in the fair value of the embedded derivatives is recorded in investment related gains (losses), net.

The Company has entered into various financial reinsurance treaties on a funds withheld and modco basis. These treaties do not transfer significant insurance risk and are recorded on a deposit method of accounting with the Company earning a net fee. As a result of the experience refund provisions contained in these treaties, the value of the embedded derivatives in these contracts is

currently considered immaterial. The Company monitors the performance of these treaties on a quarterly basis. Significant adverse performance or losses on these treaties may result in a loss associated with the embedded derivative.

Fair Value Measurements

General accounting principles for *Fair Value Measurements and Disclosures* define fair value, establish a framework for measuring fair value, establish a fair value hierarchy based on the inputs used to measure fair value and enhance disclosure requirements for fair value measurements. In compliance with these principles, the Company has categorized its assets and liabilities, based on the priority of the inputs to the valuation technique, into a three level hierarchy or separately for assets measured using the net asset value (“NAV”). The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1), the second highest priority to quoted prices in markets that are not active or inputs that are observable either directly or indirectly (Level 2) and the lowest priority to unobservable inputs (Level 3).

If the inputs used to measure fair value fall within different levels of the hierarchy, the category level is based on the lowest priority level input that is significant to the fair value measurement of the asset or liability.

See Note 6 – “Fair Value of Assets and Liabilities” for further details on the Company’s assets and liabilities recorded at fair value.

Cash and Cash Equivalents

Cash and cash equivalents include cash on deposit and highly liquid debt instruments purchased with an original maturity of three months or less.

Premiums Receivable

Premiums are accrued when due and in accordance with information received from the ceding company. When the Company enters into a new reinsurance agreement, it records accruals based on the terms of the reinsurance treaty. Similarly, when a ceding company fails to report information on a timely basis, the Company records accruals based on the terms of the reinsurance treaty as well as historical experience. Other management estimates include adjustments for increased in force on existing treaties, lapsed premiums given historical experience, the financial health of specific ceding companies, collateral value and the legal right of offset on related amounts (i.e. allowances and claims) owed to the ceding company. Under the legal right of offset provisions in its reinsurance treaties, the Company can withhold payments for allowances and claims from unpaid premiums. Based on its review of these factors and historical experience, the Company did not believe a provision for doubtful accounts was necessary as of December 31, 2021 or 2020.

Reinsurance Ceded Receivables

The Company generally reports retrocession activity on a gross basis. Amounts paid or deemed to have been paid for reinsurance are reflected in reinsurance ceded receivables. The cost of reinsurance related to long-duration contracts is recognized over the terms of the reinsured policies on a basis consistent with the reporting of those policies.

Deferred Policy Acquisition Costs

Costs of acquiring new business, which vary with and are directly related to the production of new business, have been deferred to the extent that such costs are deemed recoverable from future premiums or gross profits. Such costs include commissions and allowances as well as certain costs of policy issuance and underwriting. Non-commission costs related to the acquisition of new and renewal insurance contracts may be deferred only if they meet the following criteria:

- Incremental direct costs of a successful contract acquisition
- Portions of employees’ salaries and benefits directly related to time spent performing specified acquisition activities for a contract that has been acquired or renewed
- Other costs directly related to the specified acquisition or renewal activities that would not have been incurred had that acquisition contract transaction not occurred

The Company tests the recoverability for each year of business at issue before establishing additional deferred acquisition costs (“DAC”). The Company also performs annual tests to establish that DAC are expected to remain recoverable, and if financial performance significantly deteriorates to the point where a deficiency exists, a cumulative charge to current operations will be recorded. No such adjustments related to DAC recoverability were made in 2021, 2020 and 2019.

DAC related to traditional life insurance contracts are amortized with interest over the premium-paying period of the related policies in proportion to the ratio of individual period premium revenues to total anticipated premium revenues over the expected life of the policy. Such anticipated premium revenues are estimated using the same assumptions used for computing liabilities for future policy benefits.

DAC related to interest-sensitive life and investment-type policies are amortized over the expected lives of the policies, in proportion to the gross profits realized from mortality, investment income less interest credited, and expense margins.

Other Reinsurance Balances

The Company assumes and retrocedes financial reinsurance contracts that do not expose it to a reasonable possibility of loss from insurance risk. These contracts are reported as deposits and are included in other reinsurance assets/liabilities. The amount of revenue reported in other revenues on these contracts represents fees and the cost of insurance under the terms of the reinsurance agreement. Assets and liabilities are reported on a net or gross basis, depending on the specific details within each treaty. Reinsurance agreements reported on a net basis, where a legal right of offset exists, are generally included in other reinsurance balances on the consolidated balance sheets. Balances resulting from the assumption and/or subsequent transfer of benefits and obligations resulting from cash flows related to variable annuities have also been classified as other reinsurance balance assets and/or liabilities. Other reinsurance assets are included in premiums receivable and other reinsurance balances while other reinsurance liabilities are included in other reinsurance balances.

Acquired Intangibles

Goodwill and Value of Business Acquired

Goodwill, reported in other assets, is not amortized into results of operations, but instead is reviewed at least annually for impairment and written down only in the periods in which the recorded value of goodwill exceeds its fair value. Goodwill as of December 31, 2021 and 2020, totaled $7 million. As of December 31, 2021 and 2020, the carrying value of business acquired was $0 million and $4 million, and is reported in other assets.

Value of Distribution Agreements and Customer Relationships Acquired

Value of distribution agreements ("VODA") is reported in other assets and represents the present value of future profits associated with the expected future business derived from the distribution agreements. Value of customer relationships acquired ("VOCRA") is also reported in other assets and represents the present value of the expected future profits associated with the expected future business acquired through existing customers of the acquired company or business. VODA is amortized over a useful life of 15 years and the VOCRA is also amortized over a 15 year period in proportion to expected revenues generated, with amortization included in policy acquisition costs and other insurance expenses. Each year the Company reviews VODA and VOCRA to determine the recoverability of these balances. VODA and VOCRA totaled approximately $19 million and $25 million, including accumulated amortization of $102 million and $96 million, as of December 31, 2021 and 2020, respectively. VODA and VOCRA amortization expense for the years ended December 31, 2021, 2020 and 2019 was $7 million, $8 million and $8 million, respectively. Amortization of the VODA and VOCRA is estimated to be $6 million, $6 million and $6 million during 2022, 2023 and 2024, respectively, with the VODA and VOCRA expected to be fully amortized by the end of 2024.

Other Acquired Intangible Assets

Other acquired intangibles are reported in other assets and primarily represent intangibles and licenses acquired through the Company's acquisition of service and technology oriented companies in an effort to both support its clients and generate new future revenue streams. Other acquired intangible assets are amortized using the straight-line method over the estimated useful life of 10 to 15 years, with amortization included in other operating expenses. Each year the Company reviews other acquired intangibles to determine the recoverability of these balances. Other acquired intangibles totaled approximately $22 million and $30 million, including accumulated amortization of $17 million and $12 million, as of December 31, 2021 and 2020, respectively. Other acquired intangibles amortization expense for the years ended December 31, 2021, 2020 and 2019, was $4 million, $4 million and $4 million, respectively. During 2021, the Company wrote off $4 million of acquired intangible assets deemed to be impaired. Amortization of other acquired intangibles is estimated to be $4 million during 2022, 2023, 2024, and 2025 and $3 million during 2026, respectively.

Property, Equipment, Leasehold Improvements and Computer Software

Property, equipment and leasehold improvements, which are included in other assets, are stated at cost, less accumulated depreciation. Depreciation is determined using the straight-line method over the estimated useful lives of the assets, as appropriate. The estimated life is generally 40 years for company occupied real estate property, from one to seven years for leasehold improvements, and from three to seven years for all other property and equipment. The cost basis of property, equipment and leasehold improvements was $270 million and $260 million at December 31, 2021 and 2020, respectively. Accumulated depreciation of property, equipment and leasehold improvements was $131 million and $116 million at December 31, 2021 and 2020, respectively. Related depreciation expense was $16 million, $17 million and $18 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Computer software, which is included in other assets, is stated at cost, less accumulated amortization. Purchased software costs, as well as certain internal and external costs incurred to develop internal-use computer software during the application development stage, are capitalized. Amortization of software costs is recorded on a straight-line basis over periods ranging from

three to ten years. Carrying values are reviewed at least annually for indicators of impairment in value. Unamortized computer software costs were $145 million and $147 million at December 31, 2021 and 2020, respectively. Amortization expense was $27 million, $32 million, and $31 million for the years ended December 31, 2021, 2020 and 2019, respectively. The Company did not impair any capital projects during 2021. The Company recognized impairments of $5 million and $4 million in 2020 and 2019, respectively.

Operating Joint Ventures

The Company has made investments in certain joint ventures that are strategic in nature and made other than for the sole purpose of generating investment income. These investments are reported under the equity method of accounting and are included in other assets. The Company's share of earnings from these joint ventures is reported in other revenues on the consolidated statements of income. The Company's investments in operating joint ventures do not have a material effect on the Company's results of operations and financial condition, and as a result no additional disclosures have been presented.

Future Policy Benefits

Liabilities for future benefits on life and health policies are established in an amount adequate to meet the estimated future obligations on policies in force. Liabilities for future policy benefits under long-duration life and health insurance policies have been computed based upon expected investment yields, mortality and withdrawal (lapse) rates, and other assumptions. These assumptions include a margin for adverse deviation and vary with the characteristics of the plan of insurance, year of issue, age of insured, and other appropriate factors. Interest rates range from 3.0% to 6.0%. The mortality and withdrawal assumptions are based on the Company's experience as well as industry experience and standards. In establishing reserves for future policy benefits, the Company assigns policy liability assumptions to particular timeframes (eras) in such a manner as to be consistent with the underlying assumptions and economic conditions at the time the risks are assumed. The Company maintains a consistent approach to setting the provision for adverse deviation between eras.

Liabilities for future benefits on longevity business, including annuities in the payout phase, are established in an amount adequate to meet the estimated future obligations on policies in force. Liabilities for future benefits related to the longevity business, including annuities in the payout phase have been calculated using expected mortality, investment yields, and other assumptions. These assumptions include a margin for adverse deviation and vary with the characteristics of the plan of insurance, year of issue, age of insured, and other appropriate factors. The mortality assumptions are based on the Company's experience as well as industry experience and standards. A deferred profit liability is established when the gross premium exceeds the net premium.

The Company periodically reviews actual and anticipated experience compared to the assumptions used to establish policy benefits. The Company establishes premium deficiency reserves if actual and anticipated experience indicates that existing policy liabilities together with the present value of future gross premiums will not be sufficient to cover the present value of future benefits, settlement and maintenance costs and to recover unamortized acquisition costs. Anticipated investment income is considered in the calculation of premium deficiency losses for short-duration contracts. The premium deficiency reserve is established by a charge to income, as well as a reduction in unamortized acquisition costs and, to the extent there are no unamortized acquisition costs, an increase in future policy benefits.

The reserving process includes normal periodic reviews of assumptions used and adjustments of reserves to incorporate the refinement of the assumptions. Any such adjustments relate only to policies assumed in recent periods and the adjustments are reflected by a cumulative charge or credit to current operations.

The Company reinsures disability and long-term care products in various markets. Liabilities for future benefits on disability and long-term care policies' active lives are established in an amount adequate to meet the estimated future obligations on policies in force. These reserves are the amounts that, with the additional premiums to be received and interest thereon compounded annually at certain assumed rates, are calculated to be sufficient to meet the various policy and contract obligations as they mature.

The Company establishes future policy benefits for guaranteed minimum death benefits ("GMDB") relating to the reinsurance of certain variable annuity contracts by estimating the expected value of death benefits in excess of the projected account balance and recognizing the excess proportionally over the accumulation period based on total expected assessments. The Company regularly evaluates estimates used and adjusts the additional liability balance, with a related charge or credit to claims and other policy benefits, if actual experience or other evidence suggests that earlier assumptions should be revised. The assumptions used in estimating the GMDB liabilities are consistent with those used for amortizing DAC, and are thus subject to the same variability and risk. The Company's GMDB liabilities at December 31, 2021 and 2020, were not material.

Interest-Sensitive Contract Liabilities

Liabilities for future benefits on interest-sensitive life and investment-type contract liabilities are carried at the accumulated contract holder values without reduction for potential surrender or withdrawal charges. The Company reinsures asset-intensive

products, including annuities and corporate-owned life insurance. The investment portfolios for these products are segregated for management purposes within the general account of the respective legal entity. The liabilities under asset-intensive insurance contracts or reinsurance contracts reinsured on a coinsurance basis are included in interest-sensitive contract liabilities on the consolidated balance sheets. Asset-intensive contracts principally include individual fixed annuities in the accumulation phase, single premium immediate annuities, equity-indexed annuities, individual variable annuities, corporate-owned life and interest-sensitive whole life insurance contracts. Interest-sensitive contract liabilities are equal to (i) policy account values, which consist of an accumulation of gross premium payments; (ii) credited interest less expenses, mortality charges, and withdrawals; and (iii) fair value adjustments relating to business combinations. Liabilities for immediate annuities are calculated as the present value of the expected cash flows, with the locked-in discount rate determined such that there is no gain or loss at inception. Additionally, certain annuity contracts the Company reinsures contain terms, such as guaranteed minimum benefits and equity participation options, which are deemed to be embedded derivatives and are accounted for based on the general accounting principles for *Derivatives and Hedging*.

The Company establishes liabilities for guaranteed minimum living benefits relating to certain variable annuity products as follows:

- Guaranteed minimum income benefits (“GMIB”) provide the contract holder, after a specified period of time determined at the time of issuance of the variable annuity contract, with a minimum level of income (annuity) payments. Under the reinsurance treaty, the Company makes a payment to the ceding company equal to the GMIB net amount-at-risk at the time of annuitization and thus these contracts meet the net settlement criteria of the general accounting principles for *Derivatives and Hedging* and the Company assumes no mortality risk. Accordingly, the GMIB is considered an embedded derivative, which is measured at fair value separately from the host variable annuity product.
- Guaranteed minimum withdrawal benefits (“GMWB”) guarantee the contract holder a return of their purchase payment via partial withdrawals, even if the account value is reduced to zero, provided that the contract holder’s cumulative withdrawals in a contract year do not exceed a certain limit. The initial guaranteed withdrawal amount is equal to the initial benefit base as defined in the contract (typically, the initial purchase payments plus applicable bonus amounts). The GMWB is also an embedded derivative, which is measured at fair value separately from the host variable annuity product.
- Guaranteed minimum accumulation benefits (“GMAB”) provide the contract holder, after a specified period of time determined at the time of issuance of the variable annuity contract, with a minimum accumulation of their purchase payments even if the account value is reduced to zero. The initial guaranteed accumulation amount is equal to the initial benefit base as defined in the contract (typically, the initial purchase payments plus applicable bonus amounts). The GMAB is also an embedded derivative, which is measured at fair value separately from the host variable annuity product.

For GMIB, GMWB and GMAB, the initial benefit base is increased by additional purchase payments made within a certain time period and decreased by benefits paid and/or withdrawal amounts. After a specified period of time, the benefit base may also increase as a result of an optional reset as defined in the contract.

The fair values of the GMIB, GMWB and GMAB embedded derivative liabilities are reflected in interest-sensitive contract liabilities on the consolidated balance sheets and are calculated based on actuarial and capital market assumptions related to the projected cash flows, including benefits and related contract charges over the lives of the contracts. These projected cash flows incorporate expectations concerning policyholder behavior, such as lapses, withdrawals and benefit selections, and capital market assumptions such as interest rates and equity market volatilities. In measuring the fair value of GMIBs, GMWBs and GMABs, the Company attributes a portion of the fees collected from the policyholder equal to the present value of expected future guaranteed minimum income, withdrawal and accumulation benefits (at inception). The changes in fair value are reported in investment related gains (losses), net. Any additional fees represent “excess” fees and are reported in other revenues on the consolidated statements of income. These variable annuity guaranteed living benefits may be more costly than expected in volatile or declining equity markets or falling interest rate markets, causing an increase in interest-sensitive contract liabilities, negatively affecting net income.

The Company reinsures equity-indexed annuity contracts. These contracts allow the contract holder to elect an interest rate return or an equity market component where interest credited is based on the performance of common stock market indices, such as the S&P 500 Index®, the Dow Jones Industrial Average, or the NASDAQ. The equity market option is considered an embedded derivative, similar to a call option, which is reflected at fair value on the consolidated balance sheets in interest-sensitive contract liabilities. The fair value of embedded derivatives is computed based on a projection of future equity option costs using a budget methodology, discounted back to the balance sheet date using current market indicators of volatility and interest rates. Changes in the fair value of the embedded derivatives are included as a component of interest credited on the consolidated statements of income.

The Company reviews its estimates of actuarial liabilities for interest-sensitive contract liabilities and compares them with its actual experience. Differences between actual experience and the assumptions used in pricing these guarantees and benefits and in the establishment of the related liabilities result in variances in profit and could result in losses. The effects of changes in such estimated liabilities are included in the results of operations in the period in which the changes occur.

Other Policy Claims and Benefits

Claims payable for incurred but not reported losses are determined using case-basis estimates and lag studies of past experience. The time lag from the date of the claim or death to when the ceding company reports the claim to the Company can vary significantly by ceding company, business segment and product type, but generally averages around 3.1 months. Incurred but not reported claims are estimates on an undiscounted basis, using actuarial estimates of historical claims expense, adjusted for current trends and conditions. These estimates are continually reviewed and the ultimate liability may vary significantly from the amount recognized, which are reflected in claims and other policy benefits in the period in which they are determined.

Other Liabilities

Other liabilities primarily include liabilities associated with amounts ceded on a funds withheld basis, investments in transit, separate accounts, employee benefits, cash collateral received on derivative positions and current federal income taxes payable.

Income Taxes

The U.S. consolidated tax return includes the operations of RGA and all eligible subsidiaries. The Company's foreign subsidiaries are taxed under applicable local statutes.

The Company provides for federal, state and foreign income taxes currently payable, as well as those deferred due to temporary differences between the tax basis of assets and liabilities and the reported amounts, and are recognized in net income or in certain cases in OCI. The Company's accounting for income taxes represents management's best estimate of various events and transactions considering the laws enacted as of the reporting date.

Deferred tax assets and liabilities are measured by applying the relevant jurisdictions' enacted tax rate for the period in which the temporary differences are expected to reverse to the temporary difference change for that period. The Company will establish a valuation allowance if management determines, based on available information, that it is more likely than not that deferred income tax assets will not be realized. The Company has deferred tax assets including those related to foreign tax credits, net operating, and capital losses. The Company has projected its ability to utilize its deferred tax assets and established a valuation allowance on the portion of the deferred tax assets the Company believes more likely than not will not be realized.

Significant judgment is required in determining whether valuation allowances should be established as well as the amount of such allowances. When making such a determination, consideration is given to, among other things, the following:

(i) taxable income in prior carryback years

(ii) future reversals of existing taxable temporary differences;

(iii) future taxable income exclusive of reversing temporary differences and carryforwards; and

(iv) tax planning strategies.

Any such changes could significantly affect the amounts reported in the consolidated financial statements in the year these changes occur.

The Company made a policy election to account for GILTI as a period cost.

The Company reports uncertain tax positions in accordance with generally accepted accounting principles. In order to recognize the benefit of an uncertain tax position, the position must meet the more likely than not criteria of being sustained. Unrecognized tax benefits due to tax uncertainties that do not meet the more likely than not criteria are included within income tax liabilities and are charged to earnings in the period that such determination is made. The Company classifies interest related to tax uncertainties as interest expense whereas penalties related to tax uncertainties are classified as a component of income tax.

See Note 9 – "Income Tax" for further discussion.

Collateral Finance and Securitization Notes

Collateral finance and securitization notes represent private placement asset-backed structured financing transactions. Collateral finance notes are issued on specified insurance policies reinsured by the Company's regulated subsidiaries. Transaction costs, primarily interest expense, are reflected in collateral finance and securitization expense. See Note 14 – "Collateral Finance and Securitization Notes" for additional information.

Foreign Currency Translation

Assets, liabilities and results of foreign operations are recorded based on the functional currency of each foreign operation. The determination of the functional currency is based on economic facts and circumstances pertaining to each foreign operation. The Company's material functional currencies are the U.S. dollar, Canadian dollar, British pound, Australian dollar, Japanese yen, Korean won, Euro and South African rand. The translation of the functional currency into U.S. dollars is performed for balance sheet accounts using current exchange rates in effect at the balance sheet date and for revenue and expense accounts using weighted-average exchange rates during each year. Gains or losses, net of applicable deferred income taxes, resulting from such translation are included in accumulated currency translation adjustments, in AOCI until the underlying functional currency operation is sold or substantially liquidated.

Recognition of Revenues and Related Expenses – Long-Duration Products

Life and health premiums are recognized as revenue when due from the insured, and are reported net of amounts retroceded. Benefits and expenses are reported net of amounts retroceded and are associated with earned premiums so that profits are recognized over the life of the related contract. This association is accomplished through the provision for future policy benefits and the amortization of deferred policy acquisition costs. Other revenue includes items such as treaty recapture fees, fees associated with financial reinsurance and policy changes on interest-sensitive and investment-type products that the Company reinsures. Any fees that are collected in advance of the period benefited are deferred and recognized over the period benefited.

For certain reinsurance transactions involving in force blocks of business, the ceding company pays a premium equal to the initial required reserve (future policy benefit). In such transactions, for income statement presentation, the Company nets the expense associated with the establishment of the reserve against the premiums from the transaction.

Revenues for interest-sensitive and investment-type products consist of investment income, policy charges for the cost of insurance, policy administration, and surrenders that have been assessed against policy account balances during the period. Interest-sensitive contract liabilities for these products represent policy account balances before applicable surrender charges. Policy benefits and claims that are charged to expenses include claims incurred in the period in excess of related policy account balances and interest credited to policy account balances. Interest is credited to policyholder account balances according to terms of the policies or contracts.

For each of its reinsurance contracts, the Company must determine if the contract provides indemnification against loss or liability relating to insurance risk, in accordance with GAAP. The Company must review all contractual features, particularly those that may limit the amount of insurance risk to which the Company is subject or features that delay the timely reimbursement of claims. If the Company determines that a contract does not expose it to a reasonable possibility of a significant loss from insurance risk, the Company records the contract on a deposit method of accounting with any net amount receivable reflected as an asset within premiums receivable and other reinsurance balances, and any net amount payable reflected as a liability within other reinsurance balances. Fees earned on the contracts are reflected as other revenues, rather than premiums.

Recognition of Revenues and Related Expenses – Short-Duration Products

The Company provides reinsurance of medical, disability, life and other products for a fixed period of short-duration, typically one to three years. Under the short-duration insurance accounting model:

- Premiums are recognized over the coverage period in proportion to the amount of insurance protection provided.
- Claims or benefits are recognized when insured events occur, based on the ultimate cost to settle the claim, and are adjusted to reflect changes in estimates during the life of the contract. The estimated cost to settle the claim is based on actuarial assumptions for similar claims. The Company also establishes an incurred but not reported ("IBNR") liability based on historical reporting patterns.
- Eligible deferred acquisition costs are capitalized and amortized in proportion to premium.

Equity Based Compensation

The Company expenses the fair value of stock awards included in its incentive compensation plans. The fair value of the awards is expensed over the performance or service period, which generally corresponds to the vesting period, and is recognized as an increase to additional paid-in-capital in stockholders' equity, and stock-based compensation expense is reflected in other operating expenses.

Earnings Per Share

Basic earnings per share is calculated based on the weighted average number of common shares outstanding during the period. Diluted earnings per share include the dilutive effects assuming the exercise or issuance of stock awards.

New Accounting Pronouncements

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 consolidated financial statements.

Description	Date of Adoption	Effect on the Consolidated Financial Statements
Standards adopted:		
Financial Instruments – Credit Losses This guidance adds to U.S. GAAP an impairment model, known as the 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 pre-tax 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.
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 This guidance eases the potential burden in accounting for, or recognizing the effects of, reference rate reform on financial reporting, which includes the transition from the London Interbank Offered Rate ("LIBOR") during 2023. 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	The reference rate reform is not expected to have material accounting consequences. The Company has established a team that is currently assessing the effects of the discontinuation of LIBOR on existing contracts that extend beyond 2021 (that is, the date when the Financial Conduct Authority intends to stop persuading or compelling banks to submit LIBOR) by analyzing contractual fallback provisions, evaluating alternative rate ramifications and assessing the effects on current hedging strategies, systems and operations.

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. 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. Upon adoption, there will be an adjustment to retained earnings as a result of capping the net premium ratio at 100%. The Company is currently evaluating this impact but anticipates it will likely result in a material decrease to retained earnings. The Company is currently evaluating the impact of the other cash flow assumptions amendments on its results of operations and financial position but anticipates they will likely be material.
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. Upon adoption, there will be an adjustment to accumulated other comprehensive income as a result of remeasuring in force contract liabilities using current upper-medium grade fixed income instrument yields. The adjustment will largely reflect the difference between discount rates locked-in at contract inception versus current discount rates at transition. The Company is currently evaluating the impact of this adjustment but anticipates it will likely be material.
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. Upon adoption, the Company expects an impact to (1) accumulated other comprehensive income for the cumulative effect of changes in the instrument-specific credit risk between contract issue date and transition date and (2) retained earnings for the difference between fair value and carrying value at the transition date, excluding the changes in the instrument-specific credit risk. The Company is currently evaluating the impact of these adjustments but anticipates they will likely be material.
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. Upon adoption, the Company expects an adjustment to accumulated other comprehensive income for the removal of cumulative adjustments to DAC associated with unrealized gains and losses previously recorded in accumulated other comprehensive income. The Company is currently evaluating the impact of this adjustment but anticipates it will likely result in a material increase to accumulated other comprehensive income. The Company is currently evaluating the impact of the other amortization of DAC and other balances amendments on its results of operations and financial position but anticipates they will likely not be material.

Note 3 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):

	2021	2020	2019
Earnings:			
Net income (numerator for basic and diluted calculations)	$ 617	$ 415	$ 870
Shares:			
Weighted average outstanding shares (denominator for basic calculations)	67.8	65.4	62.7
Equivalent shares from outstanding stock awards	0.5	0.4	1.2
Diluted shares (denominator for diluted calculations)	68.3	65.8	63.9
Earnings per share:			
Basic	$ 9.10	$ 6.35	$ 13.88
Diluted	9.04	6.31	13.62

The calculation of common equivalent shares does not include the impact of stock awards with a conversion price that exceeds the average stock price for the earnings period, as the result would be antidilutive. The calculation of common equivalent shares also excludes the impact of outstanding performance contingent awards, as the conditions necessary for their issuance have not been satisfied as of the end of the reporting period. Approximately 0.2 million, 0.4 million, and 0.2 million outstanding stock awards and approximately 0.3 million, 0.3 million and 0.3 million performance contingent awards were excluded from the calculation of common equivalent shares during 2021, 2020 and 2019, respectively.

Note 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 December 31, 2021 and 2020 (dollars in millions):

December 31, 2021:	Amortized Cost	Allowance for Credit Losses	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total
Available-for-sale:						
Corporate	$ 35,239	$ 26	$ 3,084	$ 194	$ 38,103	62.8 %
Canadian government	3,339	—	1,606	1	4,944	8.1
RMBS	1,020	—	37	7	1,050	1.7
ABS	4,024	—	22	41	4,005	6.6
CMBS	1,790	1	66	6	1,849	3.0
U.S. government	2,082	—	31	8	2,105	3.5
State and political subdivisions	1,191	—	137	5	1,323	2.2
Other foreign government	7,188	4	273	87	7,370	12.1
Total fixed maturity securities	$ 55,873	$ 31	$ 5,256	$ 349	$ 60,749	100.0 %

December 31, 2020:	Amortized Cost	Allowance for Credit Losses	Unrealized Gains	Unrealized Losses	Estimated Fair Value	% of Total
Available-for-sale:						
Corporate	$ 31,963	$ 17	$ 4,356	$ 94	$ 36,208	63.9 %
Canadian government	3,145	—	1,995	—	5,140	9.1
RMBS	1,735	—	84	2	1,817	3.2
ABS	3,099	—	35	42	3,092	5.4
CMBS	1,790	3	102	21	1,868	3.3
U.S. government	1,242	—	196	1	1,437	2.5
State and political subdivisions	1,237	—	157	4	1,390	2.4
Other foreign government	5,337	—	479	33	5,783	10.2
Total fixed maturity securities	$ 49,548	$ 20	$ 7,404	$ 197	$ 56,735	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 consolidated balance sheets. Fixed maturity securities received as collateral are held in separate custodial accounts and are not recorded on the Company's consolidated balance sheets. Subject to certain constraints, the Company is permitted by contract to sell or repledge collateral it receives; however, as of December 31, 2021 and 2020, 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 December 31, 2021 and 2020 (dollars in millions):

	2021		2020	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities pledged as collateral	$ 100	$ 103	$ 148	$ 162
Fixed maturity securities received as collateral	n/a	1,922	n/a	1,784
Assets in trust held to satisfy collateral requirements	28,671	31,173	27,675	31,179

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 December 31, 2021 and 2020 (dollars in millions):

	2021		2020	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Fixed maturity securities guaranteed or issued by:				
Government of Japan	$ 3,080	$ 3,063	$ 1,493	$ 1,491
Canadian province of Quebec	1,377	2,347	1,303	2,474
Canadian province of Ontario	1,092	1,451	1,054	1,528

The amortized cost and estimated fair value of fixed maturity securities classified as available-for-sale as of December 31, 2021, 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	$ 1,641	$ 1,649
Due after one year through five years	9,698	10,115
Due after five years through ten years	10,969	11,700
Due after ten years	26,731	30,381
Structured securities	6,834	6,904
Total	$ 55,873	$ 60,749

Corporate Fixed Maturity Securities

The tables below show the major sectors of the Company's corporate fixed maturity holdings as of December 31, 2021 and 2020 (dollars in millions):

December 31, 2021:	Amortized Cost	Estimated Fair Value	% of Total
Finance	$ 13,101	$ 14,045	36.9 %
Industrial	17,857	19,375	50.8
Utility	4,281	4,683	12.3
Total	$ 35,239	$ 38,103	100.0 %

December 31, 2020:	Amortized Cost	Estimated Fair Value	% of Total
Finance	$ 11,785	$ 13,236	36.6 %
Industrial	16,274	18,435	50.9
Utility	3,904	4,537	12.5
Total	$ 31,963	$ 36,208	100.0 %

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

As discussed in Note 2 – "Significant Accounting Policies and Pronouncements," allowances for credit losses on fixed maturity securities are recognized in investment related gains (losses), net. The amount recognized represents the difference between the amortized cost of the security and the net present value of its projected future cash flows discounted at the effective interest rate implicit in the fixed maturity security prior to the allowance for credit losses. Any remaining difference between the fair value and amortized cost is recognized in AOCI.

The following tables present the rollforward of the allowance for credit losses in fixed maturity securities by type for the years ended December 31, 2021 and 2020 (dollars in millions):

For the year ended December 31, 2021:	Corporate	CMBS	Other Foreign Government	Total
Balance, beginning of period	$ 17	$ 3	$ —	$ 20
Credit losses recognized on securities for which credit losses were not previously recorded	21	1	5	27
Reductions for securities sold during the period	(10)	(2)	(1)	(13)
Additional increases or decreases for credit losses on securities that had an allowance recorded in a previous period	(2)	(1)	—	(3)
Balance, end of period	$ 26	$ 1	$ 4	$ 31

For the year ended December 31, 2020:	Corporate	CMBS	Other Foreign Government	Total
Balance, beginning of period	$ —	$ —	$ —	$ —
Credit losses recognized on securities for which credit losses were not previously recorded	36	3	2	41
Reductions for securities sold during the period	(19)	—	(2)	(21)
Balance, end of period	$ 17	$ 3	$ —	$ 20

Unrealized Losses for Fixed Maturity Securities Available-for-Sale

The Company's determination of whether a decline in value necessitates the recording of an allowance for credit losses includes an analysis of whether the issuer is current on its contractual payments, evaluating whether it is probable that the Company will be able to collect all amounts due according to the contractual terms of the security and analyzing the overall ability of the Company to recover the amortized cost of the investment.

The following table presents the estimated fair values and gross unrealized losses for the 1,862 fixed maturity securities for which an allowance for credit loss has not been recorded as of December 31, 2021, and the estimated fair value had declined and remained below amortized cost (dollars in millions). These investments are presented by class and grade of security, as well as the length of time the related fair value has continuously remained below amortized cost.

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

The following table presents the estimated fair values and gross unrealized losses for the 877 fixed maturity securities that have estimated fair values below amortized cost as of December 31, 2020 (dollars in millions). These investments are presented by class and grade of security, as well as the length of time the related fair value has continuously remained below amortized cost.

	Less than 12 months		12 months or greater		Total	
December 31, 2020:	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses	Estimated Fair Value	Gross Unrealized Losses
Investment grade securities:						
Corporate	$ 930	$ 29	$ 70	$ 5	$ 1,000	$ 34
Canadian government	—	—	—	—	—	—
RMBS	294	2	—	—	294	2
ABS	1,096	17	570	11	1,666	28
CMBS	160	6	—	—	160	6
U.S. government	27	1	—	—	27	1
State and political subdivisions	66	1	16	3	82	4
Other foreign government	973	27	—	—	973	27
Total investment grade securities	3,546	83	656	19	4,202	102
Below investment grade securities:						
Corporate	375	49	81	11	456	60
ABS	20	13	4	1	24	14
CMBS	91	15	—	—	91	15
Other foreign government	36	3	28	3	64	6
Total below investment grade securities	522	80	113	15	635	95
Total fixed maturity securities	$ 4,068	$ 163	$ 769	$ 34	$ 4,837	$ 197

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

Investment Income and Investment Related Gains (Losses), Net – Accounting Correction

During the first quarter of 2021, the Company reclassified approximately $92 million of pre-tax unrealized gains from AOCI to investment income, net of related expenses associated with investments in limited partnerships and private equity funds for which it utilizes the equity method of accounting. The unrealized gains should have been recognized directly in investment income in the same prior periods they were reported by the investees. In addition, the Company recorded approximately $70 million of pre-tax gains in investment related gains (losses), net, associated with investments in limited partnerships considered to be investment companies in order to adjust the carrying value from cost less impairments to a fair value approach, using the net asset value ("NAV") per share or its equivalent. Had the adjustments been recorded in the years they were reported by the investees, the Company estimates it would have recognized approximately $102 million, $(2) million, $1 million and $10 million of pre-tax income (loss) in the years ended December 31, 2020, 2019, 2018 and 2017, respectively.

Investment Income, Net of Related Expenses

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

	For the years ended December 31,		
	2021	2020	2019
Fixed maturity securities available-for-sale	$ 2,059	$ 1,928	$ 1,786
Equity securities	5	6	8
Mortgage loans on real estate	293	282	255
Policy loans	55	56	58
Funds withheld at interest	351	279	297
Short-term investments and cash and cash equivalents	3	7	28
Other invested assets – limited partnerships and real estate joint ventures	419	50	119
Other invested assets – all other	61	59	65
Investment income	3,246	2,667	2,616
Investment expense	(108)	(92)	(96)
Investment income, net of related expenses	$ 3,138	$ 2,575	$ 2,520

Investment Related Gains (Losses), Net

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

	For the years ended December 31,		
	2021	2020	2019
Fixed maturity securities available-for-sale:			
Change in allowance for credit losses and impairments	$ (12)	$ (21)	$ (31)
Realized gains on investment activity	299	114	151
Realized losses on investment activity	(65)	(82)	(50)
Net gains (losses) on equity securities	25	(15)	16
Other impairment losses and change in mortgage loan allowance for credit losses	29	(56)	(12)
Change in fair value of certain limited partnership investments and other, net	194	24	13
Net gains on derivatives	90	3	4
Total investment related gains (losses), net	$ 560	$ (33)	$ 91

As of December 31, 2021, the Company held non-income producing securities with amortized costs, net of allowances, of $26 million and estimated fair values of $26 million. As of December 31, 2020, the Company held non-income producing securities with amortized costs, net of allowances, of $71 million and estimated fair values of $63 million. Generally, securities are non-income producing when principal or interest is not paid primarily as a result of bankruptcies or credit defaults, but also include securities where amortization has been discontinued.

Securities Borrowing, Lending and Repurchase Agreements

The following table includes the amount of borrowed securities, loaned securities, and securities received as collateral as part of the securities lending program, and repurchased/reverse repurchased securities pledged, securities received, and cash loaned as of December 31, 2021 and 2020 (dollars in millions):

	2021		2020	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Borrowed securities	$ 374	$ 420	$ 118	$ 161
Securities lending:				
Securities loaned	94	102	94	105
Securities received	n/a	102	n/a	102
Repurchase program/reverse repurchase program:				
Securities pledged	704	736	653	711
Securities received	n/a	728	n/a	669
Cash	10	10	—	—

No cash or securities have been pledged by the Company for its securities borrowing program as of December 31, 2021 and 2020.

The following tables present information on the Company's securities lending and repurchase/reverse repurchase transactions as of December 31, 2021 and 2020, 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.

	December 31, 2021				
	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 Days	30 – 90 Days	Greater than 90 Days	Total
Securities lending transactions:					
Corporate	$ —	$ —	$ —	$ 94	$ 94
State and political subdivisions	—	—	—	3	3
Other foreign government	—	—	—	5	5
Total	—	—	—	102	102
Repurchase/reverse repurchase transactions:					
Corporate	—	—	—	366	366
Other foreign government	—	—	—	370	370
Cash	—	—	—	10	10
Total	—	—	—	746	746
Total transactions	$ —	$ —	$ —	$ 848	$ 848

Gross amount of recognized liabilities for securities lending and repurchase/reverse repurchase transactions in preceding table	$ 830
Amounts related to agreements not included in offsetting disclosure	$ 18

	December 31, 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	—	—	—	417	417
Other foreign government	—	—	—	294	294
Total	—	—	—	711	711
Total transactions	$ —	$ —	$ —	$ 816	$ 816

Gross amount of recognized liabilities for securities lending and repurchase/reverse repurchase transactions in preceding table	$ 771
Amounts related to agreements not included in offsetting disclosure	$ 45

The Company has elected to offset amounts recognized as receivables and payables resulting from the repurchase/reverse repurchase programs, excluding any cash received or paid. After the effect of offsetting, there was no liability presented on the consolidated balance sheets as of December 31, 2021 and December 31, 2020. As of December 31, 2021 and December 31, 2020, the Company did not have payables resulting from cash received as collateral associated with a repurchase/reverse repurchase agreements. 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 December 31, 2021, mortgage loans were geographically dispersed throughout the U.S. with the largest concentrations in California (13.4%), Texas (12.5%) and Washington (7.8%), in addition to loans secured by properties in Canada (3.0%) and United Kingdom (2.3%). The recorded investment in mortgage loans on real estate presented below is gross of unamortized deferred loan origination fees and expenses, and allowance for credit losses.

The following table presents the distribution of the Company's recorded investment in mortgage loans by property type as of December 31, 2021 and 2020 (dollars in millions):

	2021		2020	
	Carrying Value	Percentage of Total	Carrying Value	Percentage of Total
Property type:				
Office	$ 1,683	26.6 %	$ 1,702	29.0 %
Retail	2,090	33.0	1,711	29.3
Industrial	1,249	19.7	1,210	20.6
Apartment	801	12.7	808	13.8
Other commercial	506	8.0	430	7.3
Recorded investment	6,329	100.0 %	5,861	100.0 %
Unamortized balance of loan origination fees and expenses	(11)		(10)	
Allowance for credit losses	(35)		(64)	
Total mortgage loans on real estate	$ 6,283		$ 5,787	

The following table presents the maturities of the Company's recorded investment in mortgage loans as of December 31, 2021 and 2020 (dollars in millions):

	2021		2020	
	Recorded Investment	% of Total	Recorded Investment	% of Total
Due within five years	$ 2,660	42.0 %	$ 2,276	38.8 %
Due after five years through ten years	2,593	41.0	2,768	47.3
Due after ten years	1,076	17.0	817	13.9
Total	$ 6,329	100.0 %	$ 5,861	100.0 %

The following tables set forth certain key credit quality indicators of the Company's recorded investment in mortgage loans as of December 31, 2021 and 2020 (dollars in millions):

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

	Recorded Investment					
	Debt Service Ratios					
	>1.20x	1.00x – 1.20x	<1.00x	Construction loans	Total	% of Total
December 31, 2020:						
Loan-to-Value Ratio						
0% – 59.99%	$ 2,774	$ 106	$ 17	$ 12	$ 2,909	49.6 %
60% – 69.99%	2,013	62	33	—	2,108	36.0
70% – 79.99%	555	49	13	—	617	10.5
80% or greater	189	21	17	—	227	3.9
Total	$ 5,531	$ 238	$ 80	$ 12	$ 5,861	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 December 31, 2021 and 2020 (dollars in millions):

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

	Recorded Investment						
	Year of Origination						
December 31, 2020:	2020	2019	2018	2017	2016	Prior	Total
Internal credit quality grade:							
High investment grade	$ 411	$ 616	$ 493	$ 336	$ 574	$ 1,008	$ 3,438
Investment grade	352	496	399	407	249	368	2,271
Average	—	—	—	19	37	55	111
Watch list	—	—	—	—	—	4	4
In or near default	—	—	—	—	—	37	37
Total	$ 763	$ 1,112	$ 892	$ 762	$ 860	$ 1,472	$ 5,861

The following table presents the current and past due composition of the Company's recorded investment in mortgage loans as of December 31, 2021 and 2020 (dollars in millions):

	2021	2020
Current	$ 6,329	$ 5,846
31 – 60 days past due	—	15
Total	$ 6,329	$ 5,861

The following table presents information regarding the Company's allowance for credit losses for mortgage loans as of December 31, 2021, 2020 and 2019 (dollars in millions):

	2021	2020	2019
Balance, beginning of period	$ 64	$ 12	$ 11
Adoption of new accounting standard	—	14	—
Change in allowance for credit losses	(29)	38	1
Balance, end of period	$ 35	$ 64	$ 12

The Company did not acquire any impaired mortgage loans during the years ended December 31, 2021 and 2020. The Company had no mortgage loans that were on a nonaccrual status as of December 31, 2021 and 2020. For the years ended December 31, 2021 and 2020, the Company modified the payment terms of 1 and 52 commercial mortgage loans, with a carrying value of approximately $10 million and $660 million, respectively, 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. The Company did not have any significant loans that were modified and met the criteria of a Troubled Debt Restructuring for the years ended December 31, 2021 and 2020.

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 December 31, 2021, $4.6 billion of the funds withheld at interest balance is primarily associated with two clients. For reinsurance agreements written on a modco basis and certain agreements written on a coinsurance funds withheld basis, assets equal to the net statutory reserves are withheld and legally owned and managed by the ceding company and are reflected as funds withheld at interest. In the event of a ceding company's insolvency, the Company would need to assert a claim on the assets supporting its reserve liabilities. However, the risk of loss to the Company is mitigated by its ability to offset amounts it owes the ceding company for claims or allowances against amounts owed to the Company from the ceding company.

Other Invested Assets

Other invested assets include limited partnership interests, joint ventures (other than operating joint ventures), lifetime mortgages, derivative contracts and fair value option ("FVO") contractholder-directed unit-linked investments. Other invested assets also include FHLB common stock, which is included in Other in the table below. As of December 31, 2021 and 2020, the allowance for credit losses for lifetime mortgages was not material. The carrying values of other invested assets as of December 31, 2021 and 2020 are as follows (dollars in millions):

	2021	2020
Limited partnership interests and real estate joint ventures	$ 1,996	$ 1,367
Lifetime mortgages	758	935
Derivatives	175	140
FVO contractholder-directed unit-linked investments	52	289
Other	89	98
Total other invested assets	$ 3,070	$ 2,829

Note 5 DERIVATIVE INSTRUMENTS

Accounting for Derivative Instruments and Hedging Activities

See Note 2 – "Significant Accounting Policies and Pronouncements" for a detailed discussion of the accounting treatment for derivative instruments, including embedded derivatives and 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

Credit Derivatives

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

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

Equity Derivatives

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

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

Foreign Currency Derivatives

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

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

Interest Rate Derivatives

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

Other Derivatives

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

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

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

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

The Company has certain embedded derivatives that are required to be separated from their host contracts and reported as derivatives. Host contracts include reinsurance treaties structured on a modco or funds withheld basis. Additionally, the Company reinsures equity-indexed annuity and variable annuity contracts with benefits that are considered embedded derivatives, including guaranteed minimum withdrawal benefits, guaranteed minimum accumulation benefits, and guaranteed minimum income benefits. The changes in fair values of embedded derivatives on equity-indexed annuities described below relate to changes in the fair value associated with capital market and other related assumptions.

Summary of Derivative Positions

Derivatives, except for embedded derivatives, are included in other invested assets or other liabilities, at fair value. Embedded derivative assets and liabilities on modco or funds withheld arrangements are included on the consolidated balance sheets with the host contract in funds withheld at interest or other liabilities, at fair value. Embedded derivative liabilities on indexed annuity and variable annuity products are included on the 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 December 31, 2021 and 2020 (dollars in millions):

		December 31, 2021			December 31, 2020		
		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	$ 1,273	$ 66	$ 1	$ 1,084	$ 93	$ 1
Financial futures	Equity	240	—	—	258	—	—
Foreign currency swaps	Foreign currency	150	1	—	150	—	18
Foreign currency forwards	Foreign currency	395	2	4	347	4	2
CPI swaps	CPI	563	34	7	612	11	19
Credit default swaps	Credit	1,321	29	1	1,517	13	—
Equity options	Equity	472	29	—	395	29	—
Synthetic GICs	Interest rate	16,143	—	—	16,644	—	—
Embedded derivatives in:							
Modco or funds withheld arrangements		—	227	62	—	58	—
Indexed annuity products		—	—	693	—	—	752
Variable annuity products		—	—	162	—	—	155
Total non-hedging derivatives		20,557	388	930	21,007	208	947
Derivatives designated as hedging instruments:							
Interest rate swaps	Foreign currency/Interest rate	941	4	33	802	3	24
Foreign currency swaps	Foreign currency	153	1	—	234	8	1
Foreign currency forwards	Foreign currency	1,320	14	11	1,255	10	15
Forward bond purchase commitments	Interest rate	545	14	1	—	—	—
Total hedging derivatives		2,959	33	45	2,291	21	40
Total derivatives		$ 23,516	$ 421	$ 975	$ 23,298	$ 229	$ 987

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 for the years ended December 31, 2021, 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 Year Ended December 31, 2021:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	$ (4)	$ 6
For the Year Ended December 31, 2020:			
Foreign currency swaps	Foreign-denominated fixed maturity securities	$ 8	$ (10)
For the Year Ended December 31, 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; (ii) certain interest rate swaps, in which the cash flows of assets are denominated in different currencies, commonly referred to as cross-currency swaps and (iii) forward bond purchase commitments.

The following table presents the components of AOCI, before income tax, and the consolidated income statement classification where the gain or loss is recognized related to cash flow hedges for the years ended December 31, 2021, 2020 and 2019 (dollars in millions):

	Amounts Included in AOCI
Balance December 31, 2018	$ 9
Gains (losses) deferred in other comprehensive income (loss)	(34)
Amounts reclassified to investment income	—
Amounts reclassified to interest expense	(1)
Balance December 31, 2019	(26)
Gains (losses) deferred in other comprehensive income (loss)	(27)
Amounts reclassified to investment income	—
Amounts reclassified to interest expense	4
Balance December 31, 2020	(49)
Gains (losses) deferred in other comprehensive income (loss)	20
Amounts reclassified to investment income	—
Amounts reclassified to interest expense	7
Balance December 31, 2021	$ (22)

As of December 31, 2021, approximately $5 million of before-tax deferred net losses on derivative instruments recorded in AOCI are expected to be reclassified to interest expense during the next twelve months. For the same time period, no material amounts of before-tax deferred net gains recorded in AOCI are expected to be reclassified to investment income during the next twelve months.

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The following table presents the effect of derivatives in cash flow hedging relationships on the consolidated statements of income and the consolidated statements of stockholders' equity for the years ended December 31, 2021, 2020 and 2019 (dollars in millions):

Derivative Type	Gains (Losses) Deferred in OCI	Gains (Losses) Reclassified into Income from AOCI		
For the year ended December 31, 2021:		Investment Related Gains (Losses)	Investment Income	Interest Expense
Interest rate	$ 28	$ —	$ —	$ (7)
Foreign currency/Interest rate	(8)	—	—	—
Total	$ 20	$ —	$ —	$ (7)
For the year ended December 31, 2020:				
Interest rate	$ (33)	$ —	$ —	$ (4)
Foreign currency/Interest rate	6	—	—	—
Total	$ (27)	$ —	$ —	$ (4)
For the year ended December 31, 2019:				
Interest rate	$ (32)	$ —	$ —	$ 1
Foreign currency/Interest rate	(2)	—	—	—
Total	$ (34)	$ —	$ —	$ 1

For the years ended December 31, 2021, 2020 and 2019, there were no material amounts reclassified into earnings relating to instances in which the Company discontinued cash flow hedge accounting because the forecasted transaction did not occur by the anticipated date or within the additional time period permitted by the authoritative guidance for the accounting for derivatives and hedging.

Hedges of Net Investments in Foreign Operations

The Company uses foreign currency swaps and foreign currency forwards to hedge a portion of its net investment in certain foreign operations against adverse movements in exchange rates. The following table illustrates the Company's net investments in foreign operations ("NIFO") hedges and the gains (losses) deferred in OCI for the years ended December 31, 2021, 2020 and 2019 (dollars in millions):

	Derivative Gains (Losses) Deferred in OCI		
	For the years ended December 31,		
Type of NIFO Hedge	2021	2020	2019
Foreign currency swaps	$ (2)	$ 1	$ (9)
Foreign currency forwards	—	(30)	(24)
Total	$ (2)	$ (29)	$ (33)

The cumulative foreign currency translation gain recorded in AOCI related to these hedges was $137 million and $139 million as of December 31, 2021 and 2020, respectively. If a hedged foreign operation was sold or substantially liquidated, the amounts in AOCI would be reclassified to the consolidated statements of income. A pro rata portion would be reclassified upon partial sale of a hedged foreign operation. There were no sales or substantial liquidations of net investments in foreign operations that would have required the reclassification of gains or losses from AOCI into investment income during the periods presented.

Non-qualifying Derivatives and Derivatives for Purposes Other Than Hedging

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

A summary of the effect of non-hedging derivatives, including embedded derivatives, on the Company's consolidated statements of income for the years ended December 31, 2021, 2020 and 2019 is as follows (dollars in millions):

Type of Non-hedging Derivative	Income Statement Location of Gains (Losses)	Gains (Losses) for the years ended December 31, 2021	2020	2019
Interest rate swaps	Investment related gains (losses), net	$ (34)	$ 76	$ 65
Financial futures	Investment related gains (losses), net	(24)	(47)	(46)
Foreign currency swaps	Investment related gains (losses), net	20	(7)	—
Foreign currency forwards	Investment related gains (losses), net	(20)	5	1
Consumer price index swaps	Investment related gains (losses), net	46	16	(18)
Credit default swaps	Investment related gains (losses), net	33	16	30
Equity options	Investment related gains (losses), net	(33)	—	(40)
Longevity swaps	Other revenues	—	—	13
Mortality swaps	Other revenues	—	—	(1)
Subtotal		(12)	59	4
Embedded derivatives in:				
Modco or funds withheld arrangements	Investment related gains (losses), net	107	(62)	11
Indexed annuity products	Interest credited	10	(30)	(57)
Variable annuity products	Investment related gains (losses), net	(7)	8	5
Total non-hedging derivatives		$ 98	$ (25)	$ (37)

Changes in the credit valuation adjustment utilized by the Company to value its embedded derivatives resulted in a (decrease) and increase in investment related gains (losses), net of approximately $(36) million and $70 million for the years ended December 31, 2021 and 2020, respectively. Changes in the credit valuation adjustment did not have a material effect on the change in fair value for the year ended December 31, 2019.

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 as of December 31, 2021 and 2020 (dollars in millions):

	2021			2020		
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	$ 28	$ 600	14.2	$ 11	$ 287	15.0
Subtotal	28	600	14.2	11	287	15.0
BBB+/BBB/BBB-						
Single name credit default swaps	1	141	2.4	2	232	1.6
Credit default swaps referencing indices	—	565	5.1	—	988	3.9
Subtotal	1	706	4.6	2	1,220	3.5
BB+/BB/BB-						
Single name credit default swaps	(1)	15	3.5	—	10	0.7
Subtotal	(1)	15	3.5	—	10	0.7
Total	$ 28	$ 1,321	9.0	$ 13	$ 1,517	5.6

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

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

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

Netting Arrangements and Credit Risk

Certain of the Company's derivatives are subject to enforceable master netting arrangements and reported as a net asset or liability in the 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. See "Embedded Derivatives" above for information regarding the Company's bifurcated embedded derivatives.

The following table provides information relating to the netting of the Company's derivative instruments as of December 31, 2021 and December 31, 2020 (dollars in millions):

	Gross Amounts Recognized	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Financial Instruments/Collateral [(1)]	Net Amount
December 31, 2021:					
Derivative assets	$ 194	$ (19)	$ 175	$ (175)	$ —
Derivative liabilities	58	(19)	39	(39)	$ —
December 31, 2020:					
Derivative assets	$ 171	$ (31)	$ 140	$ (128)	$ 12
Derivative liabilities	80	(31)	49	(193)	(144)

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

The Company may be exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments. Generally, the credit exposure of the Company's derivative contracts is limited to the fair value and accrued interest of non-collateralized derivative contracts in an asset position at the reporting date. As of December 31, 2021, the Company had credit exposure of $18 million.

Derivatives may be exchange-traded or they may be privately negotiated contracts, which are referred to as over-the-counter ("OTC") derivatives. Certain of the Company's OTC derivatives are cleared and settled through central clearing counterparties ("OTC cleared") and others are bilateral contracts between two counterparties. The Company manages its credit risk related to OTC derivatives by entering into transactions with creditworthy counterparties, maintaining collateral arrangements and through the use of master netting agreements that provide for a single net payment to be made by one counterparty to another at each due date and upon termination. The Company is only exposed to the default of the central clearing counterparties for OTC cleared derivatives, and these transactions require initial and daily variation margin collateral postings. Exchange-traded derivatives are settled on a daily basis, thereby reducing the credit risk exposure in the event of non-performance by counterparties to such financial instruments.

Note 6 FAIR VALUE OF ASSETS AND LIABILITIES

Fair Value Measurement

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

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

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

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the related assets or liabilities and include those whose value is determined using market standard valuation techniques described above. Prices are determined using valuation methodologies such as discounted cash flow models and other similar techniques that require management's judgment or estimation in developing inputs that are consistent with those other market participants would use when pricing similar assets and liabilities.

Assets and Liabilities by Hierarchy Level

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2021 and 2020 are summarized below (dollars in millions):

December 31, 2021:		Fair Value Measurements Using:		
	Total	Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	$ 38,103	$ —	$ 34,215	$ 3,888
Canadian government	4,944	—	4,944	—
RMBS	1,050	—	1,049	1
ABS	4,005	—	2,908	1,097
CMBS	1,849	—	1,768	81
U.S. government	2,105	1,993	100	12
State and political subdivisions	1,323	—	1,290	33
Other foreign government	7,370	—	7,337	33
Total fixed maturity securities – available-for-sale	60,749	1,993	53,611	5,145
Equity securities	151	101	—	50
Funds withheld at interest – embedded derivatives	104	—	—	104
Funds withheld at interest	83	—	—	83
Cash equivalents	1,138	1,138	—	—
Short-term investments	64	—	36	28
Other invested assets:				
Derivatives	175	—	175	—
FVO contractholder-directed unit-linked investments	52	—	52	—
Total other invested assets [(1)]	227	—	227	—
Total	$ 62,516	$ 3,232	$ 53,874	$ 5,410
Liabilities:				
Interest-sensitive contract liabilities – embedded derivatives	$ 855	$ —	$ —	$ 855
Other liabilities:				
Funds withheld at interest – embedded derivatives	(61)	—	—	(61)
Derivatives	39	—	39	—
Total	$ 833	$ —	$ 39	$ 794

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

December 31, 2020:		Fair Value Measurements Using:		
	Total	Level 1	Level 2	Level 3
Assets:				
Fixed maturity securities – available-for-sale:				
Corporate	$ 36,208	$ —	$ 33,179	$ 3,029
Canadian government	5,140	—	5,140	—
RMBS	1,817	—	1,814	3
ABS	3,092	—	2,896	196
CMBS	1,868	—	1,813	55
U.S. government	1,437	1,312	111	14
State and political subdivisions	1,390	—	1,381	9
Other foreign government	5,783	—	5,766	17
Total fixed maturity securities – available-for-sale	56,735	1,312	52,100	3,323
Equity securities	132	79	—	53
Funds withheld at interest – embedded derivatives	58	—	—	58
Funds withheld at interest	56	—	—	56
Cash equivalents	1,478	1,478	—	—
Short-term investments	197	32	150	15
Other invested assets:				
Derivatives	140	—	140	—
FVO contractholder-directed unit-linked investments	289	224	65	—
Total other invested assets	429	224	205	—
Total	$ 59,085	$ 3,125	$ 52,455	$ 3,505
Liabilities:				
Interest-sensitive contract liabilities – embedded derivatives	$ 907	$ —	$ —	$ 907
Other liabilities:				
Funds withheld at interest – embedded derivatives	—	—	—	—
Derivatives	49	—	49	—
Total	$ 956	$ —	$ 49	$ 907

The Company may utilize information from third parties, such as pricing services and brokers, to assist in determining the fair value for certain assets and liabilities; however, management is ultimately responsible for all fair values presented in the Company’s financial statements. This includes responsibility for monitoring the fair value process, ensuring objective and reliable valuation practices and pricing of assets and liabilities, and approving changes to valuation methodologies and pricing sources. The selection of the valuation technique(s) to apply considers the definition of an exit price and the nature of the asset or liability being valued and significant expertise and judgment is required.

The Company performs initial and ongoing analysis and review of the various techniques utilized in determining fair value to ensure that they are appropriate and consistently applied, and that the various assumptions are reasonable. The Company analyzes and reviews the information and prices received from third parties to ensure that the prices represent a reasonable estimate of the fair value and to monitor controls around pricing, which includes quantitative and qualitative analysis and is overseen by the Company’s investment and accounting personnel. Examples of procedures performed include, but are not limited to, review of pricing trends, comparison of a sample of executed prices of securities sold to the fair value estimates, comparison of fair value estimates to management’s knowledge of the current market, and ongoing confirmation that third party pricing services use, wherever possible, market-based parameters for valuation. In addition, the Company utilizes both internal and external cash flow models to analyze the reasonableness of fair values utilizing credit spread and other market assumptions, where appropriate. As a result of the analysis, if the Company determines there is a more appropriate fair value based upon the available market data, the price received from the third party is adjusted accordingly. The Company also determines if the inputs used in estimated fair values received from pricing services are observable by assessing whether these inputs can be corroborated by observable market data.

For assets and liabilities reported at fair value, the Company utilizes, when available, fair values based on quoted prices in active markets that are regularly and readily obtainable. Generally, these are very liquid investments and the valuation does not require management judgment. When quoted prices in active markets are not available, fair value is based on market valuation techniques, market comparable pricing and the income approach. The use of different techniques, assumptions and inputs may have a material effect on the estimated fair values of the Company’s securities holdings. For the periods presented, the application of market standard valuation techniques applied to similar assets and liabilities has been consistent.

The methods and assumptions the Company uses to estimate the fair value of assets and liabilities measured at fair value on a recurring basis are summarized below.

Fixed Maturity Securities – The fair values of the Company's publicly-traded fixed maturity securities are generally based on prices obtained from independent pricing services. Prices from pricing services are sourced from multiple vendors, and a vendor hierarchy is maintained by asset type based on historical pricing experience and vendor expertise. The Company generally receives prices from multiple pricing services for each security, but ultimately uses the price from the vendor that is highest in the hierarchy for the respective asset type. To validate reasonableness, prices are periodically reviewed as explained above. Consistent with the fair value hierarchy described above, securities with quotes from pricing services are generally reflected within Level 2, as they are primarily based on observable pricing for similar assets and/or other market observable inputs. If the pricing information received from third party pricing services is not reflective of market activity or other inputs observable in the market, the Company may challenge the price through a formal process with the pricing service.

If the Company ultimately concludes that pricing information received from the independent pricing service is not reflective of fair value, non-binding broker quotes are used, if available. If the Company concludes that the values from both pricing services and brokers are not reflective of fair value, an internally developed valuation may be prepared; however, this occurs infrequently. Internally developed valuations or non-binding broker quotes are also used to determine fair value in circumstances where vendor pricing is not available. These valuations may use significant unobservable inputs, which reflect the Company's assumptions about the inputs that market participants would use in pricing the asset. Observable market data may not be available in certain circumstances such as market illiquidity and credit events related to the security. Pricing service overrides, internally developed valuations and non-binding broker quotes are generally based on significant unobservable inputs and are reflected as Level 3 in the valuation hierarchy.

The inputs used in the valuation of corporate and government securities include, but are not limited to standard market observable inputs that are derived from, or corroborated by, market observable data including market yield curve, duration, call provisions, observable prices and spreads for similar publicly traded or privately placed issues that incorporate the credit quality and industry sector of the issuer. For internal pricing of private placements and structured securities, valuation is based primarily on matrix pricing or other similar techniques using standard market inputs including spreads for actively traded securities, spreads off benchmark yields, expected prepayment speeds and volumes, current and forecasted loss severity, rating, weighted average coupon, weighted average maturity, average delinquency rates, geographic region, debt service coverage ratios and issuance-specific information including, but not limited to: collateral type, payment terms of the underlying assets, payment priority within the tranche, structure of the security, deal performance and vintage of loans.

When observable inputs are not available, the market standard valuation techniques for determining the estimated fair value of certain types of securities that trade infrequently, and therefore have little or no price transparency, rely on inputs that are significant to the estimated fair value that are not observable in the market or cannot be derived principally from or corroborated by observable market data, such as market illiquidity. Other significant unobservable inputs used in the fair value measurement of the Company's private debt investments include a multiple of earnings before interest, taxes, depreciation and amortization ("EBITDA"). These unobservable inputs can be based in large part on management judgment or estimation, and cannot be supported by reference to market activity. Even though unobservable, these inputs are based on assumptions deemed appropriate given the circumstances and are believed to be consistent with what other market participants would use when pricing such securities.

Equity Securities – Equity securities consist principally of common and preferred stock of publicly and privately traded companies. The fair values of publicly traded equity securities are primarily based on quoted market prices in active markets and are classified within Level 1 in the fair value hierarchy. Non-binding broker quotes and internally developed evaluations for equity securities are generally based on significant unobservable inputs and are reflected as Level 3 in the fair value hierarchy.

Embedded Derivatives – The fair value of embedded derivative liabilities, including those calculated by third parties, are monitored through the use of attribution reports to quantify the effect of underlying sources of fair value change, including capital market inputs based on policyholder account values, interest rates and short-term and long-term implied volatilities, from period to period. Actuarial assumptions are based on experience studies performed internally in combination with available industry information and are reviewed on a periodic basis, at least annually.

For embedded derivative liabilities associated with the underlying products in reinsurance treaties, primarily equity-indexed and variable annuity treaties, the Company utilizes a discounted cash flow model, which includes an estimate of future equity option purchases and an adjustment for a CVA. The variable annuity embedded derivative calculations are performed by third parties based on methodology and input assumptions provided by the Company. To validate the reasonableness of the resulting fair value, the Company's internal actuaries perform reviews and analytical procedures on the results. The capital market inputs to the model, such as equity indexes, short-term equity volatility and interest rates, are generally observable. The valuation also requires certain significant inputs, which are generally not observable and accordingly, the valuation is considered Level 3 in the fair value hierarchy,

The fair value of embedded derivatives associated with funds withheld reinsurance treaties is determined based upon a total return swap technique with reference to the fair value of the investments held by the ceding company that support the

Company's funds withheld at interest asset with an adjustment for a CVA. The fair value of the underlying assets is generally based on a variety of sources and pricing methodologies chosen by the ceding company, which are not transparent to the Company and may include significant unobservable inputs. Additionally, some of the valuations also require certain significant inputs, which are generally not observable. Therefore, the valuation of the embedded derivative assets and liabilities associated with these funds withheld reinsurance treaties are considered Level 3 in the fair value hierarchy. Where those funds withheld reinsurance agreements are ceded by the Company, the same approach is taken to valuing the embedded derivatives associated with the funds withheld at interest liability.

Credit Valuation Adjustment – The Company uses a structural default risk model to estimate a CVA. The input assumptions are a combination of externally derived and published values (default threshold and uncertainty), market inputs (interest rate, equity price per share, debt per share, equity price volatility) and insurance industry data (Loss Given Default), adjusted for market recoverability.

Funds Withheld at Interest – Funds withheld at interest, elected at fair value on a limited basis, include assets where inputs are not observable in the market and are considered Level 3 in the fair value hierarchy.

Cash Equivalents and Short-Term Investments – Cash equivalents and short-term investments include money market instruments and other highly liquid debt instruments. Money market instruments are generally valued using unadjusted quoted prices in active markets that are accessible for identical assets and are primarily classified as Level 1. The fair value of certain other cash equivalents and short-term investments, such as bonds with original maturities twelve months or less, are based upon other market observable data and are typically classified as Level 2. However, certain short-term investments may incorporate significant unobservable inputs resulting in a Level 3 classification. Various time deposits, certificates of deposit and sweeps carried as cash equivalents or short-term investments are not measured at estimated fair value and therefore are excluded from the tables presented.

FVO Contractholder-Directed Unit-Linked Investments – FVO contractholder-directed investments supporting unit-linked variable annuity type liabilities consist of fixed maturity securities, exchange-traded funds and to a lesser extent cash and cash equivalents. The fair values of the exchange-traded securities are primarily based on quoted market prices in active markets and are classified within Level 1 of the hierarchy. The fair value of the fixed maturity contractholder-directed securities is determined on a basis consistent with the methodologies described above for fixed maturity securities and are classified within Level 2 of the hierarchy.

Derivative Assets and Derivative Liabilities – All of the derivative instruments utilized by the Company are classified within Level 2 on the fair value hierarchy. These derivatives are principally valued using an income approach. Valuations of interest rate contracts are based on present value techniques, which utilize significant inputs that may include the swap yield curve, London Interbank Offered Rate ("LIBOR") basis curves, Overnight Index Swaps curves, and repurchase rates. Valuations of foreign currency contracts are based on present value techniques, which utilize significant inputs that may include the swap yield curve, LIBOR basis curves, currency spot rates, and cross currency basis curves. Valuations of credit contracts, are based on present value techniques, which utilize significant inputs that may include the swap yield curve, credit curves, and recovery rates. Valuations of equity market contracts, are based on present value techniques, which utilize significant inputs that may include the swap yield curve, spot equity index levels, and dividend yield curves. Valuations of equity market contracts, option-based, are based on option pricing models, which utilize significant inputs that may include the swap yield curve, spot equity index levels, dividend yield curves, and equity volatility.

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 December 31, 2021 and 2020 (dollars in millions):

	Estimated Fair Value		Valuation	Unobservable	Range (Weighted Average)	
Assets:	2021	2020	Technique	Input	2021	2020
Corporate	$ 49	$ 37	Market comparable securities	Liquidity premium	0-1% (1%)	0-1% (1%)
				EBITDA Multiple	5.2x-7.0x (6.4x)	5.2x-11.2x (7.1x)
ABS	205	87	Market comparable securities	Liquidity premium	2-18% (4%)	1-18% (1%)
U.S. government	12	14	Market comparable securities	Liquidity premium	0-1% (1%)	0-1% (1%)
Equity securities	5	10	Market comparable securities	EBITDA Multiple	6.9x-10.6x (8.0x)	6.9x-10.6x (7.9x)
Funds withheld at interest – embedded derivatives	182	58	Total return swap	Mortality	0-100% (3%)	0-100% (3%)
				Lapse	0-35% (18%)	0-35% (13%)
				Withdrawal	0-5% (4%)	0-5% (3%)
				CVA	0-5% (0%)	0-5% (1%)
				Crediting rate	1-4% (2%)	2-4% (2%)
Liabilities:						
Interest-sensitive contract liabilities – embedded derivatives – indexed annuities	693	752	Discounted cash flow	Mortality	0-100% (2%)	0-100% (3%)
				Lapse	0-35% (16%)	0-35% (13%)
				Withdrawal	0-5% (3%)	0-5% (3%)
				Option budget projection	1-4% (2%)	2-4% (2%)
Interest-sensitive contract liabilities – embedded derivatives – variable annuities	162	155	Discounted cash flow	Mortality	0-100% (2%)	0-100% (2%)
				Lapse	0-25% (4%)	0-25% (4%)
				Withdrawal	0-7% (5%)	0-7% (5%)
				CVA	0-5% (1%)	0-5% (1%)
				Long-term volatility	0-27% (14%)	0-27% (13%)

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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.

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 year ended December 31, 2021:	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, net[1]	Funds withheld at interest	Interest-sensitive contract liabilities – embedded derivatives
Fair value, beginning of period	$ 3,029	$ 17	$ 254	$ 23	$ 53	$ 15	$ 58	$ 56	$ (907)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Investment income, net of related expenses	5	—	1	—	—	—	—	(4)	—
Investment related gains (losses), net	(5)	—	—	—	13	—	107	—	(7)
Interest credited	—	—	—	—	—	—	—	—	10
Included in other comprehensive income	(28)	(4)	(6)	—	—	—	—	(1)	—
Other revenues	—	—	—	—	—	—	—	—	—
Purchases[2]	1,506	25	1,038	—	9	31	—	36	(34)
Sales[2]	(53)	—	(6)	—	(25)	(3)	—	—	—
Settlements[2]	(587)	(5)	(186)	(3)	—	(10)	—	(4)	83
Transfers into Level 3	29	—	84	25	—	—	—	—	—
Transfers out of Level 3	(8)	—	—	—	—	(5)	—	—	—
Fair value, end of period	$ 3,888	$ 33	$ 1,179	$ 45	$ 50	$ 28	$ 165	$ 83	$ (855)
Total gains/losses (realized/unrealized) recorded for the period relating to those Level 3 assets and liabilities that were still held at the end of the period									
Included in earnings, net:									
Investment income, net of related expenses	$ 4	$ —	$ 1	$ —	$ —	$ —	$ —	$ (4)	$ —
Investment related gains (losses), net	(7)	—	—	—	7	—	107	—	(15)
Other revenues	—	—	—	—	—	—	—	—	—
Interest credited	—	—	—	—	—	—	—	—	(72)
Included in other comprehensive income	(24)	(4)	(6)	—	—	—	—	(1)	—

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

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

For the year ended December 31, 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	Funds withheld at interest	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	2	—	—	—	—	—	—	(4)	—
Investment related gains (losses), net	(22)	—	—	—	(13)	—	(63)	—	8
Interest credited	—	—	—	—	—	—	—	—	(30)
Included in other comprehensive income	28	1	(7)	1	—	—	—	—	—
Other revenues	—	—	—	—	—	—	—	—	—
Purchases[1]	1,193	—	149	—	3	17	—	60	(32)
Sales[1]	(182)	—	(5)	—	—	—	—	—	—
Settlements[1]	(229)	—	(59)	(3)	—	(3)	—	—	77
Transfers into Level 3	57	—	38	—	—	—	—	—	—
Transfers out of Level 3	(4)	(704)	(70)	—	(14)	(1)	—	—	—
Fair value, end of period	$ 3,029	$ 17	$ 254	$ 23	$ 53	$ 15	$ 58	$ 56	$ (907)
Total gains/losses (realized/unrealized) recorded for the period relating to those Level 3 assets and liabilities that were still held at the end of the period									
Included in earnings, net:									
Investment income, net of related expenses	$ —	$ —	$ —	$ —	$ —	$ —	$ —	$ (4)	$ —
Investment related gains (losses), net	(23)	—	—	—	(13)	—	(63)	—	(2)
Other revenues	—	—	—	—	—	—	—	—	—
Interest credited	—	—	—	—	—	—	—	—	(107)
Included in other comprehensive income	(34)	1	(8)	1	—	—	—	—	—

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

For the year ended December 31, 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 – longevity and mortality swaps	Interest-sensitive contract liabilities – embedded derivatives
Fair value, beginning of period	$ 1,331	$ 533	$ 103	$ 28	$ 33	$ 2	$ 110	$ 48	$ (945)
Total gains/losses (realized/unrealized)									
Included in earnings, net:									
Investment income, net of related expenses	1	15	—	—	—	—	—	—	—
Investment related gains (losses), net	(11)	—	—	—	12	—	11	—	5
Interest credited	—	—	—	—	—	—	—	—	(57)
Included in other comprehensive income	48	162	4	1	—	(1)	—	(2)	—
Other revenues	—	—	—	—	—	—	—	12	—
Purchases[1]	1,050	10	85	—	33	30	—	—	(17)
Sales[1]	(81)	—	(1)	—	(1)	(1)	—	—	—
Settlements[1]	(194)	—	(63)	(4)	—	(1)	—	(58)	84
Transfers into Level 3	43	—	86	—	—	—	—	—	—
Transfers out of Level 3	(1)	—	(6)	—	—	(27)	—	—	—
Fair value, end of period	$ 2,186	$ 720	$ 208	$ 25	$ 77	$ 2	$ 121	$ —	$ (930)
Total gains/losses (realized/unrealized) recorded for the period relating to those Level 3 assets and liabilities that were still held at the end of the period									
Included in earnings, net:									
Investment income, net of related expenses	$ 2	$ 15	$ —	$ —	$ —	$ —	$ —	$ —	$ —
Investment related gains (losses), net	(11)	—	—	—	12	—	11	—	(3)
Other revenues	—	—	—	—	—	—	—	—	—
Interest credited	—	—	—	—	—	—	—	—	(140)

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

Nonrecurring Fair Value Measurements

The Company has certain assets subject to measurement at fair value on a nonrecurring basis, in periods subsequent to their initial recognition if they are determined to be impaired. For the year ended December 31, 2021, the Company did not have any material assets that were measured at fair value due to impairment. The following table presents information for assets measured at an estimated fair value on a nonrecurring basis as of December 31, 2020, and still held at the reporting date (for example, when there is evidence of impairment). The estimated fair values for these assets were determined using significant unobservable inputs (Level 3).

	Carrying Value After Measurement	Net Investment Gains (Losses)
	At December 31,	Years ended December 31,
(dollars in millions)	2020	2020
Limited partnership interests[1]	$ 20	$ (17)

(1) Impairments on these investments were recognized at estimated fair value determined using the net asset values of the Company’s ownership interest as provided in the financial statements of the investees. The market for these investments has limited activity and price transparency.

Fair Value of Financial Instruments

The following table presents the carrying values and estimated fair values of the Company's financial instruments, which were not measured at fair value on a recurring basis, as of December 31, 2021 and 2020 (dollars in millions). This table excludes any payables or receivables for collateral under repurchase or reverse repurchase agreements and other transactions. The estimated fair value of the excluded amount approximates carrying value as they equal the amount of cash collateral received/paid.

			Fair Value Measurement Using:			
December 31, 2021:	Carrying Value [1]	Estimated Fair Value	Level 1	Level 2	Level 3	NAV
Assets:						
Mortgage loans on real estate	$ 6,283	$ 6,580	$ —	$ —	$ 6,580	$ —
Policy loans	1,234	1,234	—	1,234	—	—
Funds withheld at interest	6,747	7,075	—	—	7,075	—
Cash and cash equivalents	1,810	1,810	1,810	—	—	—
Short-term investments	23	23	23	—	—	—
Other invested assets	910	907	6	70	831	—
Accrued investment income	533	533	—	533	—	—
Liabilities:						
Interest-sensitive contract liabilities	$ 18,625	$ 19,540	$ —	$ —	$ 19,540	$ —
Other liabilities – funds withheld at interest	1,658	1,657			1,657	—
Long-term debt	3,667	3,886	—	—	3,886	—
Collateral finance and securitization notes	180	153	—	—	153	—
December 31, 2020:						
Assets:						
Mortgage loans on real estate	$ 5,787	$ 6,167	$ —	$ —	$ 6,167	$ —
Policy loans	1,258	1,258	—	1,258	—	—
Funds withheld at interest	5,292	5,676	—	—	5,676	—
Cash and cash equivalents	1,930	1,930	1,930	—	—	—
Short-term investments	30	30	30	—	—	—
Other invested assets	1,482	1,601	5	89	1,018	489
Accrued investment income	511	511	—	511	—	—
Liabilities:						
Interest-sensitive contract liabilities	$ 18,106	$ 19,683	$ —	$ —	$ 19,683	$ —
Long-term debt	3,573	3,901	—	—	3,901	—
Collateral finance and securitization notes	388	351	—	—	351	—

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

Mortgage Loans on Real Estate – The fair value of mortgage loans on real estate is estimated by discounting cash flows, both principal and interest, using current interest rates for mortgage loans with similar credit ratings and similar remaining maturities. As such, inputs include current treasury yields and spreads, which are based on the credit rating and average life of the loan, corresponding to the market spreads. The valuation of mortgage loans on real estate is considered Level 3 in the fair value hierarchy.

Policy Loans – Policy loans typically carry an interest rate that is adjusted annually based on an observable market index and therefore carrying value approximates fair value. The valuation of policy loans is considered Level 2 in the fair value hierarchy.

Funds Withheld at Interest – The carrying value of funds withheld at interest approximates fair value except where the funds withheld are specifically identified in the agreement. When funds withheld are specifically identified in the agreement, the fair value is based on the fair value of the underlying assets that are held by the ceding company. A variety of sources and pricing methodologies, which are not transparent to the Company and may include significant unobservable inputs, are used to value the securities that are held in distinct portfolios, therefore the valuation of these funds withheld assets and liabilities are considered Level 3 in the fair value hierarchy.

Cash and Cash Equivalents and Short-term Investments – The carrying values of cash and cash equivalents and short-term investments approximate fair values due to the short-term maturities of these instruments and are considered Level 1 in the fair value hierarchy.

Other Invested Assets – This primarily includes lifetime mortgages, FHLB common stock, limited partnership interests accounted for using the cost method and cash collateral. The fair value of the Company’s lifetime mortgage loan portfolio, considered Level 3 in the fair value hierarchy, is estimated by discounting cash flows, both principal and interest, using a risk-free rate plus an illiquidity premium. The cash flow analysis considers future expenses, changes in property prices, and actuarial analysis of borrower behavior, mortality and morbidity. The fair value of the Company’s common stock investment in the FHLB is considered to be the carrying value and it is considered Level 2 in the fair value hierarchy. The fair value of limited partnership interests accounted for using the cost method, considered Level 3 in the fair value hierarchy, is estimated by internally developed valuation techniques. The fair value of the Company’s cash collateral is considered to be the carrying value and considered to be Level 1 in the fair value hierarchy.

Accrued Investment Income – The carrying value for accrued investment income approximates fair value as there are no adjustments made to the carrying value. This is considered Level 2 in the fair value hierarchy.

Interest-Sensitive Contract Liabilities – The carrying and fair values of interest-sensitive contract liabilities reflected in the table above exclude contracts with significant mortality risk. The fair value of the Company’s interest-sensitive contract liabilities utilizes a market standard technique with both capital market inputs and policyholder behavior assumptions, as well as cash values adjusted for recapture fees. The capital market inputs to the model, such as interest rates, are generally observable. Policyholder behavior assumptions are generally not observable and may require use of significant management judgment. The valuation of interest-sensitive contract liabilities is considered Level 3 in the fair value hierarchy.

Long-term Debt/Collateral Finance and Securitization Notes – The fair value of the Company’s long-term debt, and collateral finance and securitization notes is generally estimated by discounting future cash flows using market rates currently available for debt with similar remaining maturities and reflecting the credit risk of the Company, including inputs when available, from actively traded debt of the Company or other companies with similar credit quality. The valuation of long-term debt, and collateral finance and securitization notes is generally obtained from brokers and is considered Level 3 in the fair value hierarchy.

Note 7 REINSURANCE CEDED RECEIVABLES AND OTHER

In the normal course of business, 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 or reinsurance companies under excess coverage and coinsurance contracts. In the individual life markets, the Company retains a maximum of $8 million of coverage per individual life. Claims in excess of this retention amount are retroceded to retrocessionaires; however, the Company remains fully liable to the ceding company for the entire amount of risk it assumes. In certain limited situations the Company has retained more than $8 million per individual policy. The Company enters into agreements with other reinsurers to mitigate the residual risk related to the over-retained policies. Additionally, due to some lower face amount reinsurance coverage provided by the Company in addition to individual life, such as group life, disability and health, under certain circumstances, the Company could potentially incur net claims totaling more than $8 million per individual life.

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. The Company regularly evaluates the financial condition of the insurance and reinsurance companies from which it assumes and to which it cedes reinsurance. Consequently, allowances would be established for amounts deemed uncollectible. At December 31, 2021 and 2020, no allowances were deemed necessary.

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

The following table presents information for the Company’s reinsurance ceded receivables and other, including the respective amount and A.M. Best rating for each reinsurer representing in excess of five percent of the total as of December 31, 2021 and 2020 (dollars in millions):

		2021		2020	
Reinsurer	A.M. Best Rating	Amount	% of Total	Amount	% of Total
Reinsurer A	A+	$ 1,626	63.0 %	$ —	— %
Reinsurer B	A+	423	16.4	420	42.7
Reinsurer C	A+	212	8.2	216	22.0
Reinsurer D	A	59	2.3	64	6.5
Reinsurer E	A+	44	1.7	46	4.7
Reinsurer F	A++	42	1.6	55	5.6
Other reinsurers		174	6.8	182	18.5
Total		$ 2,580	100.0 %	$ 983	100.0 %

Included in the total ceded reinsurance receivables balance were $203 million and $278 million of claims recoverable, of which $10 million and $10 million were in excess of 90 days past due, as of December 31, 2021 and 2020, respectively. Also included in the total reinsurance ceded receivable and other is a deposit asset on reinsurance of $1,626 million as of December 31, 2021.

The effect of reinsurance on net premiums is as follows (dollars in millions):

Years ended December 31,	2021	2020	2019
Direct insurance	$ 33	$ 58	$ 76
Reinsurance assumed	13,348	12,583	12,150
Reinsurance ceded	(868)	(947)	(929)
Net premiums	$ 12,513	$ 11,694	$ 11,297

The effect of reinsurance on claims and other policy benefits as follows (dollars in millions):

Years ended December 31,	2021	2020	2019
Direct insurance	$ 37	$ 97	$ 113
Reinsurance assumed	13,725	11,931	11,404
Reinsurance ceded	(986)	(953)	(1,320)
Net claims and other policy benefits	$ 12,776	$ 11,075	$ 10,197

The effect of reinsurance on life insurance in force is shown in the following schedule (dollars in millions):

	Direct	Assumed	Ceded	Net	Assumed/Net %
December 31, 2021	$ 1,117	$ 3,467,054	$ 166,842	$ 3,301,329	105.0 %
December 31, 2020	1,990	3,480,692	184,625	3,298,057	105.5
December 31, 2019	1,316	3,480,206	192,864	3,288,658	105.8

At December 31, 2021 and 2020, respectively, the Company provided approximately $25.9 billion and $24.3 billion of financial reinsurance, as measured by pre-tax statutory surplus, risk based capital and other financial reinsurance structures, to other insurance companies under financial reinsurance or capital solutions transactions to assist ceding companies in meeting applicable regulatory requirements. Generally, such financial reinsurance is provided by the Company committing cash or assuming insurance liabilities, which are collateralized by future profits on the reinsured business. The Company earns a fee based on the amount of net outstanding financial reinsurance.

Reinsurance treaties, whether facultative or automatic, may provide for recapture rights on the part of the ceding company. Recapture rights permit the ceding company to reassume all or a portion of the risk formerly ceded to the reinsurer after an agreed-upon period of time, generally 10 years, or in some cases due to changes in the financial condition or ratings of the reinsurer. Recapture of business previously ceded does not affect premiums ceded prior to the recapture of such business but would reduce premiums in subsequent periods. Additionally, some reinsurance treaties give the ceding company the right to require the Company to place assets in trust for their benefit to support the ceding company’s statutory reserve credits, in the event of a downgrade of the Company’s credit ratings and or other statutory measure to specified levels, generally non-investment grade levels, or if minimum levels of financial condition are not maintained. As of December 31, 2021, neither the Company nor its subsidiaries have been required to post additional collateral or have had a reinsurance treaty recaptured as a result of credit downgrade or defined statutory measure decline.

Certain reinsurance treaties require the reinsurer to place assets in trust to collateralize the reinsurer’s obligation to the ceding company. Assets placed in trust continue to be owned by the Company, but their use is restricted based on the terms of the trust

agreement. Securities with an amortized cost of $4.1 billion and $3.7 billion were held in trust for the benefit of the Company's subsidiaries to satisfy collateral requirements for reinsurance business at December 31, 2021 and 2020, respectively. Additionally, securities with an amortized cost of $28.7 billion and $27.7 billion as of December 31, 2021 and 2020, respectively, were held in trust to satisfy collateral requirements under certain third-party reinsurance treaties. Under certain conditions, the Company may be obligated to move reinsurance from one subsidiary to another subsidiary, post additional collateral or make payments under a given reinsurance treaty. These conditions include change in control or ratings of the subsidiary, insolvency, nonperformance under a reinsurance treaty, or loss of license or other regulatory authorization of such subsidiary. If the Company was ever required to move reinsurance from one subsidiary to another subsidiary, the risk to the Company on a consolidated basis under the reinsurance treaties would not change; however, additional collateral may need to be posted or additional capital may be required due to the change in jurisdiction of the subsidiary reinsuring the business, which could lead to a strain on liquidity.

Note 8 DEFERRED POLICY ACQUISITION COSTS

The following reflects the amounts of policy acquisition costs deferred and amortized (dollars in millions):

Years ended December 31,	2021	2020	2019
Balance, beginning of year	$ 3,616	$ 3,512	$ 3,398
Capitalization	541	478	526
Amortization (including interest)	(496)	(405)	(315)
Change in value of embedded derivatives	(36)	22	(15)
Attributed to unrealized investment gains (losses)	33	(26)	(97)
Foreign currency translation	32	35	15
Balance, end of year	$ 3,690	$ 3,616	$ 3,512

Some reinsurance agreements involve reimbursing the ceding company for allowances and commissions in excess of first-year premiums. These amounts represent acquisition costs and are capitalized to the extent deemed recoverable from the future premiums and amortized against future profits of the business. This type of agreement presents a risk to the extent that the business lapses faster than originally anticipated, resulting in future profits being insufficient to recover the Company's investment.

Note 9 INCOME TAX

The effective tax rate for 2021 was lower than the U.S. Statutory rate of 21.0% primarily as a result of the release of uncertain tax positions due to the expiration of the statute of limitations, and the release of valuation allowances primarily due to income earned in RGA Australia. This benefit was partially offset by income earned in jurisdictions with tax rates higher than the U.S. and GILTI, both emerging from income in Canada and Australia. Furthermore, the UK enacted an increase to the statutory tax rate resulting in a tax expense from the remeasurement of the deferred tax liabilities. The effective tax rate for 2020 was higher than the U.S. Statutory rate of 21.0% primarily as a result of income earned in jurisdictions with tax rates higher than the U.S., GILTI tax primarily due to RGA Canada's income, and a change in the corporate tax rate in the UK. These increases were partially offset by foreign tax credit utilization and bases differences in Australia.

Pre-tax income for the years ended December 31, 2021, 2020 and 2019 consists of the following (dollars in millions):

	2021	2020	2019
Pre-tax income – U.S.	$ 327	$ 79	$ 871
Pre-tax income – foreign	364	474	261
Total pre-tax income	$ 691	$ 553	$ 1,132

The provision for income tax expense for the years ended December 31, 2021, 2020 and 2019 consists of the following (dollars in millions):

	2021	2020	2019
Current income tax expense (benefit):			
U.S.	$ 91	$ 75	$ (9)
Foreign	72	79	60
Total current	163	154	51
Deferred income tax expense (benefit):			
U.S.	(127)	(60)	182
Foreign	38	44	29
Total deferred	(89)	(16)	211
Total provision for income taxes	$ 74	$ 138	$ 262

The Company's effective tax rate differed from the U.S. federal income tax statutory rate of 21% as a result of the following for the years ended December 31, 2021, 2020 and 2019 (dollars in millions):

	2021	2020	2019
Tax provision at U.S. statutory rate	$ 145	$ 116	$ 238
Increase (decrease) in income taxes resulting from:			
Tax rate differences on income in other jurisdictions	51	21	2
Differences in tax basis in foreign jurisdictions	(4)	(32)	(23)
Deferred tax valuation allowance	(18)	10	56
Amounts related to uncertain tax positions	(119)	10	8
Equity based compensation	(1)	(1)	(8)
Corporate rate changes	29	13	(1)
GILTI, net of credits	11	13	—
Subpart F for non-full inclusion companies	2	—	1
Foreign tax credits	(10)	(7)	(6)
Return to provision adjustments	(17)	(4)	(6)
Other, net	5	(1)	1
Total provision for income taxes	$ 74	$ 138	$ 262
Effective tax rate [(1)]	10.6 %	24.9 %	23.1 %

(1) The Company rounds amounts in the financial statements to millions and calculates the effective tax rate from the underlying whole-dollar amounts. Thus certain amounts may not recalculate based on the numbers due to rounding.

Total income taxes for the years ended December 31, 2021, 2020 and 2019 were as follows (dollars in millions):

	2021	2020	2019
Provision for income taxes	$ 74	$ 138	$ 262
Income tax from OCI and additional paid-in-capital:			
Net unrealized holding gain (loss) on debt and equity securities recognized for financial reporting purposes	(520)	611	681
Foreign currency translation	23	(9)	3
Unrealized pension and post retirement	7	(1)	(5)
Total income taxes provided	$ (416)	$ 739	$ 941

The tax effects of temporary differences that give rise to significant portions of the deferred income tax assets and liabilities at December 31, 2021 and 2020, are presented in the following tables (dollars in millions):

	2021	2020
Deferred income tax assets:		
Nondeductible accruals	$ 85	$ 92
Net operating loss carryforward	251	254
Tax Credit Carryforward	50	—
Other	3	—
Subtotal	389	346
Valuation allowance	(218)	(251)
Total deferred income tax assets	171	95
Deferred income tax liabilities:		
Deferred acquisition costs	754	775
Policy reserves and other reinsurance liabilities	1,085	1,105
Invested assets	793	1,043
Outside basis difference foreign subsidiaries	260	354
Foreign currency translation	66	40
Anticipated future tax credit reduction	58	20
Other	—	2
Total deferred income tax liabilities	3,016	3,339
Net deferred income tax liabilities	$ 2,845	$ 3,244
Balance sheet presentation of net deferred income tax liabilities:		
Included in other assets	$ 41	$ 19
Included in deferred income taxes	2,886	3,263
Net deferred income tax liabilities	$ 2,845	$ 3,244

As of December 31, 2021, the valuation allowance against deferred tax assets was $218 million. During 2021, there were decreases to the valuation allowance due to pre-tax earnings in certain subsidiaries with valuation allowances. These decreases were partially offset by increases in the valuation allowance due to losses in subsidiaries that do not have a history of income. The valuation allowance was further impacted by changes in foreign currency translation during the year.

As of December 31, 2020, the valuation allowance against deferred tax assets was $251 million. During 2020, there was a $20 million increase to the valuation allowance related to the tax losses of RGA Reinsurance Company of Australia Limited ("RGA Australia"). RGA Australia's tax loss primarily relates to income on internal retrocession that is not taxable in RGA Australia. The RGA Australia deferred tax asset has been reduced to the amount more likely than not to be realized considering the projected future earnings. The valuation allowance increased further due to losses in jurisdictions that do not have a history of income and changes in foreign currency translation during the year. These increases were partially offset by a valuation allowance release related to U.S. Foreign Tax Credit utilization and income in jurisdictions with valuation allowances.

The earnings of substantially all of the Company's foreign subsidiaries have been permanently reinvested in foreign operations. The Company has provided for future tax on the full inclusion companies where the Company cannot assert permanent reinvestment. At December 31, 2021 and 2020, the financial reporting basis in excess of the tax basis for which no deferred taxes have been recognized was approximately $1.8 billion and $2.7 billion, respectively. 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 were repatriated.

During 2021, 2020, and 2019, the Company received federal and foreign income tax refunds of approximately $20 million, $59 million, and $22 million, respectively. The Company made cash income tax payments of approximately $388 million, $167 million, and $66 million, in 2021, 2020, and 2019, respectively.

The following table presents consolidated net operating losses (“NOL”) as of December 31, 2021 (dollars in millions):

	2021
NOL with no expiration and with no valuation allowance	$ 100
NOL with a full valuation allowance	187
NOL with no expiration and a partial valuation allowance	631
NOL with expiration dates between 2025 and 2041 with no valuation allowance	2
Total net operating loss carryforwards	$ 920

These net operating losses, other than the net operating losses for which there is a valuation allowance, are expected to be utilized in the normal course of business during the period allowed for carryforwards and in any event, are not expected to be lost, due to the application of tax planning strategies that management would utilize.

As of December 31, 2021, the Company had foreign tax credit carryforwards of $50 million related to the U.S. and Ireland. The Ireland foreign tax credit of $26 million has a full valuation allowance.

The Company files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. The Company is under continuous examination by the Internal Revenue Service and is subject to audit by taxing authorities in other foreign jurisdictions in which the Company has significant business operations. The income tax years under examination vary by jurisdiction. The Company is no longer subject to U.S. federal income tax examinations by tax authorities for years prior to 2018, Canadian tax authorities for years prior to 2017 and with a few exceptions, the Company is no longer subject to state and foreign income tax examinations by tax authorities for years prior to 2016.

As of December 31, 2021, the Company's total amount of unrecognized tax benefits is $34 million all of which would affect the effective tax rate, if recognized. Management believes it is reasonably possible that the unrecognized tax benefit could decrease by up to $5 million over the next 12 months if statutes expire.

A reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2021, 2020 and 2019, is as follows (dollars in millions):

	Total Unrecognized Tax Benefits		
	2021	2020	2019
Beginning balance, January 1	$ 342	$ 333	$ 325
Additions for tax positions of prior years	2	281	264
Reductions for tax positions of prior years	(312)	(278)	(262)
Additions for tax positions of current year	2	6	6
Ending balance, December 31	$ 34	$ 342	$ 333

The Company recognized interest expense (benefit) associated with uncertain tax positions in 2021, 2020 and 2019 of $(31) million, $11 million, and $12 million, respectively. As of December 31, 2021 and 2020, the Company had $3 million and $34 million, respectively, of accrued interest related to unrecognized tax benefits. There are no penalties accrued as of December 31, 2021 and 2020.

Note 10 EMPLOYEE BENEFIT PLANS

Certain subsidiaries of the Company are sponsors or administrators of both qualified and non-qualified defined benefit pension plans ("Pension Plans"). The largest of these plans is a non-contributory qualified defined benefit pension plan sponsored by RGA Reinsurance Company ("RGA Reinsurance") that covers U.S. employees. The benefits under the Pension Plans are generally based on years of service and compensation levels. Effective January 1, 2020, the qualified defined benefit pension plan and some of the non-qualified defined benefit pension plans were closed to new employees.

The Company also provides select health care and life insurance benefits for certain retired employees. The health care benefits are provided through a self-insured welfare benefit plan. Employees become eligible for these benefits if they meet minimum age and service requirements. The retiree's cost for health care benefits varies depending upon the credited years of service. Effective January 1, 2017, employees hired in the U.S. are not eligible for retiree health care benefits. The effect of the amendment was recorded in 2016 in AOCI and is being amortized through prior service cost. Virtually all retirees, or their beneficiaries, contribute a portion of the total cost of postretirement health benefits. Overfunded and underfunded plans are recognized in other assets and other liabilities, respectively.

A December 31 measurement date is used for all of the defined benefit and postretirement plans. The status of these plans as of December 31, 2021 and 2020 is summarized below (dollars in millions):

	December 31,			
	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Change in benefit obligation:				
Benefit obligation at beginning of year	$ 254	$ 220	$ 81	$ 87
Service cost	18	14	3	3
Interest cost	4	6	2	2
Participant contributions	—	—	—	—
Amendments	—	—	(3)	—
Actuarial (gains) losses	(8)	25	(6)	(9)
Benefits paid	(12)	(12)	(2)	(2)
Foreign exchange translations and other adjustments	—	1	—	—
Benefit obligation at end of year	$ 256	$ 254	$ 75	$ 81

	December 31,			
	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Change in plan assets:				
Fair value of plan assets at beginning of year	$ 157	$ 133	$ —	$ —
Actual return on plan assets	15	18	—	—
Employer contributions	19	18	2	2
Participant contributions	—	—	—	—
Benefits paid and expenses	(12)	(12)	(2)	(2)
Fair value of plan assets at end of year	$ 179	$ 157	$ —	$ —
Funded status at end of year	$ (77)	$ (97)	$ (75)	$ (81)

	December 31,					
	Qualified Plans		Non-Qualified Plans[(1)]		Total	
	2021	2020	2021	2020	2021	2020
Aggregate fair value of plan assets	$ 179	$ 157	$ —	$ —	$ 179	$ 157
Aggregate projected benefit obligations	166	160	90	94	256	254
Over (under) funded	$ 13	$ (3)	$ (90)	$ (94)	$ (77)	$ (97)

(1) For non-qualified plans, there are no required funding levels.

	December 31,			
	Pension Benefits		Other Benefits	
	2021	2020	2021	2020
Amounts recognized in accumulated other comprehensive income:				
Net actuarial loss	$ 52	$ 71	$ 20	$ 29
Net prior service cost (credit)	—	—	(9)	(8)
Total	$ 52	$ 71	$ 11	$ 21

The following table presents information for qualified and non-qualified pension plans with a projected benefit obligation in excess of plan assets as of December 31, 2021 and 2020 (dollars in millions):

	2021	2020
Projected benefit obligation	$ 256	$ 254
Fair value of plan assets	179	157

The following table presents information for pension plans with an accumulated benefit obligation in excess of plan assets as of December 31, 2021 and 2020 (dollars in millions):

	2021	2020
Accumulated benefit obligation	$ 248	$ 243
Fair value of plan assets	179	157

The components of net periodic benefit cost, included in other operating expenses on the consolidated statements of income, and other changes in plan assets and benefit obligations recognized in other comprehensive income were as follows (dollars in millions):

	Pension Benefits			Other Benefits		
	2021	2020	2019	2021	2020	2019
Net periodic benefit cost:						
Service cost	$ 18	$ 14	$ 13	$ 3	$ 3	$ 3
Interest cost	4	6	7	2	2	3
Expected return on plan assets	(10)	(9)	(7)	—	—	—
Amortization of net actuarial losses	6	5	4	2	2	1
Amortization of prior service cost (credit)	—	—	—	(1)	(1)	(1)
Settlements	—	—	—	—	—	—
Net periodic benefit cost	18	16	17	6	6	6
Other changes in plan assets and benefit obligations recognized in other comprehensive income:						
Net actuarial (gains) losses	(13)	17	14	(6)	(8)	14
Amortization of net actuarial (losses)	(6)	(5)	(4)	(2)	(2)	(1)
Amortization of prior service (cost) credit	—	—	—	1	1	1
Settlements	—	—	—	—	—	—
Prior service cost (credit)	—	—	—	(3)	—	—
Foreign exchange translations and other adjustments	—	—	—	—	—	—
Total recognized in other comprehensive income	(19)	12	10	(10)	(9)	14
Total recognized in net periodic benefit cost and other comprehensive income	$ (1)	$ 28	$ 27	$ (4)	$ (3)	$ 20

During 2022, the Company expects to contribute $22 million and $2 million to the pension plans and other benefit plans, respectively.

The following benefit payments, which reflect expected future service as appropriate, are expected to be paid (dollars in millions):

	Pension Benefits	Other Benefits
2022	$ 12	$ 2
2023	15	2
2024	16	2
2025	18	2
2026	17	3
2027 – 2031	97	17

Assumptions

The weighted average assumptions used to determine the benefit obligation and net periodic benefit cost were as follows:

	Pension Benefits			Other Benefits		
	2021	2020	2019	2021	2020	2019
Benefit obligation						
Discount rate	2.64 %	2.22 %	3.05 %	2.76 %	2.41 %	3.17 %
Rate of compensation increase	4.74 %	4.69 %	4.61 %	n/a	n/a	n/a
Net periodic benefit cost						
Discount rate	2.21 %	3.03 %	4.03 %	2.41 %	3.17 %	4.17 %
Expected long-term rate of return on plan assets	6.50 %	7.00 %	7.00 %	n/a	n/a	n/a
Rate of compensation increase	4.71 %	4.60 %	4.16 %	n/a	n/a	n/a

The expected rate of return on plan assets is based on anticipated performance of the various asset sectors in which the plan invests, weighted by target allocation percentages. Anticipated future performance is based on long-term historical returns of the plan assets by sector, adjusted for the long-term expectations on the performance of the markets. While the precise expected return derived using this approach may fluctuate from year to year, the policy is to hold this long-term assumption constant as long as it remains within reasonable tolerance from the derived rate. This process is consistent for all plan assets as all the assets are invested in mutual funds.

The assumed health care cost trend rates used in measuring the accumulated non-pension post-retirement benefit obligation were as follows:

	As of December 31,	
	2021	2020
Health care cost trend rates assumed for next year	6.50 %	7.00 %
Ultimate cost trend rate	4.50 %	4.50 %
Year ultimate trend is reached	2026	2026

Plan Assets

Target allocations of U.S. qualified pension plan assets are determined with the objective of maximizing returns and minimizing volatility of net assets through adequate asset diversification and partial liability immunization. Adjustments are made to target allocations based on the Company's assessment of the effect of economic factors and market conditions. The target allocations for plan assets are 60% equity securities and 40% debt securities as of December 31, 2021 and 2020. The Company's plan assets are invested in mutual funds. The mutual funds include holdings of S&P 500 securities, large-cap securities, mid-cap securities, small-cap securities, international securities, corporate debt securities, U.S. and other government securities, mortgage-related securities and cash.

Equity and debt securities are exposed to various risks, such as interest rate risk, credit risk and overall market volatility. Due to the level of risk associated with certain investment securities, changes in the values of investment securities will occur and any change would affect the amounts reported in the financial statements.

The fair values of the Company's qualified pension plan assets as of December 31, 2021 and 2020 are summarized below (dollars in millions):

	December 31, 2021			
		Fair Value Measurement Using:		
	Total	Level 1	Level 2	Level 3
Mutual Funds[1]	$ 179	$ 179	$ —	$ —
Cash	—	—	—	—
Total	$ 179	$ 179	$ —	$ —

(1) Mutual funds were invested 27% in U.S. equity funds, 38% in U.S. fixed income funds, 18% in non-U.S. equity funds and 17% in other.

	December 31, 2020			
		Fair Value Measurement Using:		
	Total	Level 1	Level 2	Level 3
Mutual Funds[2]	$ 157	$ 157	$ —	$ —
Cash	—	—	—	—
Total	$ 157	$ 157	$ —	$ —

(2) Mutual funds were invested 27% in U.S. equity funds, 39% in U.S. fixed income funds, 18% in non-U.S. equity funds and 16% in other.

As of December 31, 2021 and 2020, the Company classified all of its qualified pension plan assets in the Level 1 category as quoted prices in active markets are available for these assets. See Note 6 – "Fair Value of Asset and Liabilities" for additional detail on the fair value hierarchy.

Savings and Investment Plans

Certain subsidiaries of RGA also sponsor savings and investment plans under which a portion of employee contributions are matched. Subsidiary contributions to these plans were $21 million, $19 million and $16 million in 2021, 2020 and 2019, respectively.

Note 11 FINANCIAL CONDITION AND NET INCOME ON A STATUTORY BASIS – SIGNIFICANT SUBSIDIARIES

The domestic and foreign insurance subsidiaries of RGA prepare their statutory financial statements in conformity with statutory accounting practices prescribed or permitted by the applicable state insurance department or local regulatory authority, which may vary materially from statements prepared in accordance with GAAP. Prescribed statutory accounting practices in the U.S. include publications of the National Association of Insurance Commissioners ("NAIC"), as well as state laws, local regulations and general administrative rules. The differences between statutory financial statements and financial statements prepared in accordance with GAAP vary between jurisdictions. The principal differences between GAAP and NAIC are that statutory financial statements do not reflect deferred policy acquisition costs and limit deferred tax assets, life benefit reserves

predominately use interest rate and mortality assumptions prescribed by the NAIC and local regulatory agencies, bonds are generally carried at amortized cost and reinsurance assets and liabilities are presented net of reinsurance.

Statutory net income and capital and surplus of the Company's primary operating insurance subsidiaries, determined in accordance with statutory accounting practices prescribed by the applicable state insurance department or local regulatory authority are as follows (dollars in millions):

	Statutory Capital and Surplus		Statutory Net Income (Loss)		
	2021	2020	2021	2020	2019
RGA Americas Reinsurance Company, Ltd.	$ 6,812	$ 8,249	$ (241)	$ 879	$ 1,049
RGA Reinsurance Company	2,368	2,131	(98)	(133)	280
Reinsurance Company of Missouri, Incorporated	2,362	2,136	(13)	4	75
RGA Reinsurance Company (Barbados) Ltd.	1,781	1,835	52	268	234
RGA Atlantic Reinsurance Company Ltd.	1,137	1,441	(226)	175	243
RGA International Reinsurance Company dac	1,121	1,460	43	52	37
RGA Life Reinsurance Company of Canada	903	886	25	152	(225)
RGA Worldwide Reinsurance Company, Ltd.	702	703	10	104	106
RGA Global Reinsurance Company, Ltd.	565	495	93	59	71
RGA Reinsurance Company of Australia Limited	485	535	(22)	42	15
Other	1,015	1,298	(152)	194	114

Each U.S. domestic insurance subsidiary's state of domicile imposes minimum risk-based capital ("RBC") requirements that were developed by the NAIC. The formulas for determining the amount of RBC specify various weighting factors that are applied to financial balances or various levels of activity based on the perceived degree of risk. Regulatory compliance is determined by a ratio of total adjusted capital, as defined by the NAIC, to authorized control level RBC, as defined by the NAIC. Companies below specific trigger points or ratios are classified within certain levels, each of which requires specified corrective action. Each of RGA's U.S. domestic insurance subsidiaries exceeded the minimum RBC requirements for all periods presented herein. These requirements do not represent a significant constraint for the payment of dividends by RGA's U.S. domestic insurance companies.

The licensing orders of the Company's special purpose companies stipulate a minimum amount of capital required based on the purpose of the entity and the underlying business. These companies are subject to enhanced oversight by the regulator which includes filing detailed plans of operations before commencing operations or making material changes to existing agreements or entering into new agreements. Each of the Company's Special Purpose Life Reinsurance Captives ("SPLRC") exceeded the minimum capital requirements for all periods presented herein.

The Company's foreign insurance subsidiaries prepare financial statements in accordance with local regulatory requirements. The regulatory authorities in these foreign jurisdictions establish some form of minimum regulatory capital and surplus requirements. All of the Company's foreign insurance subsidiaries have regulatory capital and surplus that exceed the local minimum requirements. These requirements do not represent a significant constraint for the payment of dividends by the Company's foreign insurance companies.

The state of domicile of certain of the Company's SPLRCs follow prescribed accounting practices differing from NAIC statutory accounting practices ("NAIC SAP") applicable to their statutory financial statements. Specifically, these prescribed practices require that surplus note interest accrued but not approved for payment be reported as a direct reduction of surplus and an addition to the surplus note balance. Under NAIC SAP, surplus note interest is not to be reported until approved for payment and is reported as a reduction of net investment income in the Summary of Operations. In addition, these prescribed practices allow the SPLRC to reflect letters of credit issued for its benefit as an admitted asset and a direct credit to unassigned surplus. Under NAIC SAP, letters of credit issued on behalf of the reporting company are not reported on the balance sheet.

A reconciliation of the surplus between NAIC SAP and practices prescribed by the state of domicile is shown below (dollars in millions):

	December 31,	
	2021	2020
Prescribed practice – surplus	$ 403	$ 577
Prescribed practice – letters of credit	(461)	(461)
Surplus (deficit) – NAIC SAP	$ (58)	$ 116

Reinsurance Company of Missouri ("RCM"), RGA Reinsurance and Chesterfield Reinsurance Company ("Chesterfield Re") are subject to Missouri statutory provisions that restrict the payment of dividends. They may not pay dividends in any 12-month period in excess of the greater of the prior year's statutory net gain from operations or 10% of statutory capital and surplus at

the preceding year-end, without regulatory approval. Aurora National Life Assurance Company ("Aurora National") is subject to California statutory provisions that are identical to those imposed by Missouri regarding the ability of Aurora National to pay dividends to RGA Reinsurance. The applicable statutory provisions only permit an insurer to pay a shareholder dividend from unassigned surplus. As of January 1, 2022, RGA Reinsurance could pay maximum dividends, without prior approval, of approximately $237 million. Any dividends paid by RGA Reinsurance would be paid to RCM, its parent company, which in turn has restrictions related to its ability to pay dividends to RGA.

Chesterfield Re would pay dividends to its immediate parent Chesterfield Financial Holdings LLC, ("Chesterfield Financial"), which would in turn pay dividends to RCM, subject to the terms of the indenture for the embedded value securitization transaction, in which Chesterfield Financial cannot declare or pay any dividends so long as any private placement notes are outstanding. The Missouri Department of Commerce and Insurance allows RCM to pay a dividend to RGA to the extent RCM received the dividend from its subsidiaries, without limitation related to the level of unassigned surplus. Dividend payments from other subsidiaries are subject to regulations in the jurisdiction of domicile, which are generally based on their earnings and/or capital level.

Dividend payments from non-U.S. operations are subject to similar restrictions established by local regulators. The non-U.S. regulatory regimes also commonly limit the dividend payments to the parent to a portion of the prior year's statutory income, as determined by the local accounting principles. The regulators of the Company's non-U.S. operations may also limit or prohibit profit repatriations or other transfers of funds to the U.S. if such transfers are deemed to be detrimental to the solvency or financial strength of the non-U.S. operations, or for other reasons. Most of the non-U.S. operating subsidiaries are second tier subsidiaries that are owned by various non-U.S. holding companies. The capital and rating considerations applicable to the first tier subsidiaries may also impact the dividends paid to RGA.

There are no regulatory restrictions that limit the payment of dividends by RGA, except those generally applicable to Missouri corporations. Dividends are payable by Missouri corporations only under the circumstances specified in The General and Business Corporation Law of Missouri. RGA would not be permitted to pay common stock dividends if there is any accrued and unpaid interest on its subordinated debentures and its junior subordinated debentures. Furthermore, the ability of RGA to pay dividends is dependent on business conditions, income, cash requirements of the Company, receipt of dividends from its subsidiaries, financial covenant provisions and other relevant factors.

Note 12 COMMITMENTS, CONTINGENCIES AND GUARANTEES

Commitments

Funding of Investments

The Company's commitments to fund investments as of December 31, 2021 and 2020 are presented in the following table (dollars in millions):

	2021	2020
Limited partnership interests and joint ventures	$ 1,031	$ 678
Mortgage loans on real estate	152	199
Bank loans and private placements	768	194
Lifetime mortgages	41	43

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 associated with unfunded commitments of approximately $1 million and $2 million as of December 31, 2021 and 2020, respectively, which is included in other liabilities on the Company's consolidated balance sheets.

Off-Balance Sheet Arrangements

In 2013, the Company executed a series of incentive agreements with the County of St. Louis, Missouri (the "County"). Under these agreements, the Company transferred ownership in its newly constructed world headquarters to the County in exchange for taxable industrial revenue bonds (the "bonds"), in a series of bond issuances during 2013 and 2014, with a maximum amount of $150 million. As a result, the Company was able to reduce the cost of constructing and operating its world headquarters by reducing certain state and local tax expenditures. The Company simultaneously leased the world headquarters from the County and has an option to purchase the world headquarters for a nominal fee upon tendering the bonds back to the County. The payments due to the Company under the terms of the bonds and the amounts owed by the Company under the terms of the lease agreement qualify for the right of offset under GAAP. As such, neither the bonds nor the lease obligation is

recorded on the consolidated balance sheets as an asset or liability, respectively. The world headquarters is recorded as an asset of the Company in “Other assets” on the consolidated balance sheets.

Funding Agreements

Federal Home Loan Bank of Des Moines

The Company is a member of the FHLB and, through membership, has issued funding agreements to the FHLB in exchange for cash advances. As of December 31, 2021 and 2020, the Company had $1.4 billion and $1.9 billion, respectively, of FHLB funding agreements outstanding. The Company is required to provide collateral in excess of the funding agreement amounts outstanding, considering any discounts to the securities posted and prepayment penalties.

Funding Agreement Backed Notes

During 2021, the Company executed an offering under its Funding Agreement Backed Notes (“FABN”) program, which allows RGA Global Funding, a special-purpose, unaffiliated statutory trust, to offer its senior secured medium-term notes to investors. RGA Global Funding uses the net proceeds from each sale to purchase one or more funding agreements from the Company. As of December 31, 2021, the Company had $500 million of FABN agreements outstanding and are included within interest-sensitive contract liabilities. On January 18, 2022, the Company issued additional FABN agreements totaling $400 million.

Contingencies

Litigation

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

Other Contingencies

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

Guarantees

Statutory Reserve and Solvency Support

The Company 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, the Company 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, the Company would recognize a right to use asset and lease obligation. As of December 31, 2021, 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 December 31, 2021 (dollars in millions):

Commitment Period	Maximum Potential Obligation
2034	$ 1,243
2035	2,671
2036	3,599
2037	6,850
2038	2,300
2039	7,351
2046	3,000

Other Guarantees

The Company has issued guarantees to third parties on behalf of its subsidiaries for the payment of amounts due under certain reinsurance treaties, 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. 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 for any legally offsetting amounts due

from the guaranteed party are reflected on the Company's consolidated balance sheets in a policy related liability. 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 December 31, 2021 and 2020 are reflected in the following table (dollars in millions):

	2021	2020
Treaty guarantees	$ 2,208	$ 1,934
Treaty guarantees, net of assets in trust	1,281	961
Securities borrowing and repurchase arrangements	134	133

Note 13 DEBT

Long-Term Debt

The Company's long-term debt consists of the following as of December 31, 2021 and 2020 (dollars in millions):

	2021	2020
$400 million 5.00% Senior Notes due 2021	$ —	$ 400
$400 million 4.70% Senior Notes due 2023	400	399
$400 million 3.95% Senior Notes due 2026	400	400
$600 million 3.90% Senior Notes due 2029	599	599
$600 million 3.15% Senior Notes due 2030	597	597
$100 million 4.09% Promissory Note due 2039	80	83
$400 million 6.20% Subordinated Debentures due 2042	400	400
$500 million 4.00% Surplus Notes due 2051	500	—
$400 million 5.75% Subordinated Debentures due 2056	400	400
$400 million Variable Rate Junior Subordinated Debentures due 2065	319	319
Sub-total	3,695	3,597
Unamortized issuance costs	(28)	(24)
Long-term Debt	$ 3,667	$ 3,573

RGA has entered into an interest rate swap on its Variable Rate Junior Subordinated Debentures that effectively fixes the interest rate on these securities at 4.82% until December 2037.

On December 13, 2021, RGA Reinsurance, a subsidiary of Reinsurance Group of America, Incorporated, entered into a subscription agreement with unaffiliated financial institutions as purchasers (the "Purchasers"), pursuant to which RGA Reinsurance has issued to the Purchasers 4.00% Surplus Notes due 2051 (the "Surplus Notes"). The proceeds of the Surplus Notes issued pursuant to the subscription agreement was $500 million. RGA Reinsurance will use the proceeds of the Surplus Notes for general corporate purposes. Capitalized issue costs were approximately $6 million.

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 were used in part to repay the Company's $400 million 5.00% Senior Notes that matured in June 2021, and the remainder was used for general corporate purposes. Capitalized issue costs were approximately $5 million.

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. 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-default covenants, which would make outstanding borrowings immediately payable in the event of a material uncured covenant default under any of the agreements, including, but not limited to, non-payment of indebtedness when due for an amount in excess of the amounts set forth in those agreements, bankruptcy proceedings, or any other event that results in the acceleration of the maturity of indebtedness. As of December 31, 2021 and 2020, the Company had $3,695 million and $3,597 million, respectively, in outstanding borrowings under its debt agreements and was in compliance with all covenants under those agreements. As of December 31, 2021 and 2020, the average interest rate on long-term debt outstanding was 4.42% and 4.54%, 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, and the Company's ability to raise additional funds. Future principal payments due on long-term debt, excluding discounts, as of December 31, 2021, were as follows (dollars in millions):

	Calendar Year					
	2022	2023	2024	2025	2026	Thereafter
Long-term debt	$ 3	$ 403	$ 3	$ 4	$ 404	$ 2,883

Credit and Committed 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. At December 31, 2021 and 2020, there were approximately $53 million and $23 million, respectively, of undrawn outstanding bank letters of credit in favor of third parties. Additionally, the Company utilizes letters of credit primarily to secure 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. As of December 31, 2021 and 2020, $1,440 million and $1,508 million, respectively, in undrawn letters of credit from various banks were outstanding, primarily backing reinsurance between the various subsidiaries of the Company. The banks providing letters of credit to the Company are included on the NAIC list of approved banks.

The Company maintains seven committed credit facilities, a syndicated revolving credit facility and six letter of credit facilities. The committed credit facilities have a combined capacity of $988 million while the syndicated revolving credit facility is for $850 million and the remaining credit facilities have a capacity of $1,025 million. The Company may borrow cash and obtain letters of credit in multiple currencies under its syndicated revolving credit facility. The following table provides additional information on the Company's existing committed credit facilities as of December 31, 2021 and 2020 (dollars in millions):

		Amount Utilized[(1)] December 31,		
Current Capacity	Maturity Date	2021	2020	Basis of Fees
$ 108	March 2022	$ 108	$ 107	Fixed
500	May 2022	376	210	Debt rating and utilization %
100	May 2023	70	75	Fixed
850	August 2023	21	21	Senior unsecured long-term debt rating
80 [(2)]	December 2023	80	100	Fixed
100	February 2024	51	51	Fixed
100	August 2024	40	100	Fixed

(1) Represents issued but undrawn letters of credit. There was no cash borrowed for the periods presented.

(2) Foreign currency denominated facility, amounts presented are in U.S. dollars.

Fees associated with the Company's other letters of credit are not fixed for periods in excess of one year and are based on the Company's ratings and the general availability of these instruments in the marketplace. Total fees expensed associated with the Company's letters of credit were $11 million, $10 million and $8 million for the years ended December 31, 2021, 2020 and 2019, respectively, and are included in policy acquisition costs and other insurance expenses.

Note 14 COLLATERAL FINANCE AND SECURITIZATION NOTES

Collateral Finance Notes

In 2006, RGA's subsidiary, Timberlake Financial L.L.C. ("Timberlake Financial"), issued $850 million of Series A Floating Rate Insured Notes, due June 2036, in a private placement. The notes were issued to fund the collateral requirements for statutory reserves required by Regulation XXX on specified term life insurance policies reinsured by RGA Reinsurance and retroceded to Timberlake Re. Proceeds from the notes, along with a $113 million direct investment by RGA, were deposited into a series of accounts that collateralize the notes and are not available to satisfy the general obligations of the Company. As of December 31, 2021 and 2020, respectively, the Company held assets in trust and in custody of $465 million and $572 million, of which $39 million and $40 million were held in a Debt Service Coverage account to cover interest payments on the notes. Interest on the notes accrues at an annual rate of 1-month LIBOR plus a base rate margin, payable monthly, and totaled $1 million, $3 million and $9 million in 2021, 2020 and 2019, respectively.

In 2015, RGA's subsidiary, RGA Reinsurance Company (Barbados) Ltd. ("RGA Barbados") obtained CAD$200.0 million of collateral financing from a third party that matured in May 2020, enabling RGA Barbados to support collateral requirements for Canadian reinsurance transactions. The obligation is reflected on the consolidated balance sheets in collateral finance and

securitization notes. Interest on the collateral financing is payable quarterly and accrues at 3-month Canadian Dealer Offered Rate plus a margin and totaled $0 million, $2 million and $5 million in 2021, 2020 and 2019, respectively.

Securitization Notes

In 2014, RGA's subsidiary, Chesterfield Financial Holdings LLC, ("Chesterfield Financial"), issued $300 million of asset-backed notes due December 2024 in a private placement. The notes were called and fully redeemed on December 15, 2021. As of December 31, 2021 and 2020, the Company held deposits in trust of $0 million and $10 million, respectively, to cover interest payments on the notes, which are not available to satisfy the general obligations of the Company. Interest on the notes accrues at an annual rate of 4.50%, payable quarterly, and totaled $6 million, $7 million and $8 million in 2021, 2020 and 2019, respectively.

The Company's collateral finance and securitization notes consist of the following as of December 31, 2021 and 2020 (dollars in millions):

	2021	2020
Timberlake Financial	$ 181	$ 247
Chesterfield Financial	—	143
Unamortized issuance costs	(1)	(2)
Total	$ 180	$ 388

Note 15 SEGMENT INFORMATION

The Company has geographic-based and business-based operational segments. Geographic-based operations are further segmented into traditional and financial solutions businesses.

The U.S. and Latin America Traditional segment provides individual and group life and health reinsurance to domestic clients for a variety of products through yearly renewable term agreements, coinsurance, and modified coinsurance. The U.S. and Latin America Financial Solutions segment includes asset-intensive products that concentrate on the investment risk within underlying annuities and corporate-owned life insurance policies, financial reinsurance, and capital solutions that assists ceding companies in meeting applicable regulatory requirements while enhancing their financial strength and regulatory surplus position.

The Canada Traditional segment is primarily engaged in individual life reinsurance, and to a lesser extent creditor, group life and health, critical illness and disability reinsurance, through yearly renewable term and coinsurance agreements. The Canada Financial Solutions segment concentrates on assisting clients with longevity risk transfer structures within underlying annuities and pension benefit obligations, and provides capital solutions to assist clients in meeting applicable regulatory requirements while enhancing their financial strength and regulatory surplus position through financial reinsurance and other capital solutions structures.

The Europe, Middle East and Africa Traditional segment provides individual and group life and health products through yearly renewable term and coinsurance agreements, reinsurance of critical illness coverage that provides a benefit in the event of the diagnosis of a pre-defined critical illness and underwritten annuities. The Europe, Middle East and Africa Financial Solutions segment provides longevity, asset-intensive and financial reinsurance. Longevity reinsurance takes the form of closed block annuity reinsurance and longevity swap structures.

The Asia Pacific Traditional segment provides individual and group life and health reinsurance, critical illness coverage, disability and superannuation through yearly renewable term and coinsurance agreements. The Asia Pacific Financial Solutions segment provides financial reinsurance, asset-intensive and certain disability and life blocks.

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. 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 industry.

The accounting policies of the segments are the same as those described in Note 2 – "Significant Accounting Policies and Pronouncements." 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.

Information related to revenues, income (loss) before income taxes, interest expense, depreciation and amortization, and assets of the Company's operations are summarized below (dollars in millions):

For the years ended December 31,	2021	2020	2019
Revenues:			
U.S. and Latin America:			
Traditional	$ 7,198	$ 6,560	$ 6,500
Financial Solutions	1,492	1,220	1,279
Total	8,690	7,780	7,779
Canada:			
Traditional	1,448	1,260	1,286
Financial Solutions	101	92	99
Total	1,549	1,352	1,385
Europe, Middle East and Africa:			
Traditional	1,827	1,633	1,520
Financial Solutions	616	471	450
Total	2,443	2,104	1,970
Asia Pacific:			
Traditional	2,778	2,806	2,681
Financial Solutions	417	309	228
Total	3,195	3,115	2,909
Corporate and Other	781	245	257
Total	$ 16,658	$ 14,596	$ 14,300

For the years ended December 31,	2021	2020	2019
Income (loss) before income taxes:			
U.S. and Latin America:			
Traditional	$ (540)	$ (298)	$ 265
Financial Solutions	515	295	398
Total	(25)	(3)	663
Canada:			
Traditional	128	134	168
Financial Solutions	15	21	15
Total	143	155	183
Europe, Middle East and Africa:			
Traditional	(239)	27	80
Financial Solutions	303	258	223
Total	64	285	303
Asia Pacific:			
Traditional	(10)	174	105
Financial Solutions	98	59	23
Total	88	233	128
Corporate and Other	421	(117)	(145)
Total	$ 691	$ 553	$ 1,132

For the years ended December 31,	2021	2020	2019
Interest expense:			
Corporate and Other	$ 127	$ 170	$ 173
Total	$ 127	$ 170	$ 173

For the years ended December 31,	2021	2020	2019
Depreciation and amortization:			
U.S. and Latin America:			
Traditional	$ 360	$ 291	$ 291
Financial Solutions	80	90	143
Total	440	381	434
Canada:			
Traditional	21	24	20
Financial Solutions	—	—	—
Total	21	24	20
Europe, Middle East and Africa:			
Traditional	66	46	56
Financial Solutions	1	1	1
Total	67	47	57
Asia Pacific:			
Traditional	87	94	60
Financial Solutions	43	20	16
Total	130	114	76
Corporate and Other	22	23	22
Total	$ 680	$ 589	$ 609

The table above includes amortization of DAC, including the effect from investment related gains and losses.

For the years ended December 31,	2021	2020
Assets:		
U.S. and Latin America:		
Traditional	$ 20,572	$ 20,071
Financial Solutions	29,028	25,433
Total	49,600	45,504
Canada:		
Traditional	5,091	4,682
Financial Solutions	18	13
Total	5,109	4,695
Europe, Middle East and Africa:		
Traditional	4,670	4,763
Financial Solutions	7,165	7,292
Total	11,835	12,055
Asia Pacific:		
Traditional	10,048	8,197
Financial Solutions	7,678	4,299
Total	17,726	12,496
Corporate and Other	7,905	9,906
Total	$ 92,175	$ 84,656

Companies in which the Company has significant influence over the operating and financing decisions but are not required to be consolidated, are reported on the equity basis of accounting. The equity in the net income of such investments is not material to the results of operations or financial position of individual segments or the Company taken as a whole. Capital expenditures of each reporting segment were immaterial in the periods noted.

No individual client generated 10% or more of the Company’s total gross premiums and other revenues on a consolidated basis in 2021, 2020 and 2019. For the purpose of this disclosure, companies that are within the same insurance holding company structure are combined.

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Note 16 POLICY CLAIMS AND BENEFITS

Liabilities for Unpaid Claims and Claim Expense

The Company uses several actuarial methods to compute incurred-but-not reported liabilities. These methods use historical claim reporting patterns to develop a triangle of reported claim amounts. The claim triangle is then used to develop the ultimate claims amount and the incurred-but-not reported liabilities. Expected claim methods use exposure data such as premiums to develop the ultimate claim amount. The final method blends the estimates from the development and the expected claim methods. There were no significant changes in methodologies during 2021.

The following tables provide information on incurred and paid claims development, net of retrocession, for short-duration reinsurance contracts for the Company's U.S. and Latin America and Asia Pacific Traditional segments, which primarily relate to group life and health (including disability) business. The short-duration business for the Company's other segments is immaterial. Liabilities for claims and claims adjustment expenses, net of reinsurance equals total incurred claims less cumulative paid claims plus outstanding liabilities prior to 2012.

The Company provides reinsurance on large quota share transactions. It is common industry practice for cedants to provide loss information on a bulk basis without comprehensive claim details. Additionally, a claim under aggregate stop loss coverage may be the result of thousands of claims, but the Company only pays the excess amount. Therefore, it is impractical to provide meaningful claim count detail by accident year in the tables shown below.

U.S. and Latin America
(dollars in millions)

	Incurred Claims and Allocated Claim Adjustments, Net of Reinsurance [1]										As of December 31, 2021
	For the Years Ended December 31,										
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total of Incurred-but-Not-Reported Liabilities Plus Expected Development on Reported Claims
2012	$ 323	$ 309	$ 297	$ 298	$ 299	$ 298	$ 297	$ 297	$ 296	$ 297	$ —
2013		349	333	339	337	336	336	337	335	336	—
2014			408	411	396	397	396	399	399	401	—
2015				460	461	465	462	462	463	463	—
2016					501	500	501	497	497	498	—
2017						485	514	509	504	503	—
2018							538	538	524	517	1
2019								491	473	456	4
2020									469	426	25
2021										509	211
									Total	$ 4,406	

	Cumulative Paid Claims and Allocated Claim Adjustment Expense, Net of Reinsurance [1]									
	For the Years Ended December 31,									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2012	$109	$222	$244	$252	$258	$264	$268	$272	$275	$ 279
2013		114	249	277	286	292	297	302	305	309
2014			129	305	337	349	356	364	368	374
2015				146	361	407	422	431	437	441
2016					185	393	437	451	460	467
2017						190	403	448	462	468
2018							183	415	465	479
2019								180	372	418
2020									159	356
2021										177
									Total	$3,768
All outstanding claims prior to 2012, net of reinsurance										110
Liabilities for claims and claim adjustment expense, net of reinsurance										$ 748

(1) 2012 – 2020 unaudited.

Asia Pacific
(dollars in millions)

Accident Year	Incurred Claims and Allocated Claim Adjustments, Net of Reinsurance [1] — For the Years Ended December 31, 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	As of December 31, 2021 — Total of Incurred-but-Not-Reported Liabilities Plus Expected Development on Reported Claims
2012	$ 214	$ 287	$ 292	$ 295	$ 303	$ 313	$ 319	$ 323	$ 325	$ 328	$ 3
2013		302	323	313	310	324	338	340	339	340	4
2014			285	309	273	279	293	295	295	294	5
2015				287	265	258	275	275	276	275	8
2016					235	212	219	227	226	223	7
2017						219	221	221	224	211	7
2018							261	279	273	261	22
2019								261	270	277	44
2020									154	151	40
2021										72	37
									Total	$ 2,432	

Accident Year	Cumulative Paid Claims and Allocated Claim Adjustment Expense, Net of Reinsurance [1] — For the Years Ended December 31, 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2012	$ 51	$ 139	$ 191	$ 230	$ 251	$ 268	$ 283	$ 293	$ 301	$ 307
2013		51	149	216	243	269	292	304	313	320
2014			36	140	183	212	236	250	260	267
2015				50	122	172	208	229	241	251
2016					39	101	137	157	172	183
2017						37	90	119	141	157
2018							33	110	151	182
2019								39	105	145
2020									23	56
2021										8
									Total	$ 1,876
									All outstanding claims prior to 2012, net of reinsurance	75
									Liabilities for claims and claim adjustment expense, net of reinsurance	$ 631

(1) 2012 – 2020 unaudited.

The following is unaudited supplementary information about average historical claims duration as of December 31, 2021:

Average Annual Payout of Incurred Claims by Age, Net of Reinsurance — Years	1	2	3	4	5	6	7	8	9	10
U.S. and Latin America	35.6 %	42.8 %	9.0 %	2.8 %	1.8 %	1.6 %	1.2 %	1.3 %	1.1 %	1.1 %
Asia Pacific	15.0 %	27.2 %	16.1 %	10.6 %	7.3 %	5.2 %	3.9 %	2.6 %	2.2 %	2.0 %

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Reconciliation of the Disclosure of Incurred and Paid Claims Development to the Liability for Unpaid Claims and Claims Adjustment Expenses

The reconciliation of the net incurred and paid claims development tables to the liability for claims and claim adjustment expense in the consolidated balance sheet as of December 31, 2021, is as follows (dollars in millions):

	2021
Liabilities for claims and claim adjustment expense, net of reinsurance:	
U.S. and Latin America	$ 748
Asia Pacific	631
Liabilities for claims and claim adjustment expense, net of reinsurance	1,379
Adjustments to reconcile to total policy claims and future policy benefits:	
Reinsurance recoverable	13
Effect of discounting	(105)
Unallocated claims adjustment expense	7
Total adjustments	(85)
Other short-duration contracts:	
Canada	276
Europe, Middle East and Africa	636
Other	272
Liability for unpaid claims and claim adjustment expense – short-duration	2,478
Liability for unpaid claims and claim adjustment expense – long-duration	5,575
Total liability for unpaid claims and claim adjustment expense (included in future policy benefits and other policy-related balances)	$ 8,053

Rollforward of Claims and Claim Adjustment Expenses

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

	2021	2020	2019
Balance, beginning of period	$ 7,556	$ 6,786	$ 6,585
Less: reinsurance recoverable	(641)	(564)	(433)
Net balance, beginning of period	6,915	6,222	6,152
Incurred:			
Current year	13,181	11,195	10,307
Prior years	(377)	123	154
Total incurred	12,804	11,318	10,461
Payments:			
Current year	(6,284)	(5,617)	(5,140)
Prior years	(5,810)	(5,204)	(5,305)
Total payments	(12,094)	(10,821)	(10,445)
Other changes:			
Interest accretion	31	36	33
Foreign exchange adjustments	(159)	160	21
Total other changes	(128)	196	54
Net balance, end of period	7,497	6,915	6,222
Plus: reinsurance recoverable	556	641	564
Balance, end of period	$ 8,053	$ 7,556	$ 6,786

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.

Note 17 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 used the net proceeds of the offering for general corporate purposes.

Common Stock

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

	Issued	Held In Treasury	Outstanding
Balance, December 31, 2018	79,137,758	16,323,390	62,814,368
Common Stock acquired	—	546,614	(546,614)
Stock-based compensation [1]	—	(388,348)	388,348
Balance, December 31, 2019	79,137,758	16,481,656	62,656,102
Equity offering	6,172,840	—	6,172,840
Common Stock acquired	—	1,074,413	(1,074,413)
Stock-based compensation [1]	—	(202,372)	202,372
Balance, December 31, 2020	85,310,598	17,353,697	67,956,901
Common Stock acquired	—	852,037	(852,037)
Stock-based compensation [1]	—	(65,866)	65,866
Balance, December 31, 2021	85,310,598	18,139,868	67,170,730

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

Common Stock Held in Treasury

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

On January 24, 2019, RGA's board of directors authorized a share repurchase program for up to $400 million of RGA's outstanding common stock. As of December 31, 2021, $72 million of RGA's common stock may still be purchased under the 2019 share repurchase program.

On February 25, 2022, RGA's board of directors authorized a share repurchase program for up to $400 million of RGA's outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. The pace of repurchase activity depends on various factors such as the level of available cash, the impact of the ongoing COVID-19 pandemic, 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.

The following table summarizes the Company's current share repurchase program activity under the 2019 share repurchase program for the years ended December 31, 2021 and 2020 (dollar amounts in millions, except for the number of shares and per share amounts):

Year of Repurchase	Shares Repurchased	Amount Paid	Average Per Share
2021	852,037	$ 96	$ 112.64
2020	1,074,413	$ 153	$ 142.05

Other Comprehensive Income (Loss)

The following table presents the components of the Company's other comprehensive income (loss) for the years ended December 31, 2021, 2020 and 2019 (dollars in millions):

For the year ended December 31, 2021:

	Before-Tax Amount	Tax (Expense) Benefit	After-Tax Amount
Foreign currency translation adjustments:			
Change arising during year	$ 85	$ (24)	$ 61
Foreign currency swap	(2)	1	(1)
Net foreign currency translation adjustments	83	(23)	60
Unrealized gains on investments:(1)			
Unrealized net holding losses arising during the year	(2,093)	471	(1,622)
Less: Reclassification adjustment for net gains realized in net income	226	(49)	177
Net unrealized gains	(2,319)	520	(1,799)
Change in impairments on fixed maturity securities	—	—	—
Unrealized pension and postretirement benefits:			
Net prior service cost arising during the year	2	—	2
Net gain (loss) arising during the period	27	(7)	20
Unrealized pension and postretirement benefits, net	29	(7)	22
Other comprehensive income (loss)	$ (2,207)	$ 490	$ (1,717)

For the year ended December 31, 2020:

	Before-Tax Amount	Tax (Expense) Benefit	After-Tax Amount
Foreign currency translation adjustments:			
Change arising during year	$ 43	$ 3	$ 46
Foreign currency swap	(29)	6	(23)
Net foreign currency translation adjustments	14	9	23
Unrealized gains on investments:(1)			
Unrealized net holding gains arising during the year	2,812	(614)	2,198
Less: Reclassification adjustment for net gains realized in net income	(8)	(1)	(9)
Net unrealized gains	2,820	(613)	2,207
Change in impairments on fixed maturity securities	(8)	2	(6)
Unrealized pension and postretirement benefits:			
Net prior service cost arising during the year	(1)	—	(1)
Net gain (loss) arising during the period	(2)	1	(1)
Unrealized pension and postretirement benefits, net	(3)	1	(2)
Other comprehensive income (loss)	$ 2,823	$ (601)	$ 2,222

For the year ended December 31, 2019:

	Before-Tax Amount	Tax (Expense) Benefit	After-Tax Amount
Foreign currency translation adjustments:			
Change arising during year	$ 113	$ (10)	$ 103
Foreign currency swap	(33)	7	(26)
Net foreign currency translation adjustments	80	(3)	77
Unrealized gains on investments:(1)			
Unrealized net holding gains arising during the year	3,208	(698)	2,510
Less: Reclassification adjustment for net gains realized in net income	84	(17)	67
Net unrealized gains	3,124	(681)	2,443
Change in impairments on fixed maturity securities	—	—	—
Unrealized pension and postretirement benefits:			
Net prior service cost arising during the year	(1)	—	(1)
Net gain arising during the period	(23)	5	(18)
Unrealized pension and postretirement benefits, net	(24)	5	(19)
Other comprehensive income (loss)	$ 3,180	$ (679)	$ 2,501

(1) Includes cash flow hedges. See Note 5 for additional information on cash flow hedges.

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A summary of the components of net unrealized appreciation (depreciation) of balances carried at fair value is as follows (dollars in millions):

For the years ended December 31,	2021	2020	2019
Change in net unrealized appreciation (depreciation) on:			
Fixed maturity securities available-for-sale	$ (2,299)	$ 2,837	$ 3,258
Other investments[1]	(64)	29	(37)
Effect on unrealized appreciation on:			
Deferred policy acquisition costs	44	(54)	(98)
Net unrealized appreciation (depreciation)	$ (2,319)	$ 2,812	$ 3,123

(1) Includes cash flow hedges. See Note 5 for additional information on cash flow hedges.

The balance of and changes in each component of AOCI were as follows (dollars in millions):

	Accumulated Currency Translation Adjustments	Unrealized Appreciation (Depreciation) of Investments [1]	Pension and Postretirement Benefits	Accumulated Other Comprehensive Income (Loss)
Balance, December 31, 2018	(169)	856	(51)	636
OCI before reclassifications	80	3,306	(28)	3,358
Amounts reclassified from AOCI	—	(182)	4	(178)
Deferred income tax benefit (expense)	(3)	(681)	5	(679)
Balance, December 31, 2019	(92)	3,299	(70)	3,137
OCI before reclassifications	14	2,854	(9)	2,859
Amounts reclassified from AOCI	—	(42)	6	(36)
Deferred income tax benefit (expense)	9	(611)	1	(601)
Balance, December 31, 2020	$ (69)	$ 5,500	$ (72)	$ 5,359
OCI before reclassifications	83	(2,144)	22	(2,039)
Amounts reclassified from AOCI	—	(175)	7	(168)
Deferred income tax benefit (expense)	(23)	520	(7)	490
Balance, December 31, 2021	$ (9)	$ 3,701	$ (50)	$ 3,642

(1) Includes cash flow hedges of $(22), $(49) and $(26) as of December 31, 2021, 2020 and 2019, respectively. See Note 5 for additional information on cash flow hedges.

The following table presents the amounts of AOCI reclassifications for the years ended December 31, 2021 and 2020 (dollars in millions):

	Amount Reclassified from AOCI		
Details about AOCI Components	2021	2020	Affected Line Item in Statement of Income
Net unrealized investment gains (losses):			
Net unrealized gains and losses on available-for-sale securities	$ 226	$ (8)	Investment related gains (losses), net
Cash flow hedges – Interest rate	(7)	(4)	(1)
Cash flow hedges – Currency/Interest rate	—	—	(1)
Cash flow hedges – Forward bond purchase commitments	—	—	(1)
Deferred policy acquisition costs attributed to unrealized gains and losses	(44)	54	(2)
Total	175	42	
Provision for income taxes	(38)	(12)	
Net unrealized gains (losses), net of tax	$ 137	$ 30	
Amortization of defined benefit plan items:			
Prior service cost (credit)	$ 1	$ 1	(3)
Actuarial gains (losses)	(8)	(7)	(3)
Total	(7)	(6)	
Provision for income taxes	1	1	
Amortization of defined benefit plans, net of tax	$ (6)	$ (5)	
Total reclassifications for the period	$ 131	$ 25	

(1) See Note 5 for information on cash flow hedges.
(2) See Note 8 for information on deferred policy acquisition costs.
(3) See Note 10 for information on employee benefit plans.

Equity Based Compensation

The Company adopted the RGA Flexible Stock Plan (the "Plan") in February 1993, as amended, and the Flexible Stock Plan for Directors (the "Directors Plan") in January 1997, as amended, (collectively, the "Stock Plans"). The Stock Plans provide for the award of benefits (collectively "Benefits") of various types, including stock options, stock appreciation rights ("SARs"), restricted stock, performance shares, cash awards, and other stock-based awards, to key employees, officers, directors and others performing significant services for the benefit of the Company or its subsidiaries. As of December 31, 2021, shares authorized for the granting of Benefits under the Plan and the Directors Plan totaled 16,460,077 and 462,500 respectively. The Company uses treasury shares or shares made available from authorized but unissued shares to support the future exercise of options or settlement of awards granted under its stock plans.

Equity-based compensation expense of $55 million, $(12) million, and $39 million related to grants or awards under the Stock Plans was recognized in 2021, 2020 and 2019, respectively. The equity compensation credit for the year ended December 31, 2020, is attributable to the reduction in the estimated financial performance measures associated with performance-based stock awards, primarily due to the adverse impact of COVID-19 on the Company's financial results. Equity-based compensation expense is principally related to the issuance of performance contingent restricted units, stock appreciation rights and restricted stock.

In general, stock awards granted under the Plan become exercisable over vesting periods ranging from one to four years. SARs are generally granted with a conversion price equal to the stock's fair value at the date of grant and expire 10 years after the date of grant. There are no stock options outstanding under the Directors Plan during the periods presented. Information with respect to grants under the Stock Plans are as follows.

Stock Options and Stock Appreciation Rights

The following table presents a summary of options and SARs activity:

	Number of Options and SARs	Weighted-Average Exercise/Conversion Price	Aggregate Intrinsic Value (in millions)
Outstanding at December 31, 2020	2,168,395	$ 102.30	
Granted	200,239	$ 129.01	
Exercised	(144,042)	$ 60.47	
Forfeited	(1,878)	$ 129.01	
Outstanding at December 31, 2021	2,222,714	$ 107.39	$ 28.7
Awards exercisable	1,800,569	$ 103.30	$ 28.7

The intrinsic value of awards exercised was $8 million, $15 million, and $31 million for 2021, 2020 and 2019, respectively.

	Awards Outstanding			Awards Exercisable	
Range of Exercise Prices	Number Outstanding as of 12/31/2021	Weighted-Average Remaining Contractual Life (years)	Weighted-Average Exercise Price	Number Exercisable as of 12/31/2021	Weighted-Average Exercise Price
$50.00 – $89.99	368,754	1.3	$ 64.03	368,754	$ 64.03
$90.00 – $99.99	703,305	3.8	$ 92.55	703,305	$ 92.55
$100.00 – $139.99	805,743	7.8	$ 122.90	430,718	$ 123.44
$140.00 +	344,912	6.7	$ 147.80	297,792	$ 148.20
Totals	2,222,714	5.3	$ 107.39	1,800,569	$ 103.30

The following table presents the weighted average assumptions used to determine the fair value of SARs issued:

For the years ended December 31,	2021	2020	2019
Dividend yield	2.17 %	2.37 %	1.65 %
Risk-free rate of return	1.04 %	0.69 %	2.67 %
Expected volatility	34.5 %	18.8 %	18.2 %
Expected life (years)	6.3	7.0	6.0
Weighted average exercise price of stock options granted	$ 129.01	$ 117.85	$ 145.25
Weighted average fair value of stock options granted	$ 34.93	$ 15.14	$ 26.59

The Black-Scholes model was used to determine the fair value recognized in the financial statements of SARs that have been granted. The Company used daily historical volatility when calculating a SAR's value. The benchmark rate is based on observed interest rates for instruments with maturities similar to the expected term of the stock options. Dividend yield is determined based on historical dividend distributions compared to the price of the underlying common stock as of the valuation

date and held constant over the life of the stock options. The Company estimated expected life using the historical average years to exercise or cancellation.

Performance Contingent Awards

Performance contingent awards include both Performance Contingent Shares ("PCS") and Performance Share Units ("PSU").

- Performance Contingent Shares, are units that, if they vest, are multiplied by a performance factor to produce a number of final units that are paid in the Company's common stock. Each PCS represents the right to receive up to two shares of Company's common stock, depending on the results of certain performance measures.
- Performance Share Units, are units that, if they vest, are paid in the Company's common stock. Each PSU represents the right to receive one share of Company common stock, depending on the results of certain performance measures.

The compensation expense related to each type of performance continent award is recognized ratably over the requisite performance period. Performance contingent awards are accounted for as equity awards, but are not credited with dividend-equivalents for actual dividends paid on the Company's common stock during the performance period.

Restricted Stock Units

In general, restricted stock units ("RSUs") become payable at the end of a two or three-year vesting period. Each RSU, if they vest, represents the right to receive one share of Company common stock. RSUs awarded under the plan generally have no strike price and are included in the Company's shares outstanding.

The following table presents a summary of Performance Share and Restricted Stock Unit activity:

	Performance Contingent Awards	Restricted Stock Units
Outstanding at December 31, 2020	291,129	76,390
Granted	167,862	328,491
Change in units based on performance factor	(117,589)	—
Paid	—	(18,487)
Forfeited	(997)	(6,506)
Outstanding at December 31, 2021 [(1)]	340,405	379,888

(1) Amount outstanding at December 31, 2021, includes the amount of shares to be issued under RSUs expected to vest and number of shares to be issued under performance continent awards at target performance. The amount of shares do not reflect potential increases or decreases that may result from the performance factor results except for the 2019 – 2021 grants which vested as of December 31, 2021.

During 2021, the Company issued 167,862 performance contingent awards at a weighted average fair value per unit of $129.01.

As of December 31, 2021, the total compensation cost of non-vested awards not yet recognized in the financial statements was $21.0 million. It is estimated that these costs will vest over a weighted average period of 0.7 years.

The majority of the awards granted each year under the board-approved incentive compensation package and Directors Plan are made in the first quarter of each year.

Note 18 QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)

Years Ended December 31, (in millions, except per share data)	Three Months Ended			
2021	March 31,	June 30,	September 30,	December 31,
Total Revenues	$ 4,119	$ 4,137	$ 4,043	$ 4,359
Total benefits and expenses	3,933	3,655	4,077	4,302
Income before income taxes	186	482	(34)	57
Net Income	139	344	(22)	156
Earnings Per Share:				
Basic earnings per share	$ 2.04	$ 5.06	$ (0.32)	$ 2.32
Diluted earnings per share	2.03	5.02	(0.32)	2.30
2020	March 31,	June 30,	September 30,	December 31,
Total Revenues	$ 3,204	$ 3,606	$ 3,643	$ 4,143
Total benefits and expenses	3,300	3,411	3,358	3,974
Income before income taxes	(96)	195	285	169
Net Income	(88)	158	213	132
Earnings Per Share:				
Basic earnings per share	$ (1.41)	$ 2.49	$ 3.13	$ 1.95
Diluted earnings per share	(1.41)	2.48	3.12	1.94

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Reinsurance Group of America, Incorporated
Chesterfield, Missouri

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Reinsurance Group of America, Incorporated and subsidiaries (the "Company") as of December 31, 2021 and 2019, and the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2021, and the related notes, and the schedules listed in the Index at Item 15 (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2021 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on the criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 25, 2022 expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Fair Value - Level 3 Fixed Maturity Securities - Refer to Note 6 to the financial statements

Critical Audit Matter Description

The Company has certain fixed maturity securities that are not actively traded and classified as Level 3 assets. Since such securities trade infrequently and have little or no price transparency, the Company’s market standard valuation techniques for determining the estimated fair value of such securities rely on inputs that are significant to the estimated fair value that are not observable in the market or cannot be derived principally from or corroborated by observable market data. The determination of these unobservable inputs involve significant management judgment and estimation and typically cannot be supported by reference to market activity.

Auditing of unobservable inputs used by management to estimate the fair value of Level 3 securities required a high degree of auditor judgement and an increased extent of effort, including the involvement of our fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the proprietary models and unobservable inputs used by management to estimate the fair value of Level 3 securities included the following, among others:

- We tested the effectiveness of controls, including those surrounding the valuation of Level 3 securities.
- We obtained an understanding and evaluated the appropriateness of the Company's pricing sources.
- For a selection of securities, we compared the accuracy of the Company's estimated fair value price to a price independently developed by our fair value specialists.

Actuarial Assumptions - Refer to Notes 1, 6, and 8 to the financial statements

Critical Audit Matter Description

The estimated valuation of future policy benefits, embedded derivatives, and the amortization of deferred acquisition costs are measured based on actuarial methodologies and underlying economic and future policyholder behavior assumptions.

Significant judgment was involved in the setting of the future policyholder behavior assumptions used to determine the estimated valuation of future policy benefits, embedded derivatives and the amortization of deferred acquisition costs. These assumptions include mortality, longevity, and withdrawal (lapse).

Given the significant estimation uncertainty and complexity of the Company's actuarial assumptions, auditing these estimates required a high degree of auditor judgment and an increased extent of effort, including the involvement of our actuarial specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the assumptions used by management to estimate the valuation of future policy benefits and embedded derivatives and the amortization of deferred policy acquisition costs included the following, among others:

- We tested the effectiveness of controls, including those related to the performance of experience studies and the setting of best estimate assumptions.
- We tested the accuracy and completeness of the underlying data that served as the basis for the estimated assumptions.
- With the assistance of our actuarial specialists, we assessed the reasonableness of assumptions used in developing the estimates by comparing conclusions reached by management to the related experience study results and industry experience, as applicable.

Premiums receivable and other reinsurance balances - Refer to Note 1 to the financial statements

Critical Audit Matter Description

Premiums are accrued when due and in accordance with information received from the ceding company. When the Company enters into a new reinsurance agreement, the methodology to record estimated premiums receivables is based on the terms of the reinsurance treaty. Similarly, when a ceding company fails to report information on a timely basis, the methodology used by the Company to record estimated premiums receivables is based on the terms of the reinsurance treaty and historical experience. Other management estimates include adjustments to the premiums receivable for increased in force in existing treaties and lapsed premiums based on historical experience. Given the significant judgment used in determining estimated premium receivable, auditing the actual methodologies and estimates required a high degree of auditor judgment and an increased extent of effort.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to management's estimation of premiums receivable included the following, among others:

- We tested the effectiveness of controls that address management's estimation of accrued premiums receivable.
- We tested management's historical accuracy of estimation by comparing a selection of premiums received during the year to previously-reported premiums receivable.
- For a selection of management's premiums receivable estimates, we compared our independently-developed expectation to management's estimate.
- We utilized statistical analysis to identify outliers in the population for further testing.

/s/ DELOITTE & TOUCHE LLP

St. Louis, Missouri
February 25, 2022

We have served as the Company's auditor since 2000.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. 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 December 31, 2021, 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 the Company's workforce began working remotely in March 2020. These changes to the working environment did not have a material effect on the Company's 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.

Management's Annual Report on Internal Control Over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. In fulfilling this responsibility, estimates and judgments by management are required to assess the expected benefits and related costs of control procedures. The objectives of internal control include providing management with reasonable, but not absolute, assurance that assets are safeguarded against loss from unauthorized use or disposition, and that transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America.

Financial management has documented and evaluated the effectiveness of the internal control of the Company as of December 31, 2021 pertaining to financial reporting in accordance with the criteria established in "Internal Control – Integrated Framework (2013)" by the Committee of Sponsoring Organizations of the Treadway Commission.

In the opinion of management, the Company maintained effective internal control over financial reporting as of December 31, 2021.

Deloitte & Touche LLP, an independent registered public accounting firm, has issued an attestation report on the effectiveness of the Company's internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
Reinsurance Group of America, Incorporated
Chesterfield, Missouri

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Reinsurance Group of Americas Incorporated and subsidiaries (the "Company") as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Company and our report dated February 25, 2022, expressed an unqualified opinion on those consolidated financial statements and financial statement schedules.

Basis of Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management's Annual Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

St. Louis, Missouri
February 25, 2022

Item 9B. OTHER INFORMATION

None.

Part III

Item 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Information with respect to Directors of the Company is found in the Proxy Statement under the captions “Board of Directors – Item 1 – Election of Directors,” “– Director Qualifications and Nomination,” “Stock Ownership – Delinquent Section 16(a) Reports,” “Corporate Governance – Overview,” and “– Board Committees” and is incorporated herein by reference.

Executive Officers

The following is certain additional information concerning each individual who is an executive officer of the Company or its primary U.S.-based operating subsidiary, RGA Reinsurance Company.

Leslie Barbi, 55, is Executive Vice President, Chief Investment Officer of the Company. She is also a member of the Company’s Executive Committee. Prior to joining RGA in 2020, Ms. Barbi served as Executive Officer – Senior Vice President, Head of Public Investments for Northwestern Mutual Life Insurance Company. Prior to that, she was the Senior Managing Director, Head of Public Fixed Income at The Guardian Life Insurance Company of America. Earlier in her career, Ms. Barbi held senior positions at Goldman Sachs Asset Management and at Pacific Investment Management Company (PIMCO).

Gay Burns, 55, is Executive Vice President, Chief Human Resources Officer for the Company. She is also Chairperson of the RGA Foundation and a member of the Company’s Executive Committee. Prior to joining RGA in 2011, she served as Managing Director, Talent Development and Managing Director, Global HR Operations for Swiss Re. Prior to that, Ms. Burns was a human resources executive with Employer’s Reinsurance Corporation, a General Electric subsidiary.

Lawrence S. Carson, 50, is Executive Vice President, Global Financial Solutions (“GFS”) unit, which is responsible for all of RGA’s financial reinsurance, asset-intensive reinsurance and bulk longevity business worldwide. He is also a member of the Company’s Executive Committee. Most recently, Mr. Carson was Executive Vice President and Chief Actuary of GFS. Prior to joining RGA in 1999, he was with the actuarial firm of Milliman and Robertson (now Milliman Inc.), where he worked on demutualizations, mergers and acquisitions valuations, and market conduct class-action settlements. Previously, he was with Equitable Life Assurance Society. Mr. Carson is a Fellow of the Society of Actuaries.

Tony Cheng, 48, is Executive Vice President, Head of Asia, Australia and EMEA. He is also a member of RGA’s Executive Committee. He joined RGA in 1997 as Chief Actuary of Malaysian Life Reinsurance Group Berhad, the Company’s joint venture with the Life Insurance Association of Malaysia. In 2004, Mr. Cheng was named Chief Executive Officer of the Hong Kong office, responsible for all business activity in Hong Kong and Southeast Asia, and in 2011, was appointed Senior Vice President, Asia, an expanded role incorporating overall management of RGA’s Asia operations.

Olav Cuiper, 64, is Executive Vice President, Chief Client Officer. He is also a member of the Executive Committee. Prior to joining RGA in 2009, he was Managing (statutory) Director Europe for Fortis Insurance International. Before then, Mr. Cuiper was Managing (statutory) Director of Group Life/Institutional Clients for Delta Lloyd Insurance NV. His work experience also includes business development positions with Sedgwick/Mercer and with Goudse Verzekeringen in the Netherlands. Mr. Cuiper also serves as a director and officer of several RGA subsidiaries.

Alka Gautam, 54, is Executive Vice President of the Company and President and Chief Executive Officer of RGA Life Reinsurance Company of Canada (“RGA Canada”). She is responsible for RGA’s Technology and Operational Effectiveness divisions and leads all business activities for RGA Canada. She is also a member of the Executive Committee. Prior to joining RGA Canada in 2000, Ms. Gautam was at KPMG for 10 years. She became RGA Canada’s Chief Financial Officer and Chief Risk Officer in 2006, was named its Chief Operating Officer in 2014, and in 2015 was named RGA Canada’s President and Chief Executive Officer.

John W. Hayden, 55, is Executive Vice President, Controller. Mr. Hayden joined the Company in 2000 and held the position of Vice President, SEC Reporting and Investor Relations prior to his current role. Before coming to RGA, Mr. Hayden served in a finance position at General American Life Insurance Company and prior to that position, he was a senior manager at KPMG LLP, in the financial services audit practice, specializing in the insurance industry. Mr. Hayden also serves as a director and officer of several RGA subsidiaries.

Ron Herrmann, 57, is Executive Vice President, Head of U.S. & Latin American Markets of RGA Reinsurance Company. He joined the Company in December 2020 and is a member of RGA’s Executive Committee. Prior to joining RGA, Mr. Herrmann served as Head of both Individual Life and Employee Benefits at Equitable. Prior to that he held senior positions

at Prudential and The Hartford, as well as senior sales and sales management roles at Chubb Corporation, John Hancock Life Insurance Company, and Metropolitan Life. Mr. Herrmann is a Certified Financial Planner and a member of Leadership for Advanced Life Underwriting. He sits on the American Council of Life Insurers' Life Insurance Committee as well as the Group Executive Insurance Council.

William L. Hutton, 62, is Executive Vice President, General Counsel and Secretary of the Company. He is responsible for legal services provided throughout the RGA enterprise. Mr. Hutton joined the Company in 2001 and held several positions in the legal function before becoming General Counsel in 2011. Prior to joining the Company, he served as counsel at General American Life Insurance Company and was in private practice with two law firms in St. Louis, Missouri. Mr. Hutton also serves as an officer of several RGA subsidiaries.

Todd C. Larson, 58, is Senior Executive Vice President, Chief Financial Officer of the Company. He is also a member of the Company’s Executive Committee. Mr. Larson joined the Company in May 1995 as Controller and held several positions in the finance function, including the position of Executive Vice President, Corporate Finance and Treasurer, before becoming Global Chief Risk Officer in July 2014. Mr. Larson assumed the role of Chief Financial Officer in May 2016. Mr. Larson previously was Assistant Controller at Northwestern Mutual Life Insurance Company from 1994 through 1995 and prior to that position was an accountant for KPMG LLP from 1985 through 1993.

Anna Manning, 63, is President and Chief Executive Officer of the Company. She is also a member of the Company’s Executive Committee. Prior to her current role, Ms. Manning held the position of Senior Executive Vice President, Structured Solutions, which includes the Company’s Global Financial Solutions and Global Acquisitions businesses. Ms. Manning joined the Company in 2007 as Executive Vice President and Chief Operating Officer for RGA International Corporation, followed by four years as Executive Vice President of U.S. Markets. Prior to joining the Company, Ms. Manning spent 19 years in actuarial consulting at Tillinghast Towers Perrin, following an actuarial career in the Canadian marketplace at Manulife Financial from 1981 through 1988. She holds a B.Sc. in Actuarial Science from the University of Toronto, is a Fellow of the Canadian Institute of Actuaries (“FCIA”), and a Fellow of the Society of Actuaries.

Jonathan Porter, 51, is Executive Vice President and Global Chief Risk Officer. He is also a member of the Company’s Executive Committee. Mr. Porter is responsible for the Company’s global enterprise risk management and corporate pricing oversight. Prior to his current role, Mr. Porter previously served in positions of Senior Vice President, Global Analytics and In-Force Management and Chief Pricing Actuary of International Markets. Before joining the Company in 2008, Mr. Porter worked for Manulife Financial as Chief Financial Officer, U.S. Life Insurance. Mr. Porter holds FSA and FCIA designations. Mr. Porter also serves as a director and officer of several RGA subsidiaries.

Corporate Governance

The Company has adopted a Code of Conduct (the “Code”), a Directors’ Code of Business Conduct and Ethics (the “Directors’ Code”), and a Financial Management Code of Professional Conduct (the “Financial Management Code”). The Code applies to all employees and officers of the Company and its subsidiaries. The Directors’ Code applies to directors of the Company and its subsidiaries. The Financial Management Code applies to the Company’s chief executive officer, chief financial officer, corporate controller, primary financial officers in each business unit, and all professionals in finance and finance-related departments. The Company intends to satisfy its disclosure obligations under Item 5.05 of Form 8-K by posting on its website information about amendments to, or waivers from a provision of the Financial Management Code that applies to the Company’s chief executive officer, chief financial officer, and corporate controller. Each of the three Codes described above is available on the Company’s website at www.rgare.com.

Also available on the Company’s website are the following other items: Corporate Governance Guidelines, Audit Committee Charter, Compensation Committee Charter, Investment Committee Charter, Nominating and Governance Committee Charter and Risk Committee Charter (collectively “Governance Documents”).

The Company will provide without charge upon written or oral request, a copy of any of the Codes of Conduct or Governance Documents. Requests should be directed to Investor Relations, Reinsurance Group of America, Incorporated, 16600 Swingley Ridge Road, Chesterfield, MO 63017, by electronic mail (investrelations@rgare.com) or by telephone (636-736-2068).

In accordance with the Securities Exchange Act of 1934, the Company’s board of directors has established a standing audit committee. The board of directors has determined, in its judgment, that all of the members of the audit committee are independent within the meaning of SEC regulations and the listing standards of the New York Stock Exchange (“NYSE”). The board of directors has determined, in its judgment, that all members of the Audit Committee (Ms. Guinn (chair), Mr. Gauthier, Mr. O’Hearn, Mr. Tulin and Mr. Van Wyk) are qualified as audit committee financial experts within the meaning of SEC regulations and the board has determined that each of them has accounting and related financial management expertise within the meaning of the listing standards of the NYSE. The audit committee charter provides that members of the audit committee may not simultaneously serve on the audit committee of more than two other public companies unless such member

demonstrates that he or she has the ability to devote the time and attention that are required to serve on multiple audit committees.

Item 11. EXECUTIVE COMPENSATION

Information on this subject is found in the Proxy Statement under the captions “Compensation Discussion and Analysis,” “Compensation Tables and Other Matters,” “Compensation Committee Report,” “Board of Directors – Director Compensation” and “Corporate Governance – Board Committees” and is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDERS MATTERS

Information on this subject is found in the Proxy Statement under the caption “Stock Ownership – Securities Ownership of Directors, Management and Certain Beneficial Owners” and is incorporated herein by reference.

The following table summarizes information regarding securities authorized for issuance under equity compensation plans:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders	2,990,040[(1)]	$107.39[(2)(3)]	2,111,066[(4)]
Equity compensation plans not approved by security holders	—	—	—
Total	2,990,040[(1)]	$107.39[(2)(3)]	2,111,066[(4)]

(1) Includes the number of securities to be issued upon exercises or settlement of stock appreciation rights, restricted units, performance contingent shares, and performance share units under the following plans: Flexible Stock Plan – 2,943,007; Director Flexible Stock Plan – 2,204; and Phantom Stock Plan for Directors – 48,829. The number of performance contingent shares represents the number of shares that would be issued based on target performance, reduced for cancellations and adjustments through December 31, 2021. The actual number of shares issued at the end of each performance period will range between 0% and 200% of the target number of units granted, based on a measure of the actual performance of the Company relative to stated goals.

(2) Does not include 340,405 performance contingent shares and performance share units outstanding under the Flexible Stock Plan; 2,204 outstanding under the Flexible Stock Plan for Directors or 48,829 phantom units outstanding under the Phantom Stock Plan for Directors because those securities do not have an exercise price (i.e. a unit is a hypothetical share of Company common stock with a value equal to the fair market value of the common stock).

(3) Reflects the blended weighted-average exercise price of outstanding options under the Flexible Stock Plan $107.39.

(4) Includes the number of securities remaining available for future issuance under the following plans: Flexible Stock Plan – 2,017,793; Flexible Stock Plan for Directors – 52,926; and Phantom Stock Plan for Directors – 40,347.

On January 24, 2019, RGA’s board of directors authorized a share repurchase program for up to $400 million of RGA’s outstanding common stock. During the twelve months ended December 31, 2021, RGA repurchased 852,037 shares of common stock under this program for $96 million, and as of December 31, 2021, approximately $72 million of RGA’s common stock may still be purchased under the 2019 share repurchase program.

On February 25, 2022, RGA’s board of directors authorized a share repurchase program for up to $400 million of RGA’s outstanding common stock. The authorization was effective immediately and does not have an expiration date. In connection with this authorization, the board of directors terminated the stock repurchase authority granted in 2019. The pace of repurchase activity depends on various factors such as the level of available cash, an evaluation of the costs and benefits associated with alternative uses of excess capital, such as acquisitions and in force reinsurance transactions, and RGA’s stock price.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information on this subject is found in the Proxy Statement under the captions “Corporate Governance – Certain Relationships and Related Person Transactions,” and – “Overview” and is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information on this subject is found in the Proxy Statement under the caption “Item 5 – Ratification of Appointment of Independent Auditor” and is incorporated herein by reference.

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) 1. Financial Statements

The following consolidated statements are included within Item 8 under the following captions:

Index	Page
Consolidated Balance Sheets	89
Consolidated Statements of Income	90
Consolidated Statements of Comprehensive Income	91
Consolidated Statements of Stockholders' Equity	92
Consolidated Statements of Cash Flows	93
Notes to Consolidated Financial Statements	95-156
Report of Independent Registered Public Accounting Firm	157

2. Schedules, Reinsurance Group of America, Incorporated and Subsidiaries

Schedule		Page
I	Summary of Investments	165
II	Condensed Financial Information of the Registrant	166-167
III	Supplementary Insurance Information	168-169
IV	Reinsurance	170
V	Valuation and Qualifying Accounts	171

All other schedules specified in Regulation S-X are omitted for the reason that they are not required, are not applicable, or that equivalent information has been included in the consolidated financial statements, and notes thereto, appearing in Item 8.

3. Exhibits

See the Index to Exhibits on page 173.

Item 16. FORM 10-K SUMMARY

None.

Table of Contents

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE I-SUMMARY OF INVESTMENTS-OTHER THAN INVESTMENTS IN RELATED PARTIES
December 31, 2021
(in millions)

Type of Investment	Amortized Cost	Estimated Fair Value	Amount at Which Shown in the Balance Sheets[1]
Fixed maturity securities:			
United States government and government agencies and authorities	$ 2,082	$ 2,105	$ 2,105
State and political subdivisions	1,191	1,323	1,323
Foreign governments[2]	10,527	12,314	12,314
Public utilities	4,281	4,683	4,683
Mortgage-backed and asset-backed securities	6,834	6,904	6,904
All other corporate bonds	30,958	33,420	33,420
Total fixed maturity securities	$ 55,873	$ 60,749	$ 60,749
Equity securities	$ 176	$ 151	$ 151
Mortgage loans on real estate	6,283		6,283
Policy loans	1,234		1,234
Funds withheld at interest	6,954		6,954
Short-term investments	87		87
Other invested assets	3,070		3,070
Total investments	$ 73,677		$ 78,528

(1) Fixed maturity securities are classified as available-for-sale and carried at fair value.

(2) Includes fixed maturities directly issued by foreign governments, supranational and foreign government-sponsored enterprises.

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE II—CONDENSED FINANCIAL INFORMATION OF THE REGISTRANT
December 31,
(in millions)

	2021	2020	2019
CONDENSED BALANCE SHEETS			
Assets:			
Fixed maturity securities available-for-sale, at fair value	$ 523	$ 642	
Short-term and other investments	7	172	
Cash and cash equivalents	92	494	
Investment in subsidiaries	15,737	16,937	
Loans to subsidiaries	1,020	1,010	
Other assets	382	326	
Total assets	$ 17,761	$ 19,581	
Liabilities and stockholders' equity:			
Long-term debt – unaffiliated[1]	$ 3,172	$ 3,569	
Long-term debt – affiliated[2]	600	500	
Other liabilities	975	1,160	
Stockholders' equity	13,014	14,352	
Total liabilities and stockholders' equity	$ 17,761	$ 19,581	
CONDENSED STATEMENTS OF INCOME			
Interest / dividend income[3]	$ 399	$ 472	$ 308
Investment related gains (losses), net	5	14	4
Operating expenses	(66)	(59)	(55)
Interest expense	(152)	(202)	(206)
Income (loss) before income tax and undistributed earnings of subsidiaries	186	225	51
Income tax expense (benefit)	(21)	(21)	(33)
Net income (loss) before undistributed earnings of subsidiaries	207	246	84
Equity in undistributed earnings of subsidiaries	410	169	786
Net income	617	415	870
Other comprehensive income (loss)	14	(29)	(33)
Total comprehensive income	$ 631	$ 386	$ 837

The condensed financial information of RGA (the "Parent Company") should be read in conjunction with the consolidated financial statements of RGA and its subsidiaries and the notes thereto (the "Consolidated Financial Statements"). These condensed unconsolidated financial statements reflect the results of operations, financial position and cash flows for RGA. Investments in subsidiaries are accounted for using the equity method of accounting.

(1) Long-term debt – unaffiliated consists of the following:

	2021	2020
$400 million 5.00% Senior Notes due 2021	$ —	$ 400
$400 million 4.70% Senior Notes due 2023	400	399
$400 million 3.95% Senior Notes due 2026	400	400
$600 million 3.90% Senior Notes due 2029	599	599
$600 million 3.15% Senior Notes due 2030	597	598
$400 million 6.20% Subordinated Debentures due 2042	400	400
$400 million 5.75% Subordinated Debentures due 2056	400	400
$400 million Variable Rate Junior Subordinated Debentures due 2065	399	398
Subtotal	3,195	3,594
Unamortized debt issuance costs	(23)	(25)
Total	$ 3,172	$ 3,569

(2) Long-term debt includes $600 million and $500 million of affiliated subordinated debt in 2021 and 2020, respectively. The affiliated subordinated debt was issued to various operating subsidiaries.

(3) Interest/dividend income includes $270 million and $340 million of cash dividends received from consolidated subsidiaries in 2021 and 2020, respectively.

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE II—CONDENSED FINANCIAL INFORMATION OF THE REGISTRANT (continued)
December 31,
(in millions)

	2021	2020	2019
CONDENSED STATEMENTS OF CASH FLOWS			
Operating activities:			
Net income	$ 617	$ 415	$ 870
Equity in earnings of subsidiaries	(410)	(169)	(786)
Other, net	(227)	(170)	72
Net cash provided by (used in) operating activities	(20)	76	156
Investing activities:			
Sales of fixed maturity securities available-for-sale	268	358	576
Purchases of fixed maturity securities available-for-sale	(150)	(400)	(494)
Repayments/issuances of loans to subsidiaries	(10)	—	—
Change in short-term investments	165	(165)	—
Change in other invested assets	(1)	(26)	—
Capital contributions to subsidiaries	(43)	(78)	(96)
Net cash provided by (used in) investing activities	229	(311)	(14)
Financing activities:			
Dividends to stockholders	(194)	(182)	(163)
Proceeds from issuance of common stock, net	—	481	—
Purchases of treasury stock	(99)	(163)	(101)
Exercise of stock options, net	—	1	6
Change in cash collateral for derivative positions and other arrangements	(19)	(11)	(92)
Principal payments on debt	(399)	—	(397)
Principal payments on affiliated debt	(500)	—	—
Proceeds from unaffiliated long-term debt issuance	—	598	599
Proceeds from affiliated long-term debt issuance	600	—	—
Debt issuance costs	—	(5)	(5)
Net cash provided by (used in) financing activities	(611)	719	(153)
Change in cash and cash equivalents	(402)	484	(11)
Cash and cash equivalents, beginning of period	494	10	21
Cash and cash equivalents, end of period	$ 92	$ 494	$ 10
Supplementary information:			
Interest paid	$ 173	$ 187	$ 192
Income taxes paid, net of refunds	$ 323	$ 23	$ 9

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE III—SUPPLEMENTARY INSURANCE INFORMATION
(in millions)

	As of December 31,		
	Deferred Policy Acquisition Costs	Future Policy Benefits and Interest-Sensitive Contract Liabilities	Other Policy Claims and Benefits Payable
2021			
U.S. and Latin America:			
Traditional	$ 1,926	$ 12,757	$ 2,806
Financial Solutions	190	25,107	24
Canada:			
Traditional	192	3,668	330
Financial Solutions	—	16	5
Europe, Middle East and Africa:			
Traditional	253	1,366	1,612
Financial Solutions	—	5,999	89
Asia Pacific:			
Traditional	1,052	3,792	2,116
Financial Solutions	74	8,202	6
Corporate and Other	3	1,252	5
Total	$ 3,690	$ 62,159	$ 6,993
2020			
U.S. and Latin America:			
Traditional	$ 1,816	$ 12,245	$ 2,578
Financial Solutions	255	23,104	18
Canada:			
Traditional	195	3,474	292
Financial Solutions	—	16	4
Europe, Middle East and Africa:			
Traditional	264	1,379	1,389
Financial Solutions	—	5,881	66
Asia Pacific:			
Traditional	1,045	3,568	2,059
Financial Solutions	41	4,187	2
Corporate and Other	—	875	5
Total	$ 3,616	$ 54,729	$ 6,413

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE III—SUPPLEMENTARY INSURANCE INFORMATION (continued)
(in millions)

	Year ended December 31,				
	Premium Income	Net Investment Income	Policyholder Benefits and Interest Credited	Amortization of DAC [1]	Other Expenses [2]
2021					
U.S. and Latin America:					
Traditional	$ 6,244	$ 930	$ 6,790	$ 269	$ 679
Financial Solutions	55	1,089	731	101	145
Canada:					
Traditional	1,194	248	1,096	13	211
Financial Solutions	90	—	79	—	7
Europe, Middle East and Africa:					
Traditional	1,738	88	1,829	48	189
Financial Solutions	350	205	258	—	55
Asia Pacific:					
Traditional	2,624	136	2,445	60	283
Financial Solutions	218	138	244	41	34
Corporate and Other	—	304	4	—	356
Total	$ 12,513	$ 3,138	$ 13,476	$ 532	$ 1,959
2020					
U.S. and Latin America:					
Traditional	$ 5,838	$ 714	$ 5,979	$ 200	$ 679
Financial Solutions	53	999	764	52	109
Canada:					
Traditional	1,052	207	909	16	201
Financial Solutions	83	1	68	—	3
Europe, Middle East and Africa:					
Traditional	1,555	72	1,389	31	186
Financial Solutions	252	193	163	—	50
Asia Pacific:					
Traditional	2,681	107	2,293	65	274
Financial Solutions	180	85	206	19	25
Corporate and Other	—	197	8	—	354
Total	$ 11,694	$ 2,575	$ 11,779	$ 383	$ 1,881
2019					
U.S. and Latin America:					
Traditional	$ 5,729	$ 769	$ 5,339	$ 199	$ 697
Financial Solutions	39	931	737	31	113
Canada:					
Traditional	1,066	205	857	12	249
Financial Solutions	89	3	80	—	4
Europe, Middle East and Africa:					
Traditional	1,442	73	1,205	36	199
Financial Solutions	218	195	175	—	52
Asia Pacific:					
Traditional	2,568	104	2,317	36	223
Financial Solutions	146	46	162	16	27
Corporate and Other	—	194	22	—	380
Total	$ 11,297	$ 2,520	$ 10,894	$ 330	$ 1,944

(1) Includes the effect from investment related gains and losses.

(2) Includes policy acquisition costs and other insurance expenses, excluding amortization of DAC. Also includes other operating expenses, interest expense, and collateral finance and securitization expense.

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE IV—REINSURANCE
(in millions)

	As of or for the Year ended December 31,				
	Gross Amount	Ceded to Other Companies	Assumed from Other Companies	Net Amounts	Percentage of Amount Assumed to Net
2021					
Life insurance in force	$ 1,117	$ 166,842	$ 3,467,054	$ 3,301,329	105.0 %
Premiums					
U.S. and Latin America:					
Traditional	$ 26	$ 472	$ 6,690	$ 6,244	107.1 %
Financial Solutions	2	—	53	55	96.4
Canada:					
Traditional	—	50	1,244	1,194	104.2
Financial Solutions	—	—	90	90	100.0
Europe, Middle East and Africa:					
Traditional	5	32	1,765	1,738	101.6
Financial Solutions	—	202	552	350	157.7
Asia Pacific:					
Traditional	—	112	2,736	2,624	104.3
Financial Solutions	—	—	218	218	100.0
Total	$ 33	$ 868	$ 13,348	$ 12,513	106.7
2020					
Life insurance in force	$ 1,990	$ 184,625	$ 3,480,692	$ 3,298,057	105.5 %
Premiums					
U.S. and Latin America:					
Traditional	$ 23	$ 585	$ 6,399	$ 5,837	109.6 %
Financial Solutions	3	—	50	53	94.3
Canada:					
Traditional	—	54	1,106	1,052	105.1
Financial Solutions	—	—	83	83	100.0
Europe, Middle East and Africa:					
Traditional	32	24	1,548	1,556	99.5
Financial Solutions	—	178	430	252	170.6
Asia Pacific:					
Traditional	—	106	2,787	2,681	104.0
Financial Solutions	—	—	180	180	100.0
Total	$ 58	$ 947	$ 12,583	$ 11,694	107.6
2019					
Life insurance in force	$ 1,316	$ 192,864	$ 3,480,206	$ 3,288,658	105.8 %
Premiums					
U.S. and Latin America:					
Traditional	$ 29	$ 591	$ 6,291	5,729	109.8 %
Financial Solutions	2	—	37	39	95.4
Canada:					
Traditional	—	54	1,120	1,066	105.0
Financial Solutions	—	—	89	89	100.0
Europe, Middle East and Africa:					
Traditional	45	52	1,449	1,442	100.6
Financial Solutions	—	148	366	218	167.9
Asia Pacific:					
Traditional	—	84	2,652	2,568	103.2
Financial Solutions	—	—	146	146	100.0
Total	$ 76	$ 929	$ 12,150	$ 11,297	107.5

REINSURANCE GROUP OF AMERICA, INCORPORATED
SCHEDULE V—VALUATION AND QUALIFYING ACCOUNTS
(in millions)

Description	Balance at Beginning of Period	Additions: Charged to Costs and Expenses	Additions: Charged to Other Accounts	Deductions	Balance at End of Period
2021					
Valuation allowance for deferred income taxes	$ 251	$ (18)	$ (15)	$ —	$ 218
Allowance for credit losses for mortgage loans	64	—	—	29	35
Allowance for credit losses for fixed maturity securities available-for-sale	20	27	—	16	31
2020					
Valuation allowance for deferred income taxes	$ 236	$ (4)	$ 19	$ —	$ 251
Allowance for credit losses for mortgage loans [(1)]	12	38	14	—	64
Allowance for credit losses for fixed maturity securities available-for-sale	—	41	—	21	20
2019					
Valuation allowance for deferred income taxes	$ 181	$ 56	$ (1)	$ —	$ 236
Allowance for credit losses for mortgage loans	11	1	—	—	12

(1) Upon adoption of *Financial Instruments – Credits Losses* on January 1, 2020, the Company increased the valuation allowance for mortgage loans by $14 million. The increase was reflected as a decrease to opening retained earnings, net of income taxes.

SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) 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.

By: /s/ Anna Manning
Anna Manning
President and Chief Executive Officer

Date: February 25, 2022

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities indicated on February 25, 2022.

Signatures	Date	Title
/s/ J. Cliff Eason J. Cliff Eason	February 25, 2022*	Chairman of the Board and Director
/s/ Anna Manning Anna Manning	February 25, 2022	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ Pina Albo Pina Albo	February 25, 2022*	Director
/s/ Christine R. Detrick Christine R. Detrick	February 25, 2022*	Director
/s/ John J. Gauthier John J. Gauthier	February 25, 2022*	Director
/s/ Patricia L. Guinn Patricia L. Guinn	February 25, 2022*	Director
/s/ Hazel M. McNeilage Hazel M. McNeilage	February 25, 2022*	Director
/s/ Ng Keng Hooi Ng Keng Hooi	February 25, 2022*	Director
/s/ George Nichols III George Nichols III	February 25, 2022*	Director
/s/ Stephen T. O'Hearn Stephen T. O'Hearn	February 25, 2022*	Director
/s/ Shundrawn Thomas Shundrawn Thomas	February 25, 2022*	Director
/s/ Stanley B. Tulin Stanley B. Tulin	February 25, 2022*	Director
/s/ Steven C. Van Wyk Steven C. Van Wyk	February 25, 2022*	Director
/s/ Todd C. Larson Todd C. Larson	February 25, 2022	Senior Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)

* By: /s/ Todd C. Larson February 25, 2022
Todd C. Larson Attorney-in-fact

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 (File No. 1-11848)
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 (File No. 1-11848)
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 (File No. 1-11848)
4.1	Form of stock certificate for RGA’s common stock, incorporated by reference to Exhibit 4 to RGA’s Registration Statement on Form 8-A filed on November 17, 2008 (File No. 1-11848)
4.2	Indenture, dated as of August 21, 2012, between RGA and The Bank of New York Mellon Trust Company, N.A., as Trustee, incorporated by reference to Exhibit 4.1 to Current Report on Form 8-K filed on August 21, 2012 (File No. 1-11848)
4.3	First Supplemental Indenture, dated as of August 21, 2012, between RGA 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 August 21, 2012 (File No. 1-11848)
4.4	Second Supplemental Indenture, dated as of September 24, 2013, between RGA and The Bank of New York Trust Company, N.A., as Trustee, incorporated by reference to Exhibit 4.2 to Current Report on Form 8-K filed on September 24, 2013 (File No. 1-11848)
4.5	Third Supplemental Indenture, dated as of June 8, 2016, between RGA 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 8, 2016 (File No. 1-11848)
4.6	Fourth Supplemental Indenture, dated as of June 8, 2016, between the Company and The Bank of New York Mellon Trust Company, N.A., as Trustee, incorporated by reference to Exhibit 4.3 to Current Report on Form 8-K filed on June 8, 2016 (File No. 1-11848)
4.7	Fifth Supplemental Indenture, dated as of May 15, 2019, 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 May 15, 2019 (File No. 1-11848)
4.8	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 (File No. 1-11848)
4.9	Form of Junior Subordinated Indenture between RGA and The Bank of New York, as Trustee, incorporated by reference to Exhibit 4.3 of the Original S-3 (File No. 333-55304)
4.10	Form of Second Supplemental Junior Subordinated Indenture between RGA and The Bank of New York, as Trustee, incorporated by reference to Exhibit 4.2 to Current Report on Form 8-K filed on December 9, 2005 (File No. 1-11848)
4.11	Description of Securities, incorporated by reference to Exhibit 4.13 to Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed on February 27, 2020 (File No. 1-11848)

10.1	Credit Agreement, dated as of August 21, 2018, by and among RGA, the lenders named therein, U.S. Bank National Association, as Administrative Agent, Swing Line Lender and L/C Issuer, Bank of America, N.A.; JPMorgan Chase Bank, N.A.; and Wells Fargo Bank, National Association as Joint Syndication Agents and Barclays Bank PLC; HSBC Bank USA, National Association; KeyBank National Association; Mizuho Bank, Ltd.; MUFG Bank, Ltd.; Royal Bank of Canada; and Sumitomo Mitsui Banking Corporation as Co-Documentation Agents, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on August 22, 2018 (File No. 1-11848)
10.2	Letter of Credit Reimbursement Agreement, dated as of May 17, 2017, by and between RGA and Crédit Agricole Corporate and Investment Bank, incorporated by reference to Exhibit 10.1 of Current Report on Form 8-K filed May 19, 2017 (File No. 1-11848)
10.3	First Amendment to Letter of Credit Reimbursement Agreement, dated as of June 14, 2019, by and between Reinsurance Group of America, Incorporated and Crédit Agricole Corporate and Investment Bank, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on June 18, 2019 (File No. 1-11848)
10.4	RGA Annual Bonus Plan, effective February 20, 2020, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended March 31, 2020, filed on May 7, 2020 (file No. 1-11848)*
10.5	RGA Flexible Stock Plan as amended and restated effective July 1, 1998 and as further amended by Amendment on March 16, 2000, Second Amendment on May 28, 2003, Third Amendment on May 26, 2004, Fourth Amendment on May 23, 2007, Fifth Amendment on May 21, 2008, Sixth Amendment on May 8, 2011, Seventh Amendment on May 18, 2011, and Eighth Amendment on May 15, 2013, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended June 30, 2013, filed on August 5, 2013 (File No. 1-11848)*
10.6	Form of RGA Flexible Stock Plan Performance Contingent Share Agreement, incorporated by reference to Exhibit 10.2 to Quarterly Report on Form 10-Q for the period ended March 31, 2012, filed on May 7, 2012 (File No. 1-11848)*
10.7	Form of RGA Flexible Stock Plan Stock Appreciation Right Award Agreement, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on February 25, 2011 (File No. 1-11848)*
10.8	Form of RGA Flexible Stock Plan Stock Appreciation Right Award Agreement, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended March 31, 2012, filed on May 7, 2012 (File No. 1-11848)*
10.9	RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.9 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.10	Form of Performance Contingent Share Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended March 31, 2018, filed on May 4, 2018 (File No. 1-11848)*
10.11	Form of Stock Appreciation Right Award Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.2 to Quarterly Report on Form 10-Q for the period ended March 31, 2018, filed on May 4, 2018 (File No. 1-11848)*
10.12	Form of Non-Qualified Stock Option Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended June 30, 2018, filed on August 3, 2018 (File No. 1-11848)*
10.13	Form of Performance Contingent Share Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended March 31, 2019, filed on May 3, 2019 (File No. 1-11848)*

10.14	Form of Stock Appreciation Right Award Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.2 to Quarterly Report on Form 10-Q for the period ended March 31, 2019, filed on May 3, 2019 (File No. 1-11848)*
10.15	Form of Non-Qualified Stock Option Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.3 to Quarterly Report on Form 10-Q for the period ended March 31, 2019, filed on May 3, 2019 (File No. 1-11848)*
10.16	RGA Flexible Stock Plan for Directors, as amended and restated effective May 28, 2003, incorporated by reference to Proxy Statement on Schedule 14A for the annual meeting of shareholders on May 28, 2003, filed on April 10, 2003 (File No. 1-11848)*
10.17	RGA Flexible Stock Plan for Directors, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.11 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.18	RGA Phantom Stock Plan for Directors, as amended effective January 1, 2003, incorporated by reference to Proxy Statement on Schedule 14A for the annual meeting of shareholders on May 28, 2003, filed on April 10, 2003*
10.19	RGA Phantom Stock Plan for Directors, as amended and restated effective January 1, 2016, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended September 30, 2015, filed on November 4, 2015 (File No. 1-11848)*
10.20	RGA Phantom Stock Plan for Directors, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.14 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.21	Offer Letter, dated October 29, 2015, between RGA and Anna Manning, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on November 24, 2015 (File No. 1-11848)*
10.22	Letter Agreement, dated as of July 25, 2019, by and between the Company and Anna Manning, incorporated by reference to Exhibit 10.1 to Quarterly Report on Form 10-Q for the period ended September 30, 2019, filed on November 1, 2019 (File No. 1-11848)*
10.23	RGA Reinsurance Company Augmented Benefit Plan, as amended, incorporated by reference to Exhibit 10.20 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.24	RGA Reinsurance Company Executive Deferred Savings Plan, as amended, incorporated by reference to Exhibit 10.21 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.25	Canadian Supplemental Executive Retirement Plan for Executive Employees of RGA Life Reinsurance Company of Canada, as amended and restated as of August 1, 2015, incorporated by reference to Exhibit 10.22 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.26	Directors' Compensation Summary Sheet
10.27	Form of Directors' Indemnification Agreement, incorporated by reference to Exhibit 10.24 to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on February 27, 2018 (File No. 1-11848)*
10.28	Form of Performance Share Unit Agreement as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on March 15, 2021 (File No. 1-11848)*

10.29	Form of Restricted Share Unit Agreement as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed on March 15, 2021 (File No. 1-11848)*
10.30	Form of Performance Contingent Share Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017*
10.31	Form of Restricted Stock Unit Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.2 to Quarterly Report on Form 10-Q for the period ended March 31, 2021, filed on May 7, 2021 (File No. 1-11848)*
10.32	Form of Stock Appreciation Right Award Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.3 to Quarterly Report on Form 10-Q for the period ended March 31, 2021, filed on May 7, 2021 (File No. 1-11848)*
10.33	Form of Non-Qualified Stock Option Agreement under RGA Flexible Stock Plan, as amended and restated effective May 23, 2017, incorporated by reference to Exhibit 10.4 to Quarterly Report on Form 10-Q for the period ended March 31, 2021, filed on May 7, 2021 (File No. 1-11848)*
10.34	Amendment to the Reinsurance Group of America, Incorporated Flexible Stock Plan, effective May 19, 2021, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on May 20, 2021 (File No. 1-11848)*
10.35	Amendment to the Reinsurance Group of America, Incorporated Flexible Stock Plan for Directors, effective May 19, 2021, incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed on May 20, 2021 (File No. 1-11848)*
10.36	Reinsurance Group of America, Incorporated Phantom Stock Plan for Directors, as amended and restated effective May 19, 2021, incorporated by reference to Exhibit 10.3 to Current Report on Form 8-K filed on May 20, 2021 (File No. 1-11848)*
10.37	Separation and Release Agreement, dated December 14, 2021, by and among Reinsurance Group of America, Incorporated, RGA Life Reinsurance Company of Canada and Alain P. Néemeh, incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on December 17, 2021 (File No. 1-11848)
21.1	Subsidiaries of RGA
23.1	Consent of Deloitte & Touche LLP
24.1	Powers of Attorney for Messrs. Eason, Gauthier, Hooi, Nichols, O’Hearn, Thomas, Tulin and Van Wyk and Mses. Albo, Detrick, Guinn and McNeilage
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).

* Represents a management contract or compensatory plan or arrangement required to be filed as an exhibit to this form pursuant to Item 15 of this Report.

Exhibit 10.26

Directors' Compensation Summary Sheet - 2022

	Board Members	**Chairman of the Board**
Annual Retainer	115,000	215,000
Committee Chairs		
Audit Committee	27,500	
Human Capital & Compensation Committee	22,500	
Investment Committee	22,500	
Nominating & Governance Committee	22,500	
Risk Committee	22,500	
Transaction Review Subgroup Committee Retainer	10,000	
Cyber & Technology Subgroup Committee Retainer	10,000	
Stock Grants [1] [2]	155,000	280,000

[1] Number of shares issued based upon FMV on date of grant.

[2] Chairman of the Board Stock Grant will increase to $285,000 in 2023

Exhibit 21.1

SUBSIDIARIES OF
REINSURANCE GROUP OF AMERICA, INCORPORATED

As of January 31, 2022

Entity	Jurisdiction of Organization
APEXA CORP.	Ontario
Aurora National Life Assurance Company	California
Bonhomme Financing LLC	Missouri
Bueller Financing LLC	Missouri
Castlewood Financial LLC	Missouri
Castlewood Reinsurance Company	Missouri
Chesterfield Financial Holdings LLC	Delaware
Chesterfield Reinsurance Company	Missouri
Elite Sales Processing, Inc.	Nebraska
Gateway Ridge LLC	Missouri
Hodge Life Assurance Company Limited	United Kingdom
Horseshoe Financing LLC	Missouri
LOGIQ3 CORP.	Ontario
LOGIQ3 INC.	Canada
LOGIQ3 INC UK LTD.	United Kingdom
Manor Reinsurance, Ltd.	Barbados
Maroon Financing LLC	Missouri
Meramec Financing LLC	Iowa
My Life Covered LLC	Missouri
Omnilife Insurance Company, Limited	United Kingdom
Papara Financing LLC	Delaware
Parkway Financial LLC	Missouri
Parkway Reinsurance Company	Missouri
Quincy Financing LLC	Missouri
Reinsurance Company of Missouri, Incorporated	Missouri
RGA Americas Investments LLC	Missouri
RGA Americas Reinsurance Company, Ltd.	Bermuda
RGA Atlantic Reinsurance Company Ltd.	Barbados
RGA Australian Holdings Pty Limited	Australia
RGA Capital Limited	United Kingdom
RGA Capital LLC	Missouri
RGA Enterprise Services Company	Missouri
RGA Financial Group, L.L.C.	Delaware
RGA Global Reinsurance Company, Ltd.	Bermuda
RGA Global Reinsurance Company, Ltd.,- escritório de Representação no Brasil Ltda.	Brazil
RGA Global Shared Services India Private Limited	India
RGA Holdings Limited	United Kingdom
RGA International Corporation	Nova Scotia
RGA International Division Sydney Office Pty. Limited	Australia
RGA International Reinsurance Company dac	Ireland
RGA International Services Pty Ltd.	Australia
RGA Investment Advisors LLC	Missouri
RGA Life Reinsurance Company of Canada	Canada

RGA Partners Japan GK	Japan
RGA Real Estate Holdings LLC	Missouri
RGA Real Estate Investments LLC	Missouri
RGA ReCap Incorporated	Missouri
RGA Reinsurance Company	Missouri
RGA Reinsurance Company (Barbados) Ltd.	Barbados
RGA Reinsurance Company Middle East Limited	Dubai International Finance Centre
RGA Reinsurance Company of Australia Limited	Australia
RGA Reinsurance Company of South Africa Limited	South Africa
RGA Services (Singapore) Pte. Ltd.	Singapore
RGA South African Holdings (Pty) Ltd.	South Africa
RGA Technology Partners, Inc.	Missouri
RGA UK Services Limited	United Kingdom
RGA Ventures (Pty) Ltd.	South Africa
RGA Worldwide Reinsurance Company, Ltd.	Barbados
RGAx EMEA Limited	United Kingdom
RGAx LLC	Missouri
River's Edge Turnkey Services, Inc.	Missouri
Rockwood Reinsurance Company	Missouri
SALT Associates, LLC	Maine
Sun Mountain Financing LLC	Missouri
Swyvyl Corp.	Ontario
Timberlake Financial, L.L.C.	Delaware
Timberlake Reinsurance Company II	South Carolina
Tindall Associates, Inc.	Illinois
Ulysses Financing LLC	Missouri
Weldon Spring Partners LLC	Missouri
Wild Horse Financing LLC	Iowa

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-123161, 333-176104, 333-196114 and 333-218214 on Form S-3 and Registration Statement Nos. 333-155685, 333-192656 and 333-218213 on Form S-8 of our reports dated February 25, 2022, relating to the financial statements and financial statement schedules of Reinsurance Group of America, Incorporated and the effectiveness of Reinsurance Group of America, Incorporated's internal control over financial reporting, appearing in this Annual Report on Form 10-K of Reinsurance Group of America, Incorporated for the year ended December 31, 2021.

/s/ DELOITTE & TOUCHE LLP

St. Louis, Missouri
February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ J. Cliff Eason   Director

J. Cliff Eason
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Pina Albo Director

Pina Albo
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Christine R. Detrick Director

Christine R. Detrick
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ John J. Gauthier Director

John J. Gauthier
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Patricia L. Guinn Director

Patricia L. Guinn
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Hazel M. McNeilage Director

Hazel M. McNeilage
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Ng Keng Hool Director

Ng Keng Hool
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ George Nichols III Director

George Nichols III
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Stephen T. O'Hearn Director

Stephen T. O'Hearn
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Shundrawn Thomas   Director

Shundrawn Thomas
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Stanley B. Tulin Director

Stanley B. Tulin
Name (Typed or printed)

Date February 25, 2022

Exhibit 24.1

REINSURANCE GROUP OF AMERICA, INCORPORATED

POWER OF ATTORNEY

I, the undersigned, as a director of Reinsurance Company of America, Incorporated hereby constitute Todd C. Larson and William L. Hutton, and each of them singly, with full power to sign for me, in my name and in the capacity checked below, the annual report of Reinsurance Group of America, Incorporated for fiscal year 2021 on Form 10-K and any and all amendments to this report with the Securities and Exchange Commission and I hereby ratify and confirm my signature as it may be signed by the above-mentioned people to said Form 10-K and to any and all amendments thereto.

Witness my hand on the date set forth below.

Signature

/s/ Steven C. Van Wyk Director

Steven C. Van Wyk
Name (Typed or printed)

Date February 25, 2022

Exhibit 31.1

I, Anna Manning, certify that:

1. I have reviewed this annual report on Form 10-K 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: February 25, 2022

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

Exhibit 31.2

I, Todd C. Larson, certify that:

1. I have reviewed this annual report on Form 10-K 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: February 25, 2022

/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 Annual Report on Form 10-K of Reinsurance Group of America, Incorporated and subsidiaries, (the "Company"), for the year ended December 31, 2021, 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 Securities Exchange Rule 13a-14(b) and 18 U.S.C. Section 1350, 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: February 25, 2022

/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 Annual Report on Form 10-K of Reinsurance Group of America, Incorporated and subsidiaries, (the “Company”), for the year ended December 31, 2021, 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 Securities Exchange Rule 13a-14(b) and 18 U.S.C. Section 1350, 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: February 25, 2022

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