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, 2020

or

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

Commission File Number: 001-37963

ATHENE HOLDING LTD.

(Exact name of registrant as specified in its charter)

Bermuda	**98-0630022**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

Second Floor, Washington House
16 Church Street
Hamilton, HM 11, Bermuda
(441) 279-8400

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class	Trading Symbols	Name of each exchange on which registered
Class A common shares, par value $0.001 per share	ATH	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a 6.35% Fixed-to-Floating Rate Perpetual Non-Cumulative Preference Share, Series A	ATHPrA	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a 5.625% Fixed-Rate Perpetual Non-Cumulative Preference Share, Series B	ATHPrB	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a 6.375% Fixed-Rate Reset Perpetual Non-Cumulative Preference Share, Series C	ATHPrC	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a 4.875% Fixed-Rate Perpetual Non-Cumulative Preference Share, Series D	ATHPrD	New York Stock Exchange

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

Indicate by check mark whether the registrant 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. ☑

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of June 30, 2020, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately $6.0 billion. For purposes of this calculation, we define affiliates as directors, executive officers and shareholders possessing greater than 10% of our aggregate voting power.

As of January 31, 2021, 191,613,948 of our Class A common shares 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 2021 Annual General Meeting of Shareholders 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, 2020.

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As used in this Annual Report on Form 10-K (report), unless the context otherwise indicates, any reference to "Athene," "our Company," "the Company," "us," "we" and "our" refer to Athene Holding Ltd. together with its consolidated subsidiaries and any reference to "AHL" refers to Athene Holding Ltd. only.

Forward-Looking Statements

Certain statements in this report are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended (Securities Act) and Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act). You can identify forward-looking statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as "anticipate," "estimate," "expect," "project," "plan," "intend," "seek," "assume," "believe," "may," "will," "should," "could," "would," "likely" and other words and terms of similar meaning, including the negative of these or similar words and terms, in connection with any discussion of the timing or nature of future operating or financial performance or other events. However, not all forward-looking statements contain these identifying words. Forward-looking statements appear in a number of places throughout and give our current expectations and projections relating to our business, financial condition, results of operations, plans, strategies, objectives, future performance and other matters.

We caution you that forward-looking statements are not guarantees of future performance and that our actual consolidated financial condition, results of operations, liquidity, cash flows and performance may differ materially from that made in or suggested by the forward-looking statements contained in this report. A number of important factors could cause actual results or conditions to differ materially from those contained or implied by the forward-looking statements, including the risks discussed in *Item 1A. Risk Factors*. Factors that could cause actual results or conditions to differ from those reflected in the forward-looking statements contained in this report include:

- the accuracy of management's assumptions and estimates;
- variability in the amount of statutory capital that our insurance and reinsurance subsidiaries have or are required to hold;
- interest rate and/or foreign currency fluctuations;
- our potential need for additional capital in the future and the potential unavailability of such capital to us on favorable terms or at all;
- major public health issues, and specifically the pandemic caused by the effects of the spread of the Coronavirus Disease of 2019 (COVID-19);
- changes in relationships with important parties in our product distribution network;
- the activities of our competitors and our ability to grow our retail business in a highly competitive environment;
- the impact of general economic conditions on our ability to sell our products and on the fair value of our investments;
- our ability to successfully acquire new companies or businesses and/or integrate such acquisitions into our existing framework;
- downgrades, potential downgrades or other negative actions by rating agencies;
- our dependence on key executives and inability to attract qualified personnel, or the potential loss of Bermudian personnel as a result of Bermuda employment restrictions;
- market and credit risks that could diminish the value of our investments;
- changes to the creditworthiness of our reinsurance and derivative counterparties;
- the discontinuation of London Inter-bank Offered Rate (LIBOR);
- changes in consumer perception regarding the desirability of annuities as retirement savings products;
- potential litigation (including class action litigation), enforcement investigations or regulatory scrutiny against us and our subsidiaries, which we may be required to defend against or respond to;
- the impact of new accounting rules or changes to existing accounting rules on our business;
- interruption or other operational failures in telecommunication and information technology and other operating systems, as well as our ability to maintain the security of those systems;
- the termination by Apollo Global Management, Inc. (AGM) or any of its subsidiaries (collectively, AGM together with its subsidiaries, Apollo) of its investment management agreements with us and limitations on our ability to terminate such arrangements;
- Apollo's dependence on key executives and inability to attract qualified personnel;
- the accuracy of our estimates regarding the future performance of our investment portfolio;
- increased regulation or scrutiny of alternative investment advisers and certain trading methods;
- potential changes to laws or regulations affecting, among other things, group supervision and/or group capital requirements, entity-level regulatory capital standards, transactions with our affiliates, the ability of our subsidiaries to make dividend payments or distributions to AHL, acquisitions by or of us, minimum capitalization and statutory reserve requirements for insurance companies and fiduciary obligations on parties who distribute our products;
- the failure to obtain or maintain licenses and/or other regulatory approvals as required for the operation of our insurance subsidiaries;
- increases in our tax liability resulting from the Base Erosion and Anti-Abuse Tax (BEAT) or otherwise;
- improper interpretation or application of Public Law no. 115-97, the Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018 (Tax Act) or subsequent changes to, clarifications of or guidance under the Tax Act that is counter to our interpretation and has retroactive effect;
- AHL or any of its non-United States (US) subsidiaries becoming subject to US federal income taxation;
- adverse changes in US tax law;
- changes in our ability to pay dividends or make distributions;

- the failure to achieve the economic benefits expected to be derived from the Athene Co-Invest Reinsurance Affiliate 1A Ltd. (together, with its subsidiaries, ACRA) capital raise or future ACRA capital raises;
- the failure of third-party ACRA investors to fund their capital commitment obligations; and
- other risks and factors listed under *Item 1A. Risk Factors* and those discussed elsewhere in this report.

We caution you that the important factors referenced above may not be exhaustive. In light of these risks, you should not place undue reliance upon any forward-looking statements contained in this report. Unless an earlier date is specified, the forward-looking statements included in this report are made only as of the date that this report was filed with the US Securities and Exchange Commission (SEC). We undertake no obligation, except as may be required by law, to publicly update or revise any forward-looking statement as a result of new information, future events or otherwise. Comparisons of results for current and any prior periods are not intended to express any future trends, or indications of future performance, unless expressed as such, and should only be viewed as historical data.

Risk Factor Summary

Our business faces significant risks. In addition to the summary below, you should carefully review Item 1A. Risk Factors. These risks should be read in conjunction with the other information in this report. Capitalized terms used below and not previously defined herein shall have the respective meanings set forth elsewhere in this report. The factors that make an investment in our business speculative or risky include:

- Our business, financial condition, results of operations, liquidity and cash flows depend on the accuracy of our management's assumptions and estimates, and we could experience significant gains or losses if these assumptions and estimates differ significantly from actual results.
- Major public health issues, and specifically the pandemic caused by the spread of COVID-19, could have an adverse impact on our financial condition, results of operations, liquidity, cash flows and other aspects of our business.
- As a financial services company, we are exposed to liquidity risk, which is the risk that we are unable to meet near-term obligations as they come due.
- Our investments are subject to market and credit risks that could diminish their value and these risks could be greater during periods of extreme volatility or disruption in the financial and credit markets, which could adversely impact our business, financial condition, results of operations, liquidity and cash flows.
- Interest rate fluctuations could adversely affect our business, financial condition, results of operations, liquidity and cash flows.
- The amount of statutory capital that our insurance and reinsurance subsidiaries have, or that they are required to hold, can vary significantly from time to time and is sensitive to a number of factors outside of our control.
- Interruption or other operational failures in telecommunications, information technology and other operational systems or a failure to maintain the security, integrity, confidentiality or privacy of sensitive data residing on those systems, including as a result of human error, could have a material adverse effect on our business.
- We are subject to the credit risk of our counterparties, including ceding companies who reinsure business to ALRe, reinsurers who assume liabilities from our subsidiaries, plan sponsors who transfer pension obligations to our subsidiaries and derivative counterparties.
- Our investment portfolio may be subject to concentration risk, particularly with respect to single issuers, including MidCap, AmeriHome, Athora and PK AirFinance; industries, including financial services; and asset classes, including real estate.
- A financial strength rating downgrade, potential downgrade or any other negative action by a rating agency could make our product offerings less attractive, inhibit our ability to acquire future business through acquisitions or reinsurance and increase our cost of capital, which could have a material adverse effect on our business.
- We rely significantly on third parties for various services, and we may be held responsible for obligations that arise from the acts or omissions of third parties under their respective agreements with us if they are deemed to have acted on our behalf.
- Uncertainty relating to the LIBOR calculation process and the phasing out of LIBOR after a future date may adversely affect the value of our investment portfolio, our ability to achieve our hedging objectives and our ability to issue funding agreements bearing a floating rate of interest.
- Many of our invested assets are relatively illiquid and we may fail to realize profits from these assets for a considerable period of time, or lose some or all of the principal amount we invest in these assets if we are required to sell our invested assets at a loss at inopportune times to cover policyholder withdrawals or to meet our insurance, reinsurance or other obligations.
- We may be the target or subject of, and may be required to defend against or respond to, litigation, regulatory investigations or enforcement actions.
- Our investments linked to real estate are subject to credit risk, market risk, servicing risk, loss from catastrophic events and other risks, which could diminish the value that we obtain from such investments.
- Our investment portfolio may include investments in securities of issuers based outside the US, including emerging markets, which may be riskier than securities of US issuers.
- We are subject to significant operating and financial restrictions imposed by our credit agreement and we are also subject to certain operating restrictions imposed by the indenture to which we are a party.
- We operate in a highly competitive industry that includes a number of competitors, which could limit our ability to achieve our growth strategies and could materially and adversely affect our business, financial condition, results of operations, cash flows and prospects.
- If we are unable to attract and retain IMOs, agents, banks and broker-dealers, sales of our products may be adversely affected.
- Our growth strategy includes acquisitions and block reinsurance transactions, and our ability to consummate these transactions on economically advantageous terms acceptable to us in the future is unknown.
- Repurchase agreement programs subject us to potential liquidity and other risks.
- Foreign currency fluctuations may reduce our net income and our capital levels, adversely affecting our financial condition.
- Our business in Bermuda could be adversely affected by Bermuda employment restrictions.
- We rely on our investment management agreements with Apollo for the management of our investment portfolio. Apollo may terminate these arrangements at any time, and there are limitations on our ability to terminate such arrangements, which may adversely affect our investment results.
- Interruption or other operational failures in telecommunications, information technology and other operational systems at Apollo or a failure to maintain the security, integrity, confidentiality or privacy of sensitive data residing on Apollo's systems, including as a result of human error, could have a material adverse effect on our business.
- The historical performance of Apollo should not be considered as indicative of the future results of our investment portfolio, our future results or any returns expected on our common shares.
- The returns that we expect to achieve on our investment portfolio may not be realized.

- Our industry is highly regulated and we are subject to significant legal restrictions and these restrictions may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects.
- Our failure to obtain or maintain licenses and/or other regulatory approvals as required for the operations of our insurance subsidiaries may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects.
- Changes in the laws and regulations governing the insurance industry or otherwise applicable to our business, may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects.
- The BEAT may significantly increase our tax liability.
- AHL or its non-US subsidiaries may be subject to US federal income taxation in an amount greater than expected.
- US persons who own our equity securities may be subject to US federal income taxation at ordinary income rates on our undistributed earnings and profits.
- US persons who own our equity securities may be subject to US federal income taxation at ordinary income rates on a disproportionate share of our undistributed earnings and profits attributable to RPII.
- US persons who dispose of our equity securities may be required to treat any gain as ordinary income for US federal income tax purposes and comply with other specified reporting requirements.
- US tax-exempt organizations that own our equity securities may recognize unrelated business taxable income.
- US persons who own our equity securities may be subject to adverse tax consequences if AHL is considered a passive foreign investment company for US federal income tax purposes.
- Changes in US tax law might adversely affect us or holders of our equity securities.
- Changes in US tax law might adversely affect demand for our products.
- There is US income tax risk associated with reinsurance between US insurance companies and their Bermuda affiliates.
- We are subject to the risk that Bermuda tax laws may change and that we may become subject to new Bermuda taxes following the expiration of a current exemption after 2035.
- The impact of the Organisation for Economic Co-operation and Development’s recommendations on base erosion and profit shifting is uncertain and could impose adverse tax consequences on us.
- Our operations may be affected by the introduction of EU mandatory disclosure rules under DAC 6.
- Changes in UK tax law could increase the amount of UK tax we are required to pay.
- The interest of the Apollo Group, which currently controls approximately 35% of, and is expected to continue to control a significant portion of, the total voting power of AHL and holds a number of the seats on our board of directors, may conflict with that of other shareholders and could make it more difficult for you and other shareholders to influence significant corporate decisions.
- Our bye-laws contain provisions that could discourage takeovers and business combinations that our shareholders might consider in their best interests, including provisions that prevent a holder of Class A common shares from having a significant stake in Athene.
- Our bye-laws contain provisions that may cause a holder of Class A common shares to lose the right to vote the shares if the holder or certain connected persons own an equity interest in AGM.
- Holders of our shares may have difficulty effecting service of process on us or enforcing judgments against us in the United States.
- Our choice of forum provisions in our bye-laws may limit your ability to bring suits against us or our directors and officers.
- US persons who own our shares may have more difficulty in protecting their interests than US persons who are shareholders of a US corporation.
- AHL is a holding company with limited operations of its own. As a consequence, AHL’s ability to pay dividends on its common shares and to make timely payments on its debt obligations will depend on the ability of its subsidiaries to make distributions or other payments to it, which may be restricted by law.
- Future sales of common shares by existing shareholders could cause our share price to decline.

GLOSSARY OF SELECTED TERMS

Unless otherwise indicated in this report, the following terms have the meanings set forth below:

Entities

Term or Acronym	Definition
A-A Mortgage	A-A Mortgage Opportunities, L.P.
AAA	AP Alternative Assets, L.P.
AAA Investor	AAA Guarantor – Athene, L.P.
AADE	Athene Annuity & Life Assurance Company
AAIA	Athene Annuity and Life Company
AAM	Athene Asset Management LLC, now known as Apollo Insurance Solutions Group LP
AARe	Athene Annuity Re Ltd., a Bermuda reinsurance subsidiary
ACRA	Athene Co-Invest Reinsurance Affiliate 1A Ltd., together with its subsidiaries
ACRA 1A	Athene Co-Invest Reinsurance Affiliate 1A Ltd., a Bermuda reinsurance subsidiary
ADIP	Apollo/Athene Dedicated Investment Program
AGM	Apollo Global Management, Inc.
AHL	Athene Holding Ltd.
ALRe	Athene Life Re Ltd., a Bermuda reinsurance subsidiary
ALReI	Athene Life Re International Ltd., a Bermuda reinsurance subsidiary
AmeriHome	AmeriHome Mortgage Company, LLC
Apollo	Apollo Global Management, Inc., together with its subsidiaries
Apollo Group	(1) AGM, (2) the AAA Investor, (3) any investment fund or other collective investment vehicle whose general partner or managing member is owned, directly or indirectly, by AGM or one or more of AGM's subsidiaries, (4) BRH Holdings GP, Ltd. and its shareholders, (5) any executive officer or employee of AGM or AGM's subsidiaries (6) any shareholder that has granted to AGM or any of its affiliates a valid proxy with respect to all of such shareholder's Class A common shares pursuant to our bye-laws and (7) any affiliate of any of the foregoing (except that AHL or its subsidiaries are not members of the Apollo Group)
AUSA	Athene USA Corporation
Athora	Athora Holding Ltd.
BMA	Bermuda Monetary Authority
CoInvest Other	AAA Investments (Other), L.P.
CoInvest VI	AAA Investments (Co-Invest VI), L.P.
CoInvest VII	AAA Investments (Co-Invest VII), L.P.
DOL	United States Department of Labor
ISG	Apollo Insurance Solutions Group LP, formerly known as Athene Asset Management LLC
LIMRA	Life Insurance and Market Research Association
MidCap	MidCap FinCo Designated Activity Company
NAIC	National Association of Insurance Commissioners
NYSDFS	New York State Department of Financial Services
RLI	ReliaStar Life Insurance Company
Treasury	United States Department of the Treasury
Voya	Voya Financial, Inc.
VIAC	Venerable Insurance and Annuity Company, formerly Voya Insurance and Annuity Company
Venerable	Venerable Holdings, Inc., together with its subsidiaries

Certain Terms & Acronyms

Term or Acronym	Definition
ABS	Asset-backed securities
ACL	Authorized control level RBC as defined by the model created by the National Association of Insurance Commissioners
ALM	Asset liability management
ALRe RBC	The risk-based capital ratio using ALRe's Bermuda capital and applying NAIC risk-based capital factors to the statutory financial statements of ALRe and ALRe's non-US reinsurance subsidiaries on an aggregate basis. Adjustments are made to (i) exclude US subsidiaries which are included within our US RBC Ratio, (ii) exclude our interests in the AOG units and other non-insurance subsidiary holding companies from our capital base and (iii) limit RBC concentration charges such that when they are applied to determine target capital, the charges do not exceed 100% of the asset's carrying value.
Alternative investments	Alternative investments, including investment funds, CLO equity positions and certain other debt instruments considered to be equity-like
Base of earnings	Earnings generated from our results of operations and the underlying profitability drivers of our business
BEAT	Base Erosion and Anti-Abuse Tax
Bermuda capital	The capital of Athene's non-US reinsurance subsidiaries calculated under US statutory accounting principles, including that for policyholder reserve liabilities which are subjected to US cash flow testing requirements, but (i) excluding certain items that do not exist under our applicable Bermuda requirements, such as interest maintenance reserves and (ii) including certain Bermuda statutory accounting differences, such as marking to market of inception date investment gains or losses relating to reinsurance transactions. Bermuda capital may from time to time materially differ from the calculation of statutory capital under US statutory accounting principles primarily due to the foregoing differences.
Block reinsurance	A transaction in which the ceding company cedes all or a portion of a block of previously issued annuity contracts through a reinsurance agreement
BSCR	Bermuda Solvency Capital Requirement
CAL	Company action level risk-based capital as defined by the model created by the National Association of Insurance Commissioners
CLO	Collateralized loan obligation
CMBS	Commercial mortgage-backed securities
CML	Commercial mortgage loans
Cost of crediting	The interest credited to the policyholders on our fixed annuities, including, with respect to our fixed indexed annuities, option costs, as well as institutional costs related to institutional products, presented on an annualized basis for interim periods
Cost of funds	Cost of funds includes liability costs related to cost of crediting on both deferred annuities and institutional products, as well as other liability costs. Cost of funds is computed as the total liability costs divided by the average net invested assets for the relevant period. Presented on an annualized basis for interim periods.
DAC	Deferred acquisition costs
Deferred annuities	Fixed indexed annuities, annual reset annuities, multi-year guaranteed annuities and registered index-linked annuities
DSI	Deferred sales inducement
Excess capital	Capital in excess of the level management believes is needed to support our current operating strategy
FIA	Fixed indexed annuity, which is an insurance contract that earns interest at a crediting rate based on a specified index on a tax-deferred basis
Fixed annuities	FIAs together with fixed rate annuities
Fixed rate annuity	An insurance contract that offers tax-deferred growth and the opportunity to produce a guaranteed stream of retirement income for the lifetime of its policyholder
Flow reinsurance	A transaction in which the ceding company cedes a portion of newly issued policies to the reinsurer
GAAP	Accounting principles generally accepted in the United States of America
GLWB	Guaranteed lifetime withdrawal benefit
GMDB	Guaranteed minimum death benefit

Term or Acronym	Definition
Gross invested assets	The sum of (a) total investments on the consolidated balance sheet with available-for-sale securities at amortized cost, excluding derivatives, (b) cash and cash equivalents and restricted cash, (c) investments in related parties, (d) accrued investment income, (e) consolidated variable interest entities' assets, liabilities and noncontrolling interest and (f) policy loans ceded (which offset the direct policy loans in total investments). Gross invested assets includes investments supporting assumed funds withheld and modco agreements and excludes assets associated with funds withheld liabilities related to business exited through reinsurance agreements and derivative collateral (offsetting the related cash positions). Gross invested assets includes the entire investment balance attributable to ACRA as ACRA is 100% consolidated
IMA	Investment management agreement
IMO	Independent marketing organization
Investment margin on deferred annuities	Investment margin applies to deferred annuities and is the excess of our net investment earned rate over the cost of crediting to our policyholders, presented on an annualized basis for interim periods
Liability outflows	The aggregate of withdrawals on our deferred annuities, maturities of our funding agreements, payments on payout annuities, and pension risk benefit payments
MCR	Minimum capital requirements
MMS	Minimum margin of solvency
Modco	Modified coinsurance
MVA	Market value adjustment
MYGA	Multi-year guaranteed annuity
Net invested assets	The sum of (a) total investments on the consolidated balance sheet with available-for-sale securities at amortized cost, excluding derivatives, (b) cash and cash equivalents and restricted cash, (c) investments in related parties, (d) accrued investment income, (e) consolidated variable interest entities' assets, liabilities and noncontrolling interest and (f) policy loans ceded (which offset the direct policy loans in total investments). Net invested assets includes investments supporting assumed funds withheld and modco agreements and excludes assets associated with funds withheld liabilities related to business exited through reinsurance agreements and derivative collateral (offsetting the related cash positions). Net invested assets includes our economic ownership of ACRA investments but does not include the investments associated with the noncontrolling interest
Net investment earned rate	Income from our net invested assets divided by the average net invested assets for the relevant period, presented on an annualized basis for interim periods
Net investment spread	Net investment spread measures our investment performance less the total cost of our liabilities, presented on an annualized basis for interim periods
Net reserve liabilities	The sum of (a) interest sensitive contract liabilities, (b) future policy benefits, (c) dividends payable to policyholders, and (d) other policy claims and benefits, offset by reinsurance recoverable, excluding policy loans ceded. Net reserve liabilities also includes the reserves related to assumed modco agreements in order to appropriately match the costs incurred in the consolidated statements of income with the liabilities. Net reserve liabilities is net of the ceded liabilities to third-party reinsurers as the costs of the liabilities are passed to such reinsurers and therefore we have no net economic exposure to such liabilities, assuming our reinsurance counterparties perform under our agreements. Net reserve liabilities is net of the reserve liabilities attributable to the ACRA noncontrolling interest
Other liability costs	Other liability costs include DAC, DSI and VOBA amortization, change in rider reserves, the cost of liabilities on products other than deferred annuities and institutional products, excise taxes, as well as offsets for premiums, product charges and other revenues
Payout annuities	Annuities with a current cash payment component, which consist primarily of single premium immediate annuities, supplemental contracts and structured settlements
Policy loan	A loan to a policyholder under the terms of, and which is secured by, a policyholder's policy
PRT	Pension risk transfer
RBC	Risk-based capital
Rider reserves	Guaranteed lifetime withdrawal benefits and guaranteed minimum death benefits reserves
RMBS	Residential mortgage-backed securities
RML	Residential mortgage loan
Sales	All money paid into an individual annuity, including money paid into new contracts with initial purchase occurring in the specified period and existing contracts with initial purchase occurring prior to the specified period (excluding internal transfers)
SPIA	Single premium immediate annuity
Surplus assets	Assets in excess of policyholder obligations, determined in accordance with the applicable domiciliary jurisdiction's statutory accounting principles
TAC	Total adjusted capital as defined by the model created by the NAIC
US RBC Ratio	The CAL RBC ratio for AADE, our parent US insurance company

Term or Acronym	Definition
VIE	Variable interest entity
VOBA	Value of business acquired

PART I

Item 1. Business

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Item 1. Business

Overview

We are a leading retirement services company that issues, reinsures and acquires retirement savings products designed for the increasing number of individuals and institutions seeking to fund retirement needs. We generate attractive financial results for our policyholders and shareholders by combining our two core competencies of (1) sourcing long-term, generally illiquid liabilities and (2) investing in a high-quality investment portfolio, which takes advantage of the illiquid nature of our liabilities. Our steady and significant base of earnings generates capital that we opportunistically invest across our business to source attractively-priced liabilities and capitalize on opportunities. Our differentiated investment strategy benefits from our strategic relationship with Apollo, which provides a full suite of services for our investment portfolio, including direct investment management, asset allocation, mergers and acquisition asset diligence and certain operational support services, including investment compliance, tax, legal and risk management support. Our relationship with Apollo provides us with access to Apollo's investment professionals around the world as well as Apollo's global asset management infrastructure across a broad array of asset classes. We are led by a highly skilled management team with extensive industry experience. We are based in Bermuda with our US subsidiaries' headquarters located in Iowa.

We began operating in 2009 when the burdens of the financial crisis and resulting capital demands caused many companies to exit the retirement market, creating the need for a well-capitalized company with an experienced management team to fill the void. Taking advantage of this market dislocation, we have been able to acquire substantial blocks of long-duration liabilities and reinvest the related investments to produce profitable returns.

We operate our core business strategies out of one reportable segment, Retirement Services. In addition to Retirement Services, we report certain other operations in Corporate and Other. Retirement Services is comprised of our US and Bermuda operations which issue and reinsure retirement savings products and institutional products. Retirement Services has retail operations, which provide annuity retirement solutions to our policyholders. Retirement Services also has reinsurance operations, which reinsure fixed indexed annuities (FIA), multi-year guaranteed annuities (MYGA), traditional one year guarantee fixed deferred annuities, immediate annuities and institutional products from our reinsurance partners. In addition, our institutional operations, including funding agreement activities and pension risk transfer (PRT) operations, are included in our Retirement Services segment. Corporate and Other includes certain other operations related to our corporate activities, including corporate allocated expenses, merger and acquisition costs, debt costs, certain integration and restructuring costs, certain stock-based compensation and intersegment eliminations. In Corporate and Other we also hold strategic capital in excess of the level of capital we hold in Retirement Services to support our operating strategy.

We believe we hold a sufficient amount of capital in our Retirement Services segment to support our core operating strategies, maintain or improve our current ratings and manage our risk appetite. The sufficiency of capital that we hold in our Retirement Services segment is determined based on our internal capital and risk models as well as consideration of capital models of the three rating agencies that rate us. Our excess capital is currently allocated to our Corporate non-reportable segment and may fluctuate depending on the mix of both our assets and our liabilities as well as our growth and investment in our organic and inorganic channels. We view this excess as strategic capital, which we expect to deploy for future growth opportunities. We further expect our excess capital position to contribute to ratings improvements over time. In addition to the excess capital that we hold, we have untapped debt capacity and available uncalled capital commitments at Athene Co-Invest Reinsurance Affiliate 1A Ltd. (ACRA 1A, and together with its subsidiaries, ACRA), each of which may be used to capitalize on future growth opportunities. See –*Capital* for further discussion.

We have developed organic and inorganic channels to address the retirement services market and grow our assets and liabilities. By focusing on the retirement services market, we believe that we will benefit from several demographic and economic trends, including the increasing number of retirees in the US and the lack of tax advantaged alternatives for people trying to save for retirement. To date, most of the products that we have sold or acquired have been fixed annuities, which offer people saving for retirement a product that is tax advantaged, has a minimum guaranteed rate of return or minimum cash value and provides protection against investment loss.

Within our organic channels, we have focused on developing a diverse suite of products that allow us to meet our risk and return profiles, even in today's low rate environment. Our organic channels currently include: (1) retail, from which we provide retirement solutions to our policyholders primarily through independent marketing organizations (IMOs), banks and broker-dealers; (2) flow reinsurance, through which we partner with insurance companies to improve their product offerings and enhance their financial results; and (3) institutional, which includes funding agreements and PRT transactions. Our inorganic channel, comprised of acquisitions and block reinsurance, has contributed significantly to our growth, and we expect that it will continue to be an important source of growth in the future. We believe our internal transactions team, with support from Apollo, has an industry-leading ability to source, underwrite and expeditiously close transactions, which makes us a competitive counterparty for acquisitions and block reinsurance transactions. In conjunction with Apollo, we are able to provide bespoke solutions to insurance companies seeking to restructure their businesses. We are highly selective in the transactions we pursue, ultimately closing only those that are well aligned with our core competencies and pricing discipline.

We intend to maintain a presence within each of our distribution channels. However, we do not have any market share targets across our organization, which we believe provides us flexibility to respond to changing market conditions in one or more channels and to opportunistically grow liabilities that generate our desired levels of profitability. In a rising interest rate environment, we believe we will be able to profitably increase the volumes generated through our organic channels, while more challenging market environments may give rise to increased growth opportunities through our inorganic channel.

Item 1. Business

Through our efficient corporate structure and operations, we believe we have built a cost-effective platform to support our growth opportunities. We believe our fixed operating cost structure supports our ability to maintain an attractive financial profile across market environments. Additionally, we believe we have designed our platform to be highly scalable and support growth without significant incremental investment in infrastructure, which allows us to scale our business production up or down to meet demand for our products and services. As a result, we believe we will be able to convert a significant portion of our new business spread into adjusted operating income.

Relationship with Apollo

We have a strategic relationship with Apollo which allows us to leverage the scale of its asset management platform. In addition to co-founding the Company, Apollo assists us in identifying and capitalizing on acquisition opportunities that have been critical to our ability to significantly grow our business. We expect our strategic relationship with Apollo to continue for the foreseeable future. For purposes of our bye-laws, the Apollo Group consists of (1) AGM, (2) the AAA Guarantor – Athene, L.P. (AAA Investor), (3) any investment fund or other collective investment vehicle whose general partner or managing member is owned, directly or indirectly, by AGM or one or more of AGM's subsidiaries, (4) BRH Holdings GP, Ltd. and its shareholders, (5) any executive officer or employee of AGM or AGM's subsidiaries, (6) any shareholder that has granted to AGM or any of its affiliates a valid proxy with respect to all of such shareholder's Class A common shares pursuant to bye-law 34 and (7) any affiliate of any of the foregoing; provided that none of AHL or its subsidiaries shall be deemed to be a member of the Apollo Group).

The Apollo Group currently controls approximately 35% of, and is expected to continue to control a significant portion of, the total voting power of AHL. Six of our sixteen directors are employees of or consultants to Apollo, including our Chairman, Chief Executive Officer and Chief Investment Officer, who is also the Chief Executive Officer of Apollo Insurance Solutions Group LP (ISG, formerly Athene Asset Management LLC (AAM)), our investment manager and a subsidiary of AGM. Further, our bye-laws generally limit the voting power of our Class A common shares such that no person owns (or is treated as owning) more than 9.9% of the total voting power of our common shares (with certain exceptions, including the interest held by the Apollo Group). See *Item 1A. Risk Factors–Risks Relating to Our Relationship with Apollo–The interest of the Apollo Group, which currently controls approximately 35% of, and is expected to continue to control a significant portion of, the total voting power of AHL and holds a number of the seats on our board of directors, may conflict with that of other shareholders and could make it more difficult for you and other shareholders to influence significant corporate decisions* and *Item 13. Certain Relationships and Related Transactions, and Director Independence*.

On February 28, 2020, we completed a transaction with AGM and certain of its affiliates that collectively comprise the Apollo Operating Group (AOG). In connection with the transaction, we sold Class A common shares to the AOG in exchange for AOG units and cash (Share Exchange). We also granted to AOG and another AGM affiliate certain other rights, including the right to purchase additional Class A common shares at a later time, subject to certain conditions. Further, in connection with the transaction, certain of our executive officers entered into a voting agreement, pursuant to which such executive officers irrevocably appointed an AGM affiliate as their proxy and attorney-in-fact to vote all of their Class A common shares at any meeting of our shareholders or in connection with any written consent of our shareholders following February 28, 2020. Completion of the transaction resulted in the elimination of our prior multi-class common share structure. See *Note 14 – Related Parties – Other Related Party Transactions – Apollo Share Exchange and Related Transactions* to the consolidated financial statements for further discussion.

Growth Strategy

The key components of our long-term growth strategy are as follows:

- **Expand Our Organic Distribution Channels.** We plan to grow organically by expanding our retail, flow reinsurance and institutional distribution channels. These organic channels generally allow us to adjust our product mix to originate liabilities that meet our return targets in diverse market environments.

  We expect our retail channel to continue to benefit from our credit profile, strong financial position, suite of capital efficient products and product design capabilities. We believe that this should support growth in sales at our desired cost of funds through increased volumes in each of our existing retail channels, including via expanding our bank and broker-dealer network. However, we do not seek to achieve volume growth at the expense of profitability. As a result, we adjust our retail pricing more rapidly for changes in asset yields than do many of our peers. In an economic environment characterized by declining asset yields, our product offerings may be less competitive than those of our peers and in the short-term, we may experience reduced sales volumes.

  Within our flow reinsurance channel, we target reinsurance business consistent with our preferred liability characteristics, and as such, flow reinsurance provides another opportunistic channel for us to source liabilities with attractive cost of funds. We expect our credit profile and growing reputation as a valuable reinsurance counterparty will enable us to attract additional flow reinsurance partners and maintain or increase our flow reinsurance volumes with existing counterparties. Our ability to provide attractive solutions to reinsurance partners was demonstrated by our entry into the Japanese annuity market during 2020 as we established a partnership with a large Japanese financial institution in July. Similar to our retail channel, we do not seek to achieve volume growth at the expense of profitability and therefore tend to respond more rapidly to adjust our pricing for changes in asset yields than do many of our peers.

  We expect to grow our institutional channel by continuing to engage in opportunistic issuances of funding agreements and pursuing additional PRT transactions. During 2020, we issued our inaugural non-US dollar denominated funding agreement under our FABN program, followed by additional non-US dollar denominated issuances at the end of the year. We believe non-US dollar denominated issuances provide an attractive opportunity for growth in our funding agreement channel. We believe that our demonstrated ability to create customized solutions for PRT counterparties seeking to reduce or eliminate their exposure to pension obligations will continue to drive the positive momentum that we have seen in this channel. In addition, after having entered into our inaugural United Kingdom (UK) PRT reinsurance arrangement in December 2019, we believe that we will be able to provide similar PRT solutions to the significant PRT market that exists in the UK, thereby accelerating our growth in this channel.

- **Pursue Attractive Inorganic Growth Opportunities.** We plan to continue leveraging our expertise in sourcing and evaluating inorganic transactions to grow our business profitably. From our founding through December 31, 2020, we have grown to total assets of $202.8 billion, primarily through acquisitions and block reinsurance transactions. Most recently, in June 2020, we entered into a block reinsurance transaction with Jackson National Life Insurance Company (Jackson), pursuant to which we sourced $28.8 billion of gross inflows. We believe that our demonstrated ability to successfully consummate complex transactions, as well as our relationship with Apollo, provides us with distinct advantages relative to other acquisition and block reinsurance counterparty candidates. Furthermore, we have achieved sufficient scale to provide meaningful operational synergies for the businesses and blocks of business that we acquire and reinsure, respectively. Consequently, we believe we are often sought out by companies looking to restructure their businesses.

- **Expand Our Product Offering.** We seek to build products that meet our policyholders' retirement savings objectives, such as accumulation, income and legacy planning. Our products are customized for each of the retail channels through which we distribute, including IMOs, banks and independent broker dealers, and represent innovative solutions that meet the needs of policyholders in each of these channels. We continue to release updated or new products to meet the evolving needs of policyholders. To further provide innovative solutions to policyholders, in 2019 we launched our first registered product, Amplify, an index-linked product that offers policyholders an opportunity to participate in increases in equity market indices to a greater degree than was previously available within our product portfolio, in exchange for limited risk of loss to principal due to decreases in such equity market indices. Unlike more traditional deferred annuities, as a registered product, Amplify is distributed through registered financial representatives, broker dealers and banks.

- **Leverage Our Unique Relationship with Apollo.** We intend to continue leveraging our unique relationship with Apollo to source high-quality assets with attractive risk-adjusted returns. Apollo's global scale and reach provide us with broad market access across environments and geographies and allow us to actively source assets that exhibit our preferred risk and return characteristics. For example, through our relationship with Apollo, we have access to, or the ability to partner with, Apollo's portfolio of origination platforms, which provides us assets with higher spreads than those available in the public markets. See *–Investment Management* for more information regarding Apollo's origination platforms.

  Our relationship with Apollo also allows us to offer creative solutions to insurance companies seeking to restructure their businesses and may enable us opportunities to source additional volumes of attractively-priced liabilities. For example, in December 2017 we worked with Apollo to structure transactions that provided Voya Financial, Inc. (Voya) with a comprehensive solution to its variable annuity exposure, and enabling us to reinsure a $19 billion block of fixed annuities, without requiring that we acquire Voya's variable annuity business.

Finally, our relationship with Apollo has provided us with access to on-demand capital through ACRA. We believe that this capital will be instrumental to executing our growth strategy. See –*Capital* for additional information regarding ACRA.

- **Allocate Assets during Market Dislocations.** As we have done successfully in the past, we plan to fully capitalize on future market dislocations to opportunistically reposition our portfolio to capture incremental yield. For example, regulatory changes in the wake of the financial crisis have made it more expensive for banks and other traditional lenders to hold certain illiquid and complex assets, notwithstanding the fact that these assets may have prudent credit characteristics. The repressed demand for these asset classes has provided opportunities for investors to acquire high-quality assets that offer attractive returns. For example, we see continuing opportunities as banks retreat from direct mortgage lending, structured and asset-backed products, and middle-market commercial loans. We intend to maintain a flexible approach to asset allocation, which will allow us to act quickly on similar opportunities that may arise in the future across a wide variety of asset types.

- **Maintain Risk Management Discipline.** Our risk management strategy is to proactively manage our exposure to risks associated with interest rate duration, credit risk and structural complexity of our invested assets. We address interest rate duration and liquidity risks by managing the duration of the liabilities we source with the assets we acquire through asset liability management (ALM) modeling. We assess credit risk by modeling our liquidity and capital under a range of stress scenarios. We manage the risks related to the structural complexity of our invested assets through Apollo's modeling efforts. The goal of our risk management discipline is to be able to continue to grow and achieve profitable results across various market environments. See *Item 7A. Quantitative and Qualitative Disclosures About Market Risks* for additional information.

Products

We principally offer two product lines: annuities and funding agreements. Our primary product line is annuities and includes fixed, payout and group annuities issued in connection with PRT transactions. We also offer funding agreements, including those issued to institutions and to special-purpose unaffiliated trusts in connection with our funding agreement backed notes (FABN) and secured funding agreement backed repurchase agreement (FABR) programs. The following summarizes our total premiums and deposits by product:

	Years ended December 31,		
(In millions)	2020	2019	2018
Annuities			
Indexed	$ 20,257	$ 7,304	$ 29,973
Fixed rate	20,433	3,192	5,501
Payout	989	624	1,362
Group annuities – PRT	5,467	6,049	2,581
Total annuities products	47,146	17,169	39,417
Funding agreements[1]	8,277	1,301	650
Life and other	54	37	58
Gross premiums and deposits, net of ceded	55,477	18,507	40,125
Premiums and deposits attributable to ACRA noncontrolling interests	(18,692)	(544)	—
Net premiums and deposits, net of ceded and noncontrolling interests	$ 36,785	$ 17,963	$ 40,125

[1] *Funding agreements are comprised of funding agreements issued under our FABN and FABR programs, funding agreements issued to the FHLB and repurchase agreements with an original maturity exceeding one year.*

Gross premiums and deposits are comprised of all products deposits, which generally are not included in revenues on the consolidated statements of income, and premiums collected. Gross premiums and deposits include directly written business, flow reinsurance assumed as well as premiums and deposits generated from assumed block reinsurance transactions, net of those ceded through reinsurance. Net premiums and deposits includes premiums and deposits associated with our proportionate share of ACRA premiums and deposits, based on our economic ownership, but does not include the proportionate share associated with the noncontrolling interest. Organic and inorganic deposits do not correspond to the gross premiums and deposits presented above as gross premiums and deposits include renewal deposits, annuitizations, as well as premiums and deposits from life and other products other than deferred annuities and institutional products, all of which are not included in our organic deposits.

Item 1. Business

Reserve liabilities represents our policyholder liability obligations, including liabilities assumed through reinsurance and net of liabilities ceded through reinsurance, and therefore does not correspond to interest sensitive contract liabilities, future policy benefits, dividends payable to policyholders and other policy claims and benefits as disclosed on our consolidated balance sheets. Reserve liabilities includes the reserves related to assumed modified coinsurance (Modco) and coinsurance on a funds withheld basis (Funds Withheld) to encompass the liabilities for which costs are being recognized in the consolidated statements of income. Reserve liabilities is net of the ceded liabilities to third-party reinsurers as the costs of those liabilities are passed to such reinsurers and, therefore, we have no net economic exposure to such liabilities, assuming our reinsurance counterparties perform under our agreements. The majority of our ceded reinsurance is a result of reinsuring large blocks of life business following acquisitions. Reserve liabilities includes our proportionate share of ACRA reserve liabilities, based on our economic ownership, but does not include the proportionate share of reserve liabilities associated with the noncontrolling interest.

The following summarizes our reserve liabilities by product:

	December 31,			
(In millions, except percentages)	2020		2019	
Annuities				
Indexed	$ 81,084	55.9 %	$ 73,346	64.0 %
Fixed rate	30,315	20.9 %	19,481	17.0 %
Group annuities – PRT	12,262	8.5 %	8,230	7.2 %
Payout	6,859	4.7 %	6,383	5.6 %
Total annuities products	130,520	90.0 %	107,440	93.8 %
Funding agreements[1]	12,591	8.7 %	5,107	4.4 %
Life and other	1,878	1.3 %	2,105	1.8 %
Total reserve liabilities	$ 144,989	100.0 %	$ 114,652	100.0 %

[1] *Funding agreements are comprised of funding agreements issued under our FABN and FABR programs, funding agreements issued to the FHLB and repurchase agreements with an original maturity exceeding one year.*

Annuities

We offer deferred and payout annuities, which are focused on meeting the needs and objectives of people preparing for, approaching or living in retirement. The combination of financial strength, innovative product design and an effective sales strategy enables us to compete successfully in the market and meet the evolving needs of the rapidly growing population of retirees.

Indexed Annuities

Fixed Indexed Annuities – The majority of our reserve liabilities are FIAs. An FIA is a type of insurance contract in which the policyholder makes one or more premium deposits which earn interest, on a tax deferred basis, at a crediting rate based on a specified market index. The policyholder is entitled to receive periodic or lump sum payments a specified number of years after the contract is issued. FIAs allow policyholders the possibility of earning interest without significant risk to principal, unless the contract is surrendered during a surrender charge period. A market index tracks the performance of a specific group of stocks or other assets representing a particular segment of the market, or in some cases, an entire market. Our FIAs include a provision for a minimum guaranteed surrender value calculated in accordance with applicable law, as well as death benefits as required by non-forfeiture regulations. We generally buy options on the indices to which the FIAs are tied to hedge the associated market risk. The cost of the option is priced into the overall economics of the product as an option budget.

The value to the policyholder of an FIA contract is equal to the sum of premiums paid, premium bonuses, if any, and index credits based on the change in the relevant market index, subject to a cap (a maximum rate that may be credited), spread (a credited rate determined by deducting a specific rate from the index return) and/or a participation rate (a credited rate equal to a percentage of the index return), less any fees for riders. Caps on our FIA products generally range from 1.0% to 6.0% when measured annually and 0.5% to 2.5% when measured monthly. Participation rates generally range from 25% to 150% of the performance of the applicable market index. Caps, spreads and participation rates can typically be reset no more frequently than annually, and in some instances no more frequently than every two to four years, at the relevant US insurance subsidiary's discretion, subject to stated policy minimums. Certain riders provide a variety of benefits, such as lifetime income or additional liquidity, for a set charge. As this charge is fixed, the policyholder may lose principal if the index credits received do not exceed the amount of such charge.

We generate income on FIA products by earning an investment spread, which is based on the difference between (1) income earned on the investments supporting the liabilities and (2) the cost of funds, including fixed interest credited to customers, option costs, the cost of providing guarantees (net of rider fees), policy issuance and maintenance costs, and commission costs.

Registered Index-Linked Annuities – A registered index-linked annuity (RILA) is similar to an FIA in that it offers the policyholder the opportunity for tax-deferred growth based in part on the performance of a market index. Compared to an FIA, a RILA has the potential for higher returns but also has the potential for risk of loss to principal and related earnings. A RILA provides the ability for the policyholder to participate in the positive performance of certain market indices during a term, limited by a cap or adjusted for a participation rate. Negative performance of the market indices during a term can result in negative policyholder returns. Downside protection is typically provided in the form of either a "buffer" or a "floor" to limit the policyholder's exposure to market loss. A "buffer" is protection from negative exposure up to a certain percentage, typically 10 or 20 percent. A "floor" is protection from negative exposure less than a stated percentage (i.e., the policyholder risks exposure of loss up to the "floor," but is protected against any loss in excess of this amount).

Fixed Rate Annuities

Fixed rate annuities include annual reset annuities and MYGAs. Unlike FIAs, fixed rate annuities earn interest at a set rate (or declared crediting rate), rather than a rate that may vary based on an index. Fixed rate annual reset annuities have a crediting rate that is typically guaranteed for one year. After such period, we have the ability to change the crediting rate at our discretion, generally once annually, to any rate at or above a guaranteed minimum rate. MYGAs are similar to annual reset annuities except that the initial crediting rate is guaranteed for a specified number of years, rather than just one year, before it may be changed at our discretion. After the initial crediting period, MYGAs can generally be reset annually. As of December 31, 2020, crediting rates on outstanding annual reset annuities ranged from 1.5% to 5.3% and crediting rates on outstanding MYGAs ranged from 0.3% to 4.0%. As of December 31, 2020, 37% of our fixed rate annuities were set at the guaranteed minimum crediting rate.

Income Riders to Fixed Annuity Products

We broadly characterize the income riders on our deferred annuities as either guaranteed or participating. Guaranteed income riders provide policyholders with a guaranteed lifetime withdrawal benefit (GLWB), the amount of which is determined based upon the age of the policyholder when the policy is purchased and when the lifetime income is elected. Riders providing GLWB features permit policyholders to elect to receive guaranteed payments for life from their contract without having to annuitize their policies, which provides policyholders with greater flexibility in the future. Participating income riders tend to have lower levels of guaranteed income than guaranteed income riders, but provide policyholders the opportunity to receive greater levels of income if the policies' indexed crediting strategies perform well.

Income riders, particularly on FIAs, have become very popular among policyholders. The Life Insurance and Market Research Association (LIMRA) estimates that 60% of FIA premium for the nine months ended September 30, 2020 (the most recent period that specific market share data is currently available) included an income rider. Much of our in-force block of deferred annuities contains policies with income riders, which were sourced through retail and reinsurance operations as well as acquisitions, such as the substantial block of these policies acquired with Aviva USA Corporation (Aviva USA). Many of our in-force deferred annuities contain policies that provide GLWB. As of December 31, 2020, approximately 36% of our deferred annuities account value have rider benefits and the reserve associated with the rider benefits was 13% of the related account value. Of the deferred annuities sourced through our retail and flow reinsurance channels, for the year ended December 31, 2020, 10% contained participating income riders and 4% contained guaranteed income riders.

Withdrawal Options for Deferred Annuities

After the first year following the issuance of a deferred annuity, the policyholder is typically permitted to make withdrawals up to 5% or 10% (depending on the contract) of the prior year's value without a surrender charge or market value adjustment (MVA), subject to certain limitations. Withdrawals in excess of the allowable amounts are assessed a surrender charge and MVA if such withdrawals are made during the surrender charge period of the policy. The surrender charge of most of our products is typically between 7% and 15% of the contract value at contract inception and generally decreases by approximately one percentage point per year during the surrender charge period. The surrender charge period of our most popular products ranges from 3 to 20 years. The average surrender charge (excluding the impact of MVAs) is 6% for our deferred annuities as of December 31, 2020.

At maturity, the policyholder may elect to receive proceeds in the form of a single payment or an annuity. If the annuity option is selected, the policyholder will receive a series of payments either over the policyholder's lifetime or over a fixed number of years, depending upon the terms of the contract. Some contracts permit annuitization prior to maturity. In addition to the foregoing rights, a policyholder may also elect to purchase a guaranteed lifetime withdrawal benefit rider which provides the policyholder with a guaranteed lifetime withdrawal benefit for the life of the contract.

Payout Annuities

Payout annuities primarily consist of single premium immediate annuities (SPIA), supplemental contracts and structured settlements. Payout annuities provide a series of periodic payments for a fixed period of time or for the life of the policyholder, based upon the policyholder's election at the time of issuance. The amounts, frequency and length of time of the payments are fixed at the outset of the annuity contract. SPIAs are often purchased by persons at or near retirement age who desire a steady stream of payments over a future period of years. Supplemental contracts are typically created upon the conversion of a death claim or the annuitization of a deferred annuity. Structured settlements generally relate to legal settlements.

Group Annuities

PRT transactions usually involve a single premium group annuity contract issued to discharge certain pension plan liabilities. The group annuities that we issue are nonparticipating contracts. The assets supporting the guaranteed benefits for each contract may be held in a separate account. Group annuity benefits may be purchased for current, retired and/or terminated employees and their beneficiaries covered under terminating or continuing pension plans. Both immediate and deferred annuity certificates may be issued pursuant to a single group annuity contract. Immediate annuity certificates cover those retirees and beneficiaries currently receiving payments, whereas deferred annuity certificates cover those participants who have not yet begun receiving benefit payments. Immediate annuity certificates have no cash surrender rights, whereas deferred annuity certificates may include an election to receive a lump sum payment, exercisable by the participant upon either the participant achieving a specified age or the occurrence of a specified event, such as termination of the participant's employment.

A PRT transaction may be structured as a buyout or buy-in transaction. A buyout transaction involves the issuance by an insurer of a group annuity contract to the plan sponsor and individual annuity certificates to each plan participant, resulting in the transfer of the contractual obligation to pay pension benefits from the plan sponsor to the insurer. A buyout transaction may be a full buyout or a partial buyout. A full buyout covers all obligations outstanding under the plan and involves the termination of the plan, whereas, a partial buyout covers benefits for a subset of the plan population with the remaining plan participants continuing with the plan sponsor. A partial buyout may or may not involve a plan termination. A buy-in similarly involves the issuance of a group annuity contract to the plan sponsor, but the plan sponsor retains the contractual obligation to pay pension benefits to the plan participants and receives reimbursement from the insurer for those payments related to plan participants covered by the group annuity contract. The buy-in group annuity contract is considered a plan asset. A PRT transaction structured as a buy-in includes an option to convert to buyout at the election of the plan sponsor. Generally, a buy-in structure is selected when the plan sponsor seeks to eliminate risk but is not yet prepared to terminate the plan or recognize any adverse accounting impact that may accompany a plan termination. A buy-in contract may be surrendered at the election of the plan sponsor, subject to certain conditions, resulting in a refund to the plan sponsor in an amount determined in accordance with the group annuity contract.

We earn income on group annuities based upon the spread between the return on the assets received in connection with the PRT transaction and the cost of the pension obligations assumed. Group annuities expose us to longevity risk, which would be realized if plan participants live longer than assumed in underwriting the transaction, resulting in aggregate payments that exceed our expectations.

Funding Agreements

We focus on opportunistically issuing funding agreements at attractive risk-adjusted funding costs to institutional investors. Funding agreements are negotiated privately between an investor and an insurance company. They are designed to provide an agreement holder with a guaranteed return of principal and periodic interest payments, while offering competitive yields and predictable returns. The interest rate can be fixed or floating. If the interest rate is a floating rate, it may be linked to the London Interbank Offered Rate (LIBOR), the federal funds rate or other major index. See *Item 1A. Risk Factors–Risks Relating to Our Business Operations–Uncertainty relating to the LIBOR calculation process and the phasing out of LIBOR after a future date may adversely affect the value of our investment portfolio, our ability to achieve our hedging objectives and our ability to issue funding agreements bearing a floating rate of interest.* We also include repurchase agreements with a term that exceeds one year at the time of execution within the funding agreement product category.

Life and Other

Life and other products include other retail products, including run-off or ceded business, statutory closed blocks and ceded life insurance.

Distribution Channels

We have developed four dedicated distribution channels: retail, flow reinsurance, institutional and acquisitions and block reinsurance, which support opportunistic origination across differing market environments. Additionally, we believe these distribution channels enable us to achieve stable asset growth while maintaining attractive returns.

We are diligent in setting our return targets based on market conditions and risks inherent in the products we offer and in the acquisition or block reinsurance transactions we pursue. Generally, we target mid-teen returns for sources of organic growth and mid-teen or higher returns for sources of inorganic growth. However, specific return targets are established with due consideration to the facts and circumstances surrounding each growth opportunity and may be higher or lower than those that we target more generally. Factors that we consider in establishing return targets for a given growth opportunity include, but are not limited to, the certainty of the return profile, the strategic nature of the opportunity, the size and scale of the opportunity, the alignment and fit of the opportunity with our existing business, the opportunity for risk diversification and the existence of increased opportunities for higher returns or growth. If market conditions or risks inherent in a product or transaction create return profiles that are not acceptable to us, we generally will not sacrifice our profitability merely to facilitate growth.

Retail

We have built a scalable platform that allows us to originate and rapidly grow our business in deferred annuity products despite today's low interest rate environment. We have developed a suite of retirement savings products, distributed through our network of approximately 54 IMOs; approximately 59,000 independent agents in all 50 states; and our growing network of 17 banks and 102 regional broker-dealers. We are focused in every aspect of our retail channel on providing high quality products and service to our policyholders and maintaining appropriate financial protection over the life of their policies.

Flow Reinsurance

Reinsurance is an arrangement under which an insurance company, the reinsurer, agrees to indemnify another insurance company, the ceding company or cedant, for all or a portion of certain insurance risks underwritten by the ceding company. Reinsurance is designed to (1) 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, (2) stabilize operating results by reducing volatility in the ceding company's loss experience, (3) assist the ceding company in meeting applicable regulatory requirements and (4) enhance the ceding company's financial strength and surplus position.

Within our flow reinsurance channel, we generally conduct third-party flow reinsurance transactions through our subsidiary, Athene Life Re Ltd. (ALRe). As a fixed annuity reinsurer, ALRe partners with insurance companies to develop solutions to their capital requirements, enhance their presence in the retirement market and improve their financial results. The specific liabilities that ALRe targets to reinsure include FIAs, MYGAs, traditional one-year guarantee fixed deferred annuities, immediate annuities and institutional products. ALRe only targets business consistent with our preferred liability characteristics, and as such, flow reinsurance provides another opportunistic channel for us to source long-term liabilities with attractive crediting rates. For various transaction-related reasons, from time to time, our US insurance subsidiaries, in particular Athene Annuity & Life Assurance Company (AADE), will reinsure business from third-party ceding companies. In these instances, the respective US insurance subsidiary will generally retrocede a portion of the reinsured business to Athene Annuity Re Ltd. (AARe) or ALRe.

As of December 31, 2020, we had on-going flow reinsurance and retrocession agreements involving 12 third-party cedants, for a quota share of such cedants' new inflows, including both FIAs and MYGAs.

Institutional

Funding Agreements

We participate in an FABN program through which we may issue funding agreements to a special-purpose trust that issues marketable medium-term notes. The notes are underwritten and marketed by major investment banks' broker-dealer operations and are sold to institutional investors. The proceeds of the issuance of notes are used by the trust to purchase one or more funding agreements from us with matching interest and maturity payment terms. We have established an FABR program, in which a special-purpose, unaffiliated entity may enter into a repurchase agreement with a bank and the proceeds of the repurchase transactions are used by the special-purpose entity to purchase secured funding agreements from us. We are also a member of the Federal Home Loan Bank (FHLB) and we have issued funding agreements to the FHLB in exchange for cash advances. Finally, repurchase agreements with an original maturity exceeding one year are also included within the funding agreement channel. The following represents the aggregate principal amount of funding agreement inflows:

	Years ended December 31,		
(In millions)	2020	2019	2018
FABN	$ 5,804	$ 1,001	$ —
FHLB	875	300	650
FABR	1,000	—	—
Long-term repurchase agreements	598	—	—
Total funding agreement inflows	$ 8,277	$ 1,301	$ 650

As of December 31, 2020, we had funding agreements of $8.8 billion and $1.0 billion outstanding under our FABN and FABR programs, respectively, $2.0 billion outstanding with the FHLB and $598 million of long-term repurchase agreements. As of February 15, 2021, we had $3.9 billion of capacity remaining under our FABN program.

Item 1. Business

Pension Risk Transfer

Through PRT, we partner with institutions seeking to transfer and thereby reduce their obligation to pay future pension benefits to retirees and deferred participants. We have built an experienced team and continue to enhance our capabilities in this channel by, among other things, expanding into the deferred liability segment, offering a buy-in product and expanding into the UK market by reinsuring the PRT obligations of UK counterparties through our subsidiary Athene Life Re International Ltd. (ALReI). We work with advisors, brokers and consultants to source PRT transactions and design solutions that meet the needs of prospective PRT counterparties. In the US, we are focused on medium- and large-sized deals involving retirees and/or deferred participants that are structured as either a buyout or a buy-in transaction. In the UK, we are focused on reinsuring direct writers of medium- and large-sized deals involving retirees and/or deferred participants that are structured as PRT transactions. We entered the PRT channel during 2017 and from our entry through the year ended December 31, 2020, we had closed 24 deals involving more than 250,000 plan participants resulting in the issuance of an aggregate $16.3 billion of group annuities and UK PRT reinsurance arrangements.

We believe we have established ourselves as a trusted PRT solutions provider and expect that our experience in crafting customized PRT solutions and our improving credit profile will enable us to continue to source and execute PRT transactions. Our ability to design tailored solutions that meet the needs of our PRT counterparties was highlighted in our landmark transaction with Bristol-Myers Squibb Company (Bristol-Myers), which closed in August of 2019. Pursuant to that transaction, we provided Bristol-Myers with an innovative solution to facilitate the complete termination of its pension plan. This innovative solution involved us agreeing to provide a group annuity contract covering all obligations that remained after certain plan participants exercised their right to receive a lump sum payment in July 2019. The resulting group annuity contract covered $2.6 billion of remaining pension obligations. Further, we demonstrated our ability to deliver upon our value proposition in the UK market through our inaugural UK PRT reinsurance arrangement, pursuant to which we reinsured approximately $818 million in UK PRT obligations.

Acquisitions and Block Reinsurance

Acquisitions

Acquisitions are an important source of growth in our business. We have a proven ability to acquire businesses in complex transactions at terms favorable to us, manage the liabilities that we acquire and reinvest the associated assets. Through December 31, 2020, we have closed four acquisition transactions in the US: Liberty Life Insurance Corporation (Liberty Life), Investors Insurance Corporation, Presidential Life Corporation and Aviva USA; and one acquisition transaction internationally: Delta Lloyd Deutschland AG (DLD); collectively representing reserve liabilities backed by approximately $65.9 billion in total assets (net of $9.3 billion in assets ceded through reinsurance).

We plan to continue leveraging our expertise in sourcing and evaluating transactions to profitably grow our business. We believe our demonstrated ability to source transactions, consummate complex transactions and reinvest assets into higher yielding investments as well as our relationship with Apollo and access to capital provide us with distinct advantages relative to other acquisition candidates.

Block Reinsurance

Through block reinsurance transactions, we partner with life and annuity companies to decrease their exposure to one or more products or to divest of lower-margin or non-core segments of their businesses. Unlike acquisitions in which we must acquire the assets or stock of a target company, block reinsurance allows us to contractually assume assets and liabilities associated with a certain book of business. In doing so, we contractually assume responsibility for only that portion of the business that we deem desirable, without assuming additional liabilities. The benefit of the block reinsurance structure was highlighted in the transactions with Voya, in which we reinsured $19 billion in fixed annuities without assuming any of Voya’s variable annuities, and Jackson, in which we reinsured $28.8 billion of fixed and fixed indexed annuities.

Item 1. Business

Investment Management

Investment activities are an integral part of our business and our net investment income is a significant component of our total revenues. Our investment philosophy is to invest a portion of our assets in securities that earn us incremental yield by taking measured liquidity risk and complexity risk and capitalizing on our long-dated and persistent liability profile to prudently achieve higher net investment earned rates, rather than assuming solely credit risk. A cornerstone of our investment philosophy is that given the operating leverage inherent in our business, modest investment outperformance can translate to outsized return performance. For example, if we generate investment returns that exceed those of our peers by 40 basis points (net of fees), we would expect our return on equity (ROE) to exceed those of our peers by approximately 400 basis points or more, assuming consistent operating leverage of approximately 10 times. Because we have remained disciplined in underwriting attractively priced liabilities, we have the ability to invest in a broad range of high-quality assets to generate attractive earnings.

Our differentiated investment strategy benefits from our strategic relationship with Apollo, which provides a full suite of services for our investment portfolio, including direct investment management, asset allocation, mergers and acquisition asset diligence and certain operational support services, including investment compliance, tax, legal and risk management support. Apollo provides portfolio management services for substantially all of our net invested assets.

We are downside focused and our asset allocations reflect the results of stress testing analysis. Additionally, we establish risk thresholds which in turn define risk tolerance across a wide range of factors, including credit risk, liquidity risk, concentration risk and caps on specific asset classes. In addition to other efforts, we partially mitigate the risk of rising interest rates by strategically allocating a meaningful portion of our investment portfolio into floating rate securities.

Apollo's investment team and credit portfolio managers employ their deep experience to assist us in sourcing and underwriting complex asset classes. Apollo has selected a diverse array of corporate bonds and more structured, but highly rated, asset classes. We also maintain holdings in floating rate and less interest rate-sensitive investments, including collateralized loan obligations (CLO), non-agency residential mortgage-backed securities (RMBS) and various types of structured products. These asset classes permit us to earn incremental yield by assuming liquidity risk and complexity risk, rather than assuming solely credit risk.

Apollo sources assets for our investment portfolio based upon the unique characteristics of our business, including desired asset allocation and risk tolerance, and with regard to the ever-changing macroeconomic environment in which we operate. In recent years, we and Apollo have recognized that a heightened demand for investment grade marketable securities has placed substantial downward pressure on credit spreads of such securities, which adversely impacts the returns we are able to achieve on new investment purchases. Rather than increase our allocation to higher risk securities to increase yield, we and Apollo pursue the direct origination of high-quality, predominantly senior secured assets, which possess greater alpha-generating qualities than securities that would otherwise be readily available in public markets. We define our direct origination strategies to include investments sourced by (1) affiliated platforms that originate loans to third parties and which Athene gains exposure directly to the loan or indirectly through its ownership of the platform, and (2) Apollo through its extensive network of direct relationships with predominantly investment grade counterparties.

We believe that a greater focus on these direct origination strategies will afford us both quantitative and qualitative advantages, including eliminating the cost of intermediaries, recognizing an illiquidity premium, having direct access to diligence and having greater control over the terms of the investment. Furthermore, we believe that these direct origination strategies will often provide us with the flexibility to choose the location in the capital structure in which we invest, affording us the opportunity to select the risk/return profile that we deem optimal. By capitalizing on these advantages, we seek to increase yields on our investment portfolio while maintaining investment discipline and limiting our exposure to assets with sub-optimal risk/return characteristics. Employing these direct origination strategies comports well with our investment philosophy of earning incremental spread by taking liquidity and complexity risk, rather than taking excessive credit risk.

As part of our direct origination strategy, we may invest in two types of equity investments. First, we make strategic or 'differentiated' investments in the equity of asset origination platforms themselves. Second, we retain equity risk alongside our investments in investment grade tranches of the assets that Apollo directly originates. We typically refer to both of these types of equity investments as 'alternatives.'

We and Apollo have made and are continuing to make significant investments in establishing a portfolio of asset origination platforms and investment teams across a variety of asset classes. In connection with this effort, we have made and will continue to make strategic investments in certain direct origination platforms. These investments may take the form of debt and/or equity and align with our investment strategy as it relates to alternative investments, as described below. Certain of the asset origination platforms in which we have invested and/or have sourced directly originated assets in the past or may source directly originated assets in the future are set forth below.

midcap FINANCIAL LLC	MidCap is a commercial finance company that provides various financial products to middle-market businesses in multiple industries, primarily located in the US. MidCap primarily originates and invests in commercial and industrial loans, including senior secured corporate loans, working capital loans collateralized mainly by accounts receivable and inventory, senior secured loans collateralized by portfolios of commercial and consumer loans and related products and secured loans to highly capitalized pharmaceutical and medical device companies, and commercial real estate loans, including multifamily independent-living properties, assisted living, skilled nursing and medical office properties, warehouse, office building, hotel and other commercial use properties and multifamily properties. MidCap originates and acquires loans using borrowings under financing arrangements that it has in place with numerous financial institutions.

	AmeriHome is a mortgage origination platform and an aggregator of mortgage servicing rights. AmeriHome acquires mortgage loans from retail originators and re-sells the loans to the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association and other investors. AmeriHome retains the mortgage servicing rights on the loans that it sells and employs a subservicer to perform servicing operations, including payment collection.
	Merx Aviation is a global aircraft leasing, management and finance company based in New York, Dublin and Singapore. Merx has an open mandate to invest in aviation assets, with full flexibility across the spectrum of investment scale, duration, asset type, asset age and structure. Merx targets investment opportunities that provide attractive risk-adjusted returns with downside protection from the underlying aircraft metal value and collateral package. Merx sources proprietary deal flow from its extensive aviation relationship network, composed of other lessors, airlines, private equity firms, hedge funds, aircraft asset managers, part-out shops, and original equipment manufacturers. Merx leverages its operational expertise across marketing, technical, legal, finance, and portfolio management functions to ensure performance across its owned and managed portfolio.
	Apollo Net Lease Co. is a net lease origination platform focused on the acquisition of operationally-essential, triple net lease real estate assets located throughout the US and is an indirect subsidiary of AGM. The platform sources, underwrites, structures and actively manages net lease real estate assets diversified by both geography and tenancy on behalf of Athene. Apollo Net Lease Co. provides access to a diverse asset base through its experienced management team and fully integrated origination platform.
	Haydock Finance is an established lender focused on providing lease finance to UK-based small and medium-sized enterprises backed by business-critical hard assets. Collateral includes, among others, commercial vehicles, industrial plant & machinery and agricultural equipment. By nature of the agreements, the portfolio is granular and has a short weighted average life. For distribution, Haydock relies on a panel of approved brokers and direct sales.
	Redding Ridge Asset Management (Redding Ridge) is a Registered Investment Advisor specializing in leveraged loans and global CLO management. Redding Ridge's primary business consists of acting as collateral manager for CLO transactions and related warehouse facilities and as holder of CLO Retention interests in both US and Europe. Redding Ridge was established in response to risk retention regulations. The firm is strategically positioned with access to significant CLO management and structuring expertise, industry contacts and investor relationships. Pursuant to various service agreements with AGM, Redding Ridge is supported by top tier credit research, credit risk management, credit trading platform and other corporate / administrative services.
PK Air	PK AirFinance is a leading provider and arranger of loans secured by commercial aircraft and aircraft engines. PK AirFinance has comprehensive origination, underwriting, and syndication lending capabilities across products and geographies. PK AirFinance's customer base includes airlines, aircraft traders, lessors, investors and financial institutions with product expertise spanning senior secured loans, finance leases, conditional sales, loan participations, pre-delivery payment loans, and bridge loans. PK AirFinance maintains a global footprint with extensive experience in attractive emerging markets that are not core for some traditional banks. PK AirFinance employs a differentiated, asset-focused underwriting approach supplemented by credit underwriting and cash flow analysis.

In connection with our asset origination strategies, we also partner with Apollo to source, negotiate and structure large asset trades that are opportunistic in nature and offer favorable economic terms relative to investments that are more broadly available. For example, Apollo announced a $3.1 billion directly originated financing related to a 49.9% stake in Anheuser-Busch InBev's (ABI) US-based metal container plants. We invested $1.3 billion in the transaction in December 2020. This is a unique transaction that illustrates Apollo's ability to use its integrated platform and expertise to originate, structure and execute complex transactions quickly and in a size for high-quality corporate issuers. While large asset trades offer us strategic benefits, they also expose us to some degree of single issuer concentration risk. See *Item 1A. Risk Factors–Risk Relating to Market and Credit Risk–Our investment portfolio may be subject to concentration risk, particularly with respect to single issuers, including MidCap, AmeriHome, Athora and PK AirFinance; industries, including financial services; and assets, including real estate* for further discussion of these risks.

We opportunistically allocate approximately 5% of our portfolio to alternative investments where we primarily focus on fixed income-like, cash flow-based investments. Our alternative investment strategy is inherently opportunistic rather than being derived from allocating a fixed percentage of assets to the asset class and the strategy is subject to internal concentration limits. Individual alternative investments are selected based on the investment's risk-reward profile, incremental effect on diversification and potential for attractive returns due to sector and/or market dislocations. We have a strong preference for alternative investments that have some or all of the following characteristics, among others: (1) investments that constitute a direct investment or an investment in a fund with a high degree of co-investment; (2) investments with credit- or debt-like characteristics (for example, a stipulated maturity and par value), or alternatively, investments with reduced volatility when compared to pure equity; or (3) investments that we believe have less downside risk. In general, we target returns for alternative investments of 10% or higher on an internal rate of return basis over the expected lives of such investments.

Our asset portfolio is managed within the limits and constraints set forth in our Investment and Credit Risk Policy. Under this policy, we set limits on investments in our portfolio by asset class, such as corporate bonds, emerging markets securities, municipal bonds, non-agency RMBS, commercial mortgage-backed securities (CMBS), CLO, commercial mortgage whole loans and mezzanine loans and alternative investments. We also set credit risk limits for exposure to a single issuer that vary based on ratings. In addition, our asset portfolio is constrained by its scenario-based capital ratio limit and its stressed liquidity limit.

Capital

We believe that we have a strong capital position and that we are well positioned to meet policyholder and other obligations. We measure capital sufficiency using an internal capital model which reflects management's view on the various risks inherent to our business, the amount of capital required to support our core operating strategies and the amount of capital necessary to maintain our current ratings in a recessionary environment. The amount of capital required to support our core operating strategies is determined based upon internal modeling and analysis of economic risk, as well as inputs from rating agency capital models and consideration of National Association of Insurance Commissioners (NAIC) risk-based capital (RBC) requirements. Capital in excess of this required amount is considered excess equity capital, which is available to deploy.

As discussed previously in –*Growth Strategy*, we seek to achieve profitable growth that maximizes shareholder value. Executing on our growth strategy requires that we have access to adequate amounts of capital. Our deployable capital and uses thereof are set forth below.

Deployable Capital

Our deployable capital is comprised of capital from three sources: excess equity capital, untapped debt capacity and available uncalled capital commitments from ACRA. As of December 31, 2020, we believe that we have over $7.7 billion in total excess equity capital, untapped debt capacity and uncalled ACRA commitments available to be deployed, subject, in the case of debt capacity, to market conditions and general availability.

Excess Equity Capital

Capital in excess of the amount required to support our core operating strategies is considered excess equity capital. Our internal capital model is used to measure the capital in excess of the amount required to support our core operating strategies. As of December 31, 2020, we held approximately $3.5 billion in excess equity capital. Prior to the implementation of our internal capital model in 2020, excess equity capital was primarily determined based on capital in excess of US RBC ratio and ALRe RBC ratio thresholds, as well as inputs from rating agencies capital models. Our excess equity capital provides us with a high degree of flexibility to be opportunistic for inorganic growth.

Debt Capacity

As of December 31, 2020, our debt to capital ratio was 9.6% and our adjusted debt to capital ratio was 12.7%. Based upon an estimated peer average adjusted debt to capital ratio of approximately 25%, we believe that we have approximately $2.5 billion in untapped debt capacity that could be drawn, assuming favorable market conditions and general availability.

ACRA

ACRA 1A was initially formed as a wholly owned subsidiary of ALRe with the objective of raising third-party capital for the purpose of pursuing inorganic transactions, PRT transactions and certain flow reinsurance transactions (collectively, Qualifying Transactions). On September 11, 2019, ALRe entered into a framework agreement (Framework Agreement) with ACRA, in connection with which ACRA received capital commitments from ALRe and certain funds managed by AGM referred to collectively as the Apollo/Athene Dedicated Investment Program (ADIP).

On October 1, 2019, ALRe sold 67% of its economic interests in ACRA to ADIP for $575 million. The shares held by ADIP are non-voting. The shares held by ALRe represent 100% of the voting power and 33% of the economic interests in ACRA. In connection with the sale of ACRA economic interests to ADIP, ALRe entered into a shareholders agreement (Shareholders Agreement) with ACRA and ADIP. On April 1, 2020, ALRe purchased 14,000 newly issued ACRA shares for $66 million, which resulted in ALRe holding 36.55% of the economic interests in ACRA. The remaining 63.45% of the economic interests in ACRA are held by ADIP.

During a commitment period ranging from approximately three to five years, ACRA has the right to participate in substantially all Qualifying Transactions. ALRe may also offer ACRA the right to participate in flow reinsurance transactions with existing third-party counterparties and reinsurance transactions involving new funding agreements from time to time, subject to certain conditions. ACRA's election to participate in Qualifying Transactions is determined by ACRA's Transaction Committee, which is a committee of the board of directors of ACRA comprised of our representatives and those of AGM. If ACRA elects not to participate in a Qualifying Transaction, we will have the right to pursue such Qualifying Transaction without ACRA. ACRA's right to participate in Qualifying Transactions is subject to capital requirements and other terms and conditions.

In connection with each Qualifying Transaction in which ACRA elects to participate (each, a Participating Transaction), ACRA will generally pay ALRe a fee (Wrap Fee) on the reserves of the assumed or acquired business. The Wrap Fee is expected to be approximately 15 bps per year, based on a scale which increases from 10 basis points as the portion of the reserves economically attributed to ADIP increases.

In general, (a) on or about the 10th anniversary of the effective date of any Participating Transaction (other than a flow reinsurance transaction) or (b) on or about the 10th anniversary of the date on which reinsurance is terminated as to new business under any Participating Transaction that is a flow reinsurance transaction (which would occur no later than the end of the commitment period), ALRe or its applicable affiliate has the right (Commutation Right) to terminate ACRA's participation in such Participating Transaction based on a book value pricing mechanism and subject to ADIP's ability to reject the commutation if a minimum return with respect to such Participating Transaction is not achieved. If ALRe does not exercise the Commutation Right with respect to a Participating Transaction, then ACRA's obligation to pay the Wrap Fee in connection with such Participating Transaction will terminate, and, subject to certain exceptions (and the applicable terms and conditions of the Framework Agreement and related transaction documents), ALRe will be required to pay ACRA a fee calculated in the same manner as the Wrap Fee. In addition, if ACRA fails to satisfy minimum aggregate capital requirements, ALRe has the right to recapture or assign to another of our subsidiaries a portion of the business retroceded to ACRA (and/or any of its insurance or reinsurance subsidiaries) to the extent necessary to cure such failure.

As of December 31, 2020, ALRe and ALReI had retroceded to ACRA $38.8 billion of reserve liabilities. In connection with future Participating Transactions, ACRA will draw from ADIP and from ALRe their respective share of the amount of capital necessary to consummate such Participating Transactions.

The terms of any Participating Transaction may vary from the terms described above upon mutual agreement of us and the ACRA Transaction Committee.

As of December 31, 2020, ADIP had raised approximately $3.3 billion in capital commitments, of which $1.7 billion was available to deploy into future Qualifying Transactions.

Uses of Capital

Capital deployment includes both the payment for a business opportunity, such as the payment of a ceding commission to enter into a block reinsurance transaction or the payment of cash to acquire our shares on the open market, and the retention of capital based on our internal capital model. Currently, we deploy capital in four primary ways: (1) supporting organic growth, (2) supporting inorganic growth, (3) opportunistically repurchasing shares and (4) retaining capital to support financial strength ratings upgrades. We generally seek returns on our capital deployment of mid-teens or higher.

Organic Growth

We deploy capital to support the organic growth of our primary business channels, including retail, flow reinsurance and institutional products. Organic growth is generally funded through our ongoing operations by capital generated from profitability and the release of capital in connection with the run-off of historical business. Capital generated through our ongoing operations in excess of that deployed into organic growth results in an incremental increase in our excess equity capital, to the extent not otherwise deployed.

Inorganic Growth

We opportunistically deploy capital in connection with block reinsurance and acquisition transactions, which may include corporate carve-outs or whole-company purchases.

Share Repurchases

From time to time, we and our board of directors may determine it appropriate to deploy capital into repurchasing our common shares. Repurchasing undervalued common shares can be one of the most value-generative and lowest risk investments a company can make. We have implemented a share repurchase program that is intended to be opportunistic in nature, whereby repurchase activity is governed by the calculated returns achievable for shareholders based on the publicly traded value of our common shares relative to adjusted book value per share, among other factors. During the year ended December 31, 2020, we deployed $419 million of capital in connection with the repurchase of our common shares. Since the inception of the share repurchase program, we have repurchased 35.6 million common shares for $1.3 billion at an average price-to-adjusted book value multiple of 0.64x.

Ratings Upgrades

As of December 31, 2020, each of our significant insurance subsidiaries is rated "A" by the three rating agencies that evaluate the financial strength of such subsidiaries. See – *Financial Strength Ratings* for further discussion regarding our ratings. To achieve our financial strength ratings aspirations, we may choose to retain additional capital above the level required by the rating agencies to support our operating needs. We believe there are numerous benefits to achieving stronger ratings over time, including increased recognition of and confidence in our financial strength by prospective business partners, particularly within product distribution, as well as potential profitability improvements in certain organic channels though lower funding costs.

Internal Reinsurance

Subject to quota shares generally ranging from 80% to 100%, substantially all of the existing deposits held and new deposits generated by our US insurance subsidiaries are reinsured to our Bermuda reinsurance subsidiaries. Our internal reinsurance structure provides us with several strategic and operational advantages, including the aggregation of regulatory capital, which makes the aggregate capital of our Bermuda reinsurance subsidiaries available to support the risks assumed by each entity, and enhanced operating efficiencies. As a result of our internal reinsurance structure and third-party direct to Bermuda business, the significant majority of our aggregate capital is held by our Bermuda reinsurance subsidiaries.

We use two principal forms of internal reinsurance arrangements, Modco and Funds Withheld. Under Modco, the reinsured reserves are retained by the US cedant, whereas under Funds Withheld, the Bermuda reinsurer is required to establish reserves for the obligations ceded. Under both Modco and Funds Withheld, the Bermuda reinsurer holds capital against the reserves and the US cedant retains physical possession and legal ownership of the assets supporting the reserves. The profit and loss with respect to the obligations ceded flow from the US cedant to the Bermuda reinsurer through periodic net settlements. Each Modco and Funds Withheld agreement requires the US cedant to establish a segregated account in which the assets supporting the ceded obligations are maintained. The US cedant is authorized under the respective agreement to make payments on the ceded obligations directly from the segregated account. The assets maintained in the segregated account are valued at statutory carrying value for purposes of determining settlement amounts. Under the respective agreements, the US cedants have an obligation to make payments to the Bermuda reinsurers to the extent that the statutory carrying value of the assets maintained in the applicable segregated account exceeds 100% of the reserves maintained in respect of the reinsured business, and the Bermuda reinsurers have an obligation to make payments to the US cedants to the extent that the statutory carrying value of the assets maintained in the applicable segregated account is less than 100% of the reserves maintained in respect of the reinsured business.

Outsourcing

With regard to our US business, we outsource some portion or all of each of the following functions to third-party service providers:

- hosting of financial systems;
- policy administration of existing policies;
- custody;
- information technology development and maintenance; and
- investment management.

We closely monitor our outsourcing partners and integrate their services into our operations. We believe that outsourcing such functions allows us to focus capital and our employees on our core business operations and perform higher utility functions, such as actuarial, product development and risk management. In addition, we believe an outsourcing model provides predictable pricing and service levels and operational flexibility and further allows us to benefit from technological developments that enhance our capabilities, each in a manner that we would not otherwise be able to achieve without investing more of our own capital.

For our retail annuity business, all aspects of new business, including call centers and in-force administration is handled in-house. For some closed in-force blocks of business we partner with Alliance – One Services, Inc., Concentrix Insurance Administrative Solutions Corporation and Infosys McCamish Systems, LLC to provide policy administration services. For annuities issued in support of PRT transactions, we partner with Conduent Health Administration Inc. and Alight Administration Solutions LLC to provide administration services. For information technology services, we use some providers for managed services or supplemental labor, including Tata Consulting Services Limited and UST Global Inc., and for data center, infrastructure and related services we use a combination of OneNeck (a TDS company), Rackspace US, Inc. and State Street Global Exchange (US) LLC. for hosting, and UST Global Inc. for managed services. For investment management services, we use Apollo. We believe we have a good relationship with our principal outsource service providers.

Hedging Program and Derivatives

We use, and may continue to use, derivatives, including swaps, options, futures and forward contracts, and reinsurance contracts to hedge risks such as current or future changes in the fair value of our assets and liabilities, current or future changes in cash flows, changes in interest rates, equity markets, currency fluctuations and changes in longevity. Our hedging program is focused on hedging our economic risk exposures. See *Item 7A. Quantitative and Qualitative Disclosures About Market Risks* for additional information regarding the risks to which we are subject and the strategies that we employ to manage those risks.

Financial Strength Ratings

Financial strength and credit ratings directly affect our ability to access funding and the related cost of borrowing, the attractiveness of certain of our products to customers, our attractiveness as a reinsurer to potential ceding companies and requirements for derivatives collateral posting. Such ratings are periodically reviewed by the rating agencies.

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Credit ratings represent the opinions of rating agencies regarding an entity's ability to repay its indebtedness. Financial strength ratings represent the opinions of rating agencies regarding the financial ability of an insurer or reinsurer to meet its obligations under an insurance policy or reinsurance arrangement and generally involve quantitative and qualitative evaluations by rating agencies of a company's financial condition and operating performance. Generally, rating agencies base their financial strength ratings upon information furnished to them by the respective company and upon their own investigations, studies and assumptions. Financial strength ratings are based upon factors of concern to policyholders, agents, intermediaries and ceding companies and are not directed toward the protection of investors. Credit and financial strength ratings are not recommendations to buy, sell or hold securities and they may be revised or revoked at any time at the sole discretion of the rating organization.

As of December 31, 2020, A.M. Best, Standard & Poor's Rating Services (S&P) and Fitch Ratings (Fitch) had issued credit or financial strength ratings and outlook statements regarding us as follows:

Company	A.M. Best	S&P	Fitch
Athene Holding Ltd.			
Long-Term Issuer Credit Rating/Issuer Default Rating	bbb	BBB+	BBB+
Outlook	Positive	Stable	Negative
Athene Life Re Ltd.			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative
Athene Life Re International Ltd.			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative
Athene Annuity & Life Assurance Company			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative
Athene Annuity & Life Assurance Company of New York			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative
Athene Annuity and Life Company			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative
Athene Life Insurance Company of New York			
Financial Strength Rating	A	Not Rated	Not Rated
Outlook	Stable	Not Rated	Not Rated
Athene Co-Invest Reinsurance Affiliate 1A Ltd. and Athene Co-Invest Reinsurance Affiliate 1B Ltd.			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative
Athene Co-Invest Reinsurance Affiliate International Ltd.			
Financial Strength Rating	A	A	A
Outlook	Stable	Stable	Negative

Item 1. Business

Rating Agency	Financial Strength Rating Scale	Issuer Credit Rating Scale
A.M. Best[1]	“A++” to “D”	“aaa” to “c”
S&P[2]	“AAA” to “D”	“AAA” to “D”
Fitch[3]	“AAA” to “C”	“AAA” to “D”

[1] *A.M. Best’s Financial Strength Rating (FSR) is an independent opinion of an insurer’s financial strength and ability to meet its ongoing insurance policy and contract obligations. A.M. Best’s FSR Categories from “A+” to “C” include a Ratings Notch to reflect a gradation of financial strength within the category. Ratings Notches for A.M. Best’s FSR are expressed with either a second plus “+” or a minus “-“. A.M. Best’s Long-Term Issuer Credit Rating (ICR) is an opinion of an entity’s ability to meet its ongoing senior financial obligations. A.M. Best’s Long-Term ICR Categories from “aa” to “ccc” include Rating Notches to reflect a gradation within the category to indicate whether credit quality is near the top or bottom of a particular Rating Category. Rating Notches for A.M. Best’s Long-Term ICR are expressed with a “+” (plus) or “-“ (minus).*

[2] *S&P’s insurer financial strength rating is a forward-looking opinion about the financial security characteristics of an insurance organization with respect to its ability to pay under its insurance policies and contracts in accordance with their terms. S&P’s issuer credit rating is a forward-looking opinion about an obligor’s overall creditworthiness. This opinion focuses on the obligor’s capacity and willingness to meet its financial commitments as they come due. Long-term issuer credit ratings focus on the obligor’s capacity and willingness to over the long-term to meet all of its financial commitments, both long- and short-term, as they come due. A “+” or “-“ indicates relative standing within a rating category.*

[3] *Fitch’s insurer financial strength ratings provide an assessment of the financial strength of an insurance organization. The insurer financial strength rating is assigned to the insurance company’s policyholder obligations, including assumed reinsurance obligations and contractholder obligations, such as guaranteed investment contracts. The insurer financial strength rating reflects both the ability of the insurer to meet these obligations on a timely basis and expected recoveries received by claimants in the event the insurer stops making payments or payments are interrupted, due to either the failure of the insurer or some form of regulatory intervention. Fitch’s issuer default ratings opine on an entity’s relative vulnerability to default on financial obligations. The threshold default risk addressed by issuer default ratings is generally that of financial obligations whose non-payment would best reflect the uncured failure of that entity. As such, issuer default ratings also address relative vulnerability to bankruptcy, administrative receivership or similar concepts. A “+” or a “-” may be appended to a rating to denote relative status within major rating categories.*

In addition to the financial strength ratings, rating agencies use an outlook statement to indicate a medium or long-term trend which, if continued, may lead to a rating change. A positive outlook indicates a rating may be raised and a negative outlook indicates a rating may be lowered. A stable outlook is assigned when ratings are not likely to be changed. Outlooks should not be confused with expected stability of the issuer’s financial or economic performance. A rating may have a stable outlook to indicate that the rating is not expected to change, but a stable outlook does not preclude a rating agency from changing a rating at any time without notice.

A.M. Best, S&P and Fitch review their ratings of insurance companies from time to time. There can be no assurance that any particular rating will continue for any given period of time or that it will not be changed or withdrawn entirely if, in the respective rating agency’s judgment, circumstances so warrant. While the degree to which ratings adjustments will affect sales and persistency is unknown, we believe if our ratings were to be negatively adjusted for any reason, we could experience a material decline in the sales of our products and the persistency of our existing business. See *Item 1A. Risk Factors–Risks Relating to Our Business Operations–A financial strength rating downgrade, potential downgrade or any other negative action by a rating agency could make our product offerings less attractive, inhibit our ability to acquire future business through acquisitions or reinsurance and increase our cost of capital, which could have a material adverse effect on our business* for further discussion about risks associated with financial strength ratings.

Competition

We operate in highly competitive markets. We face a variety of large and small industry participants, including diversified financial institutions and insurance and reinsurance companies. These companies compete in one form or another for the growing pool of retirement assets driven by a number of external factors such as the continued aging of the population and the reduction in safety nets provided by governments and private employers. As a result, scale and the ability to provide value-added services and build long-term relationships are important factors to compete effectively. See *Item 1A. Risk Factors–Risks Relating to Our Business Operations–We operate in a highly competitive industry that includes a number of competitors, which could limit our ability to achieve our growth strategies and could materially and adversely affect our business, financial condition, results of operations, cash flows and prospects* for further discussion on competitive risks. We believe that our leading presence in the retirement market, diverse range of capabilities and broad distribution network uniquely position us to effectively serve consumers’ increasing demand for retirement solutions, particularly in the FIA market.

We face competition in the FIA market from traditional insurance carriers such as Allianz Life Insurance Company of North America (Allianz) and American International Group Companies (AIG). Principal competitive factors for FIAs are initial crediting rates, reputation for renewal crediting action, product features, brand recognition, customer service, distribution capabilities and financial strength ratings of the provider. Competition may affect, among other matters, both business growth and the pricing of our products and services. See *Item 7.–Management’s Discussion and Analysis of Financial Condition and Results of Operations–Industry Trends and Competition–Competition* for a discussion of our ranking and market share within the FIA market and the fixed annuity market more broadly.

Reinsurance markets are highly competitive, as well as cyclical by product and market. As a reinsurer, ALRe competes on the basis of many factors, including, among other things, financial strength, pricing and other terms and conditions of reinsurance agreements, reputation, service and experience in the types of business underwritten. The impact of these and other factors is generally not consistent across lines of business, domestic and international geographical areas and distribution channels. ALRe's competition includes other insurance and reinsurance companies, such as Reinsurance Group of America, Incorporated and Global Atlantic Financial Group Limited (together with its subsidiaries, Global Atlantic).

We face strong competition within our institutional channel. With respect to funding agreements, namely those issued in connection with our FABN program, we compete with other insurers that have active FABN programs, such as MetLife, Inc. (MetLife) and New York Life Insurance Company. Within the funding agreement market, we compete primarily on the basis of perceived financial strength, interest rates and term. With respect to group annuities, we compete with other insurers that offer such annuities, such as MetLife and Prudential Financial, Inc. Within the PRT market, we compete primarily on the basis of price, underwriting, investment capabilities and our ability to provide quality service to the corporate sponsor's pension participants.

Finally, we face competition in the market for acquisition targets and profitable blocks of insurance. Such competition is likely to intensify as insurance businesses become more attractive acquisition targets for both other insurance companies and financial and other institutions and as the already substantial consolidation in the financial services industry continues. We compete for potential acquisition and block reinsurance opportunities based on a number of factors including perceived financial strength, brand recognition, reputation and the pricing we are able to offer, which, to the extent we determine to finance a transaction, is in turn dependent on our ability to do so on suitable terms. We believe that our demonstrated ability to source and consummate large and complex transactions is a competitive advantage over other potential acquirors.

Human Capital Management

As of December 31, 2020, we had 1,350 employees, including 80 located in our Bermuda headquarters and 1,265 located in the US, primarily at our headquarters in West Des Moines, IA. We believe our employee relations are good. None of our employees are subject to collective bargaining agreements, nor are we aware of any efforts to implement such agreements.

We are committed to a culture that prioritizes teamwork, engagement, inclusivity and pride of ownership. When employees are engaged and feel a sense of purpose and belonging, they are more enthusiastic about their work and the success of the organization. Engagement is driven by many facets of our employee experience. Our core values – Believe in your Co-workers, Engage Actively, Act like Owners, and Make it Happen (BEAM) – provide the foundation for employee engagement. BEAM was created by a team of employees tasked with articulating our core beliefs. BEAM is core to our culture and helps inspire employees to take positive action in our workplace and in our communities.

Talent

Recruiting, developing and retaining high-performing employees in the workplace is very important to us. We value each employee's individual talents and skills, and promote career growth and development for all employees. As we invest in the growth and development of our employees, the value of our workforce increases. The continued success of our business depends upon our ability to retain the employees in whom we have invested. We monitor turnover rates by function and actively defend against key talent losses to competitors. We also conduct annual succession planning to ensure that as the organization expands, is subject to turnover and/or provides promotional opportunities, we are in a position to fill key open positions.

To measure employee satisfaction and engagement, we administer an annual employee engagement survey. The scores and feedback are reviewed by management in addition to being communicated to all employees. We make adjustments to our business practices based on feedback received. To achieve meaningful feedback, we strive to achieve high employee completion rates, with 89% and 88% of employees participating during 2020 and 2019, respectively.

Diversity, Equity and Inclusion

We are committed to ensuring diversity, equity and inclusion (DEI) are woven into our organizational values. Our DEI efforts are led by our Senior Vice President, Diversity, Equity and Inclusion, who reports to our Executive Vice President of Human Resources, with additional reporting responsibilities to the Legal & Regulatory Committee of our board of directors, the committee charged with oversight of our DEI efforts and our corporate and social responsibility efforts more broadly. We have established a Diversity & Inclusion Council and seven Employee Resource Groups (ERGs) that work to elevate diversity efforts by fostering a workplace that cultivates our differences, where employees feel celebrated, engaged, and connected. We seek to build a diverse workforce that delivers on our business objectives and embodies our values. We engage actively with our communities to make a difference in the places in which we live and work.

In addition to our human resources and DEI leadership, we currently have a DEI Manager and seven advisors supporting our seven ERGs, which are comprised of: Athene Military Veterans Organization; LiveWell; African American Athene Connection; Athene Asian Alliance; Lesbian, Gay, Bisexual, Transgender, Queer/Questioning Employee Resource Group; Women's Inclusion Network; and the Bermuda Diversity and Inclusion Committee. Each ERG is paired with a member of our Executive Committee to provide a direct link between the group and our executive leadership.

Item 1. Business

Pay

Our performance-based compensation strategy is designed to recognize and reward employees for their contribution to our success, and we strive to provide strong, equitable incentives for performance. Compensation may be comprised of up to three elements: base compensation, which is determined based upon a number of factors, including size, scope and impact of the employee's role, the market value associated with the employee's role, leadership skills, length of service and individual performance; an annual incentive award, which if applicable, is a cash incentive award determined based on a combination of individual and company performance during the period to which the incentive award relates; and a long-term incentive award, which if applicable, is a stock-based award intended to compensate an employee for her or his contribution to our success and to align the interest of the award recipient with our interest during the vesting period of the award. We seek to determine compensation on the basis of merit and without regard to demographic characteristics. During 2020, we employed a third-party consultant to assist us in evaluating our pay practices. In conducting this exercise, we found no meaningful difference in compensation based upon gender, race or any other defining characteristic examined.

Employee Safety

In light of COVID-19, we have devoted significant attention to the importance of employee safety and well-being. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Industry Trends and Competition—COVID-19—Risk and Mitigation Measures—Business Continuity Risk* for a discussion regarding certain of the procedures we are undertaking to maintain employee safety in the current environment.

Regulation

Our US insurance subsidiaries are licensed to transact insurance business in, and are subject to regulation and supervision by, all 50 states of the United States, Puerto Rico and the District of Columbia. Our Bermuda reinsurance subsidiaries are subject to regulation and supervision by the Bermuda Monetary Authority (BMA) and compliance with all applicable Bermuda law and Bermuda insurance statutes and regulations, including but not limited to Bermuda's Insurance Act 1978 (Bermuda Insurance Act). Our business is also subject to certain international regulations and frameworks as well as the laws and regulations of various other jurisdictions. A summary of certain of the laws, regulations and frameworks to which we are subject is set forth below.

General

United States

Each of our US insurance subsidiaries, with the exception of Athene Re USA IV, Inc. (Athene Re IV) discussed further below, is organized and domiciled in one of the following states: Delaware, Iowa, or New York (each, an Athene Domiciliary State) and is also licensed in such state as an insurer. The insurance department of each Athene Domiciliary State regulates the applicable US insurance subsidiary, and each US insurance subsidiary is regulated by each of the insurance regulators in the other states where such company is authorized to transact insurance business. The primary purpose of such regulatory supervision is to protect policyholders rather than holders of any securities, such as the AHL common shares. Generally, insurance products underwritten by our US insurance subsidiaries must be approved by the insurance regulators in each state in which they are sold.

As part of our acquisition of Aviva USA, we acquired a special-purpose insurance company, Athene Re IV, which is a subsidiary of Athene Annuity and Life Company (AAIA). Athene Re IV is domiciled in Vermont and provides reinsurance to AAIA in order to facilitate the reserve financing associated with a closed block of policies resulting from the demutualization of a prior insurance company currently part of AAIA. As part of the acquisition of AAIA, the liabilities associated with such closed block of insurance policies, including any exposure to payments due from such special-purpose insurance company subsidiary, were reinsured to Accordia. We do not write business that requires the use of captive reinsurers.

State insurance authorities have broad administrative powers over our US insurance subsidiaries with respect to all aspects of their insurance business including: (1) licensing to transact business; (2) licensing of producers; (3) prescribing which assets and liabilities are to be considered in determining statutory surplus; (4) regulating premium rates for certain insurance products; (5) approving policy forms and certain related materials; (6) determining whether a reasonable basis exists as to the suitability of the annuity purchase recommendations producers make; (7) regulating unfair trade and claims practices; (8) establishing reserve requirements, solvency standards and minimum capital requirements (MCR); (9) regulating the amount of dividends that may be paid in any year; (10) regulating the availability of reinsurance or other substitute financing solutions, the terms thereof and the ability of an insurer to take credit on its financial statements for insurance ceded to reinsurers or other substitute financing solutions; (11) fixing maximum interest rates on life insurance policy loans, minimum crediting rates on accumulation products and minimum allowable surrender values; (12) regulating the type, amounts and valuations of investments permitted; (13) setting parameters for transactions with affiliates; and (14) regulating other matters.

The rates, forms, terms and conditions of our US insurance subsidiaries' reinsurance agreements with unaffiliated third parties generally are not directly subject to regulation by any state insurance department in the United States. This contrasts with primary insurance where, as discussed above, the policy forms and premium rates are generally regulated by state insurance departments.

From time to time, increased scrutiny has been placed upon the US insurance regulatory framework, and a number of state legislatures have considered or enacted legislative measures that alter, and in many cases increase, state authority to regulate insurance and reinsurance companies. In addition to legislative initiatives of this type, the NAIC and state insurance regulators are regularly involved in a process of reexamining existing laws and regulations and their application to insurance and reinsurance companies.

Furthermore, while the federal government in most contexts currently does not directly regulate the insurance business, federal legislation and administrative policies in a number of areas, such as employee benefits regulation, age, sex and disability-based discrimination, financial services regulation and federal taxation, can significantly affect the insurance business. It is not possible to predict the future impact of changing regulation on our operations. See *Item 1A. Risk Factors–Risks Relating to Insurance and Other Regulatory Matters*.

Bermuda

The Bermuda regulatory regime has been deemed to be equivalent to the European Union (EU) Directive (2009/138/EC) (Solvency II). The Bermuda Insurance Act regulates the insurance business of our Bermuda reinsurance subsidiaries, and provides that no person may carry on any insurance business in or from within Bermuda unless registered as an insurer under such act by the BMA. The BMA is required by the Bermuda Insurance Act to determine whether the applicant is a fit and proper body to be engaged in the insurance business and, in particular, whether it has, or has available to it, adequate knowledge and expertise to operate an insurance business. See *–Fit and Proper Controllers* below.

The continued registration of an insurer is subject to the insurer complying with the terms of its registration and such other conditions as the BMA may impose from time to time. The Bermuda Insurance Act also grants to the BMA powers to supervise, investigate and intervene in the affairs of insurance companies. The Bermuda Insurance Act imposes on Bermuda insurance companies solvency standards as well as auditing and reporting requirements.

Regulation of an Insurance Group

Group Supervision

Many insurers, including us, operate within a group structure. An insurance group is two or more affiliated persons, one or more of which is an insurance company. As an insurer's financial position and risk profile may be impacted by being part of a group, US state and international regulators have developed group supervisory frameworks in order to provide regulators with the ability to scrutinize the activities of an insurance group and assess its potential impact on insurance companies. The Iowa Insurance Division (IID) and the BMA are the lead regulators of our largest subsidiaries. Under the Iowa Holding Company Act (Iowa HCA), the IID is our group supervisor. Separately, the BMA is the subgroup supervisor for our Bermuda reinsurance subsidiaries. Under applicable US state law, Apollo and (except as otherwise excluded with regulatory approval) its affiliates, including its insurance interests, are included within the holding company system for purposes of certain supervision requirements, even though many of such entities have no material relationship to us.

A group supervisor may perform a number of supervisory functions including: (1) coordinating the gathering and dissemination of relevant or essential information for going concerns and emergency situations, including the dissemination of information that is of importance for the supervisory task of other competent authorities; (2) carrying out supervisory reviews and assessments of the insurance group; (3) carrying out assessments of the insurance group's compliance with the rules on solvency, risk concentration, intra-group transactions and good governance procedures; (4) planning and coordinating supervisory activities in respect of the insurance group, both as a going concern and in emergency situations through regular meetings held at least annually (or by other appropriate means) with other competent authorities; (5) coordinating enforcement actions that may need to be taken against the insurance group or any of its members; and (6) planning and coordinating meetings of colleges of supervisors (consisting of insurance regulators) in order to facilitate the carrying out of the functions described above.

The group supervisor may impose certain requirements on the insurance group, including to make provision for, among other things: (1) assessing the financial situation and the solvency position of the insurance group and/or its members and (2) regulating intra-group transactions, risk concentration, governance procedures, risk management and regulatory reporting and disclosure. Many of these requirements are still being developed in regulatory frameworks and have not yet been applied in substance to us or our affiliates or, to the extent they have been applied, remain subject to modification as part of larger prudential regulatory initiatives.

Group Capital

In December 2020, the NAIC adopted a group capital calculation (GCC) to provide US regulators with a method to aggregate the available capital and the minimum capital of each entity in a group in a way that applies to all groups regardless of their structure. We, Apollo and Apollo's other insurance affiliates participated in the NAIC's field testing of the GCC in 2019 and we expect to continue to be included in Apollo's GCC in the future. The NAIC has stated that the calculation will be a regulatory tool and will not constitute a requirement or standard. While we do not currently expect this regulatory tool to impact our business, it is impossible to predict accurately if it will over time. The NAIC has also adopted changes to the Model Insurance Holding Company System Regulatory Act to require, subject to certain exceptions, the ultimate controlling person of every insurer subject to the holding company registration requirement to file an annual group capital calculation with its lead state on a confidential basis. We expect that Apollo's GCC will be filed with the IID.

Internationally Active Insurance Groups and the Common Framework for the Supervision of Internationally Active Insurance Groups

In November 2019, the International Association of Insurance Supervisors (IAIS) adopted the Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame). ComFrame will be applicable to entities that meet the IAIS's criteria for internationally active insurance groups (IAIGs) and that are so designated by their group-wide supervisor. Under ComFrame, an IAIG is defined as an insurance group which has (i) premiums written in three or more jurisdictions, with the percentage of gross premiums written outside the home jurisdiction comprising at least 10% of the group's total gross written premiums, and (ii) based on a rolling three-year average, total assets of at least $50 billion, or gross written premiums of at least $10 billion. ComFrame establishes international standards for the designation of a group-wide supervisor for each IAIG and for the imposition of a group capital requirement applicable to an IAIG in addition to the current legal entity capital requirements imposed by relevant insurance laws and regulations. The NAIC previously adopted changes to the Model Insurance Holding Company System Regulatory Act to allow state insurance regulators in the US to be designated as group-wide supervisors for US-based IAIGs. As with all model acts, these revisions must be adopted by individual states. Iowa has made these revisions to its Holding Company Act.

In November 2019, the IAIS also adopted a revised version of its global insurance capital standard (ICS), the group capital component of ComFrame. The NAIC currently is developing an alternative to the ICS, using an RBC aggregation methodology (AM) and will seek effective equivalency of the AM as an alternative to the ICS for US-based IAIGs. The AM will be based upon the NAIC's GCC tool. In the event that we or Apollo becomes an IAIG, we expect to be subject to the relevant ICS. It is possible that the development of these international standards will have an impact on our capital position and capital structure in the future.

Own Risk and Solvency Assessment (ORSA) Model Act

We are subject to the ORSA Model Act, which has been enacted by each Athene Domiciliary State, and requires insurance companies to assess the adequacy of their and their group's risk management and current and future solvency position. Under the ORSA Model Act, certain insurers must undertake an internal risk management review at least annually (but also at any time when there are significant changes to the risk profile of the insurer or its insurance group), in accordance with the NAIC's ORSA Guidance Manual, and prepare an ORSA Report assessing the adequacy of the insurer's risk management and capital in light of its current and future business plans. The ORSA Report is required to be filed annually with a company's lead state regulator and made available to other domiciliary regulators within the holding company system. We file the ORSA with the IID as our lead state regulator and concurrently provide the ORSA to the Delaware Department of Insurance and the New York State Department of Financial Services (NYSDFS). We also submit the ORSA to the BMA. Additionally, for the purposes of satisfying the assessment requested in the Schedule of Commercial Insurer's Solvency Self-Assessment, each Bermuda reinsurance subsidiary submits supporting documentation to the BMA regarding specific queries presented in the Bermuda Solvency Capital Requirement (BSCR), to supplement the information provided in the ORSA.

Corporate Governance Annual Disclosure Model Act and Model Regulation (together, the Corporate Governance Model Act)

In November 2014, the NAIC adopted the Corporate Governance Model Act, which requires an insurer to provide an annual disclosure regarding its corporate governance practices to its lead state and/or domestic regulator. The Corporate Governance Model Act must be adopted by the individual states for the new requirements to apply, and specifically in Delaware, Iowa and New York for the changes to apply to our US insurance subsidiaries. Each Athene Domiciliary State has adopted a form of the Corporate Governance Annual Disclosure Model Act.

Insurance Holding Company Regulation

Each direct and indirect parent of our US insurance subsidiaries (including AHL) is subject to the insurance holding company laws of each of the Athene Domiciliary States. These laws generally require an insurance holding company and insurers that are members of such holding company system to register with their US insurance regulators and to file certain reports with those authorities, including information concerning their capital structure, ownership, financial condition, certain intercompany transactions and general business operations. Generally, under these laws, transactions between our US insurance subsidiaries and their affiliates, including any reinsurance transactions and affiliated investments, must be fair and reasonable and, if material or included within a specified category, require prior notice and approval or non-disapproval by the insurance department of each applicable Athene Domiciliary State.

Most states, including each of the Athene Domiciliary States, have insurance laws that require regulatory approval of a direct or indirect change of control of an insurer, which would include a change of control of its holding company. Laws such as these prevent any person from acquiring direct or indirect control of any of our US insurance subsidiaries or their holding companies unless that person has filed a statement with specified information with the commissioner or director of the insurance department of the applicable Athene Domiciliary State (each, a Commissioner) and has obtained the Commissioner's prior approval. Under most states' statutes, including those of each of the Athene Domiciliary States, acquiring 10% or more of a voting interest in an insurance company or its parent company is presumptively considered a change of control, although such presumption may be rebutted. Accordingly, any person who acquires 10% or more of a voting interest in a direct or indirect parent of any of our US insurance subsidiaries (or AHL) without the prior approval of the Commissioner of the applicable Athene Domiciliary State will be in violation of the applicable Athene Domiciliary State's law and may be subject to injunctive action requiring the disposition or seizure of those securities by the Commissioner or prohibiting the voting of those securities and/or to other actions determined by the Commissioner. Further, a willful violation of these laws is punishable in each Athene Domiciliary State as a criminal offense.

Item 1. Business

In addition, the Model Insurance Holding Company System Regulatory Act (Amended Holding Company Model Act) requires any controlling person of a US insurer seeking to divest its controlling interest in the insurance company to file with the relevant insurance Commissioner a confidential notice of the proposed divestiture at least thirty days prior to the cessation of control (unless a person acquiring control from the divesting party has filed notice of the proposed acquisition of control with the Commissioner). After receipt of the notice, the Commissioner must determine whether the parties seeking to divest or to acquire a controlling interest will be required to file for or obtain approval of the transaction. These laws may discourage potential acquisition proposals and may delay, deter or prevent an acquisition of control of a direct or indirect parent of any of our US insurance subsidiaries (including AHL) (in particular through an unsolicited transaction), even if the shareholders of such parent consider such transaction to be desirable. Our bye-laws include limitations on the voting power exercisable by shareholders of the Company other than the Apollo Group so that certain persons or groups (Control Groups) are deemed not to hold more than 9.9% of the total voting power conferred by our shares.

Holding company system regulations currently in effect in New York require prospective acquirers of New York domiciled insurers to provide detailed disclosure with respect to intended changes to the business operations of the insurer, and expressly authorize the NYSDFS to impose additional conditions on such acquisitions. Pursuant to these regulations, the NYSDFS may limit the changes that the acquirer may make to the insurer’s business operations for a specified period of time following the acquisition without the NYSDFS’ prior approval. In particular, the regulation provides the NYSDFS with the specific authority to require acquirers of New York domiciled life insurers to post assets in a trust account for the benefit of the target company’s policyholders. In making such determination, the NYSDFS may consider whether the acquirer is, or is controlled by or under common control with, an investment manager such as Apollo. The NAIC has also published in its Financial Analysis Handbook specific narrative guidance for state insurance examiners to consider in reviewing applications for an acquisition of insurance and reinsurance companies by a private equity firm.

Although Athene Re IV is not subject to insurance holding company laws, the Vermont insurance regulator may use all or a part of the holding company law framework described above in determining whether to approve a proposed change of control.

Each of the Athene Domiciliary States has adopted a form of the Amended Holding Company Model Act, which requires each ultimate controlling party to file an annual enterprise risk report identifying the material risks within the insurance holding company system that could pose enterprise risk to the licensed companies. An enterprise risk is an activity or event involving affiliates of an insurer that could have a material adverse effect on the insurer or the insurer’s holding company system.

In December 2014, the NAIC adopted additional amendments to the Amended Holding Company Model Act for consideration by the various states that address the authority of an insurance commissioner to act as the group-wide supervisor for an internationally active insurance group or to acknowledge the authority of another regulatory official, from another jurisdiction, to so act. These changes to the Amended Holding Company Model Act must be enacted by the individual states before they will become effective, and specifically in Delaware, Iowa and New York for the changes to apply to our US insurance subsidiaries. Delaware has adopted a form of these changes to the Amended Holding Company Model Act and Iowa has adopted similar provisions under a predecessor statute. New York has adopted a new Insurance Regulation 203 that permits the New York Superintendent of Financial Services to act as group-wide supervisor of an IAIG that conducts substantial insurance operations in New York. It is not possible to predict with any degree of certainty the additional capital requirements, compliance costs or other burdens these changes may impose in the future.

NAIC

The NAIC is an organization, the mandate of which is to benefit state insurance regulatory authorities and consumers by promulgating model insurance laws and regulations for adoption by the states. The NAIC also provides standardized insurance industry accounting and reporting guidance through the NAIC Accounting Manual. However, model insurance laws and regulations are only effective when adopted by the states, and statutory accounting and reporting principles continue to be established by individual state laws, regulations and permitted practices. Changes to the NAIC Accounting Manual or modifications by the various state insurance departments may affect the statutory capital and surplus of our US insurance subsidiaries.

Some of the NAIC pronouncements, particularly as they affect accounting issues, take effect automatically in the various states without affirmative action by the states. Statutes, regulations and interpretations may be applied with retroactive impact, particularly in areas such as accounting and reserve requirements. Also, regulatory actions with prospective impact can potentially have a significant impact on products that we currently sell. The NAIC continues to work to reform state regulation in various areas, including comprehensive reforms relating to certain reserving practices.

Classification of Insurers

The Bermuda Insurance Act distinguishes between insurers carrying on long-term business, insurers carrying on special purpose business and insurers carrying on general business. Long-term business is generally defined as life, annuity and accident and health insurance, while general business broadly includes all types of insurance that are not long-term business (property and casualty business). Special purpose business is fully funded insurance business approved by the BMA to be written by a company registered either as a Special Purpose Insurer or as a Collateralized Insurer. There are five classifications of insurers carrying on long-term business, ranging from Class A insurers (pure captives) to Class E insurers (larger commercial carriers). Class A insurers are subject to the lightest regulation and Class E insurers are subject to the strictest regulation.

Our Bermuda reinsurance subsidiaries, which are incorporated to carry on long-term business, are each registered as a Class C or Class E insurer. Class C is the license class for long-term insurers and reinsurers with total assets of less than $250 million that are not registrable as a single parent or multi-owner long-term captive insurer or reinsurer. Class E is the license class for long-term insurers and reinsurers with total assets of more than $500 million that are not registrable as a single-parent or multi-owner long-term captive insurer or reinsurer. Our Bermuda reinsurance subsidiaries are not licensed, accredited or approved in any US state or jurisdiction to conduct general business and have not sought authorization as reinsurers in any US state or jurisdiction.

In order for ceding companies of our Bermuda reinsurance subsidiaries to receive statutory reserve or RBC credit for the reinsurance provided, reinsurance transactions are typically structured in one of three ways: (1) funds withheld, where, although the applicable Bermuda reinsurance subsidiary recognizes the insurance reserve liabilities, the assets to secure such liabilities are held and maintained by the applicable ceding company, (2) modco, where both the insurance reserves and assets supporting the reserves are retained by the applicable ceding company or (3) coinsurance, where the respective Bermuda reinsurance subsidiary's obligation to the applicable ceding company in connection with reinsurance transactions is secured by assets held in trust for the benefit of the applicable ceding company, which may be reduced or eliminated to the extent that the applicable Bermuda reinsurance subsidiary is approved as a certified reinsurer or reciprocal jurisdiction reinsurer in the cedant's domiciliary state as discussed in more detail in the following section.

Credit for Coinsurance Ceded by a US Cedant

The ability of a ceding insurer to take reserve credit for the business ceded to reinsurance companies through coinsurance is a significant component of reinsurance regulation and is often a determining factor in establishing a reinsurance relationship. Under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), only the state in which a ceding insurer is domiciled may regulate the financial statement credit for reinsurance taken by that ceding insurer. With respect to US-domiciled ceding companies, credit is typically granted when the reinsurer is licensed or accredited in the state where the ceding company is domiciled; the reinsurer is domiciled in a state with credit for reinsurance laws and regulations that are substantively similar to the credit for reinsurance laws and regulations in the ceding insurer's state of domicile and the reinsurer meets certain financial requirements; or other conditions are satisfied, such as the reinsurer securing its obligations to the cedant with qualified collateral.

As none of our Bermuda reinsurance subsidiaries are licensed, accredited or approved in any US state or jurisdiction, unless certain conditions are satisfied (see below), when engaging in coinsurance transactions, each must collateralize its obligations to US-based cedants in order for such cedants to obtain credit against their reserves on their statutory basis financial statements.

Credit for reinsurance laws and regulations adopted by the various states are based on the NAIC's Credit for Reinsurance Model Law and Regulations and provide that collateral requirements may be reduced for reinsurance ceded to certain unauthorized or non-accredited non-US-based reinsurers that satisfy certain criteria to qualify as a certified reinsurer. ALRe has been approved as a certified reinsurer in Delaware, Maine, Massachusetts, Michigan, Ohio, Tennessee and Vermont and is therefore eligible, based on its current ratings, to post reduced collateral equal to 20% of the statutory reserves ceded under new coinsurance agreements by insurers domiciled in those states.

In June of 2019, the NAIC adopted revisions to the Credit for Reinsurance Model Law and Regulation to allow a ceding insurer to take credit for reinsurance ceded to a qualifying unauthorized reinsurer without collateral if the reinsurer satisfies certain conditions, including being domiciled in a reciprocal jurisdiction. The NAIC has approved Bermuda as a reciprocal jurisdiction. As states adopt the 2019 revisions to the Credit for Reinsurance Model Law and Regulation, our Bermuda reinsurance subsidiaries will be eligible to apply to the adopting states for a determination that they have satisfied the conditions specified in the 2019 revisions and, to the extent any such determinations are made, will not be required by law to post collateral with respect to reinsurance ceded by insurers domiciled in such states. To date, none of our Bermuda reinsurance subsidiaries has received a determination that it satisfies the conditions to forgo the collateral posting requirements in any US state or jurisdiction; however, we currently have an application pending with the IID.

Statutory Investment Valuation Reserves

Life insurance companies domiciled in the US are required to establish an asset valuation reserve (AVR) to stabilize statutory policyholder surplus from fluctuations in the market value of investments. The AVR consists of two components: (1) a "default component" for possible credit-related losses on fixed maturity investments and (2) an "equity component" for possible market-value losses on all types of equity investments, including real estate-related investments. Although future additions to the AVR will reduce the future statutory capital and surplus of our US insurance subsidiaries, we do not believe that the impact under current regulations of such reserve requirements will materially affect our US insurance subsidiaries. Insurers domiciled in the US also are required to establish an interest maintenance reserve (IMR) for net realized capital gains and losses, net of tax, on fixed maturity investments where such gains and losses are attributable to changes in interest rates, as opposed to credit-related causes. The IMR provides a buffer to our statutory capital and surplus in the event we have to sell securities in an unrealized loss position. The IMR is required to be amortized into statutory earnings on a basis reflecting the remaining period to maturity of the fixed maturity securities. These reserves are required by state insurance regulatory authorities to be established as liabilities on a life insurer's statutory financial statements and may also be included in the liabilities assumed by our US insurance subsidiaries pursuant to their reinsurance agreements with US-based life insurer ceding companies.

Policy and Contract Reserve Adequacy Analysis

The Athene Domiciliary States and other states have adopted laws and regulations with respect to policy and contract reserve sufficiency. Under applicable insurance laws, our US insurance subsidiaries are each required to annually conduct an analysis of the adequacy of all life insurance and annuity statutory reserves. A qualified actuary appointed by each such subsidiary's board must submit an opinion annually for each such subsidiary which states that the statutory reserves make adequate provision, according to accepted actuarial standards of practice, for the anticipated cash flows resulting from the contractual obligations and related expenses of such subsidiary. The adequacy of the statutory reserves is considered in light of the assets held by such US insurance subsidiary with respect to such reserves and related actuarial items, including, but not limited to, the investment earnings on such assets and the consideration anticipated to be received and retained under the related policies and contracts. At a minimum, such testing is done over a number of economic scenarios prescribed by the states, with the scenarios designed to stress anticipated cash flows for higher and/or lower future levels of interest rates. Our US insurance subsidiaries may find it necessary to increase reserves, which may decrease their statutory surplus, in order to pass additional cash flow testing requirements.

Statutory Reporting and Regulatory Examinations

Our US insurance subsidiaries are required to file detailed annual reports, including financial statements, in accordance with prescribed statutory accounting rules, with regulatory officials in the jurisdictions in which they conduct business. In addition, each US insurance subsidiary is required to file quarterly reports prepared on the same basis, though with considerably less detail.

As part of their routine regulatory oversight process, state insurance departments conduct periodic detailed examinations, generally once every three to five years, of the books, records, accounts and operations of insurance companies that are domiciled in their states. Examinations are generally carried out in cooperation with the insurance departments of other, non-domiciliary states under guidelines promulgated by the NAIC. In May 2019, we completed such an examination for the period from January 1, 2014 through December 31, 2017. This exam was led by the Delaware Department of Insurance in coordination with the IID and the NYSDFS. In connection with the exam, the Delaware Department of Insurance conducted an exam of AADE and Athene Life Insurance Company (ALIC), the IID conducted an exam of AAIA and Structured Annuity Reinsurance Company (STAR), and the NYSDFS conducted an exam of Athene Annuity & Life Assurance Company of New York (AANY) and ALICNY. The exam resulted in no significant findings.

Vermont insurance laws and regulations applicable to Athene Re IV require it to file financial statements with the Commissioner of the Insurance Division of the Vermont Department of Financial Regulation. Additionally, Athene Re IV is subject to periodic financial examinations by the Insurance Division of the Vermont Department of Financial Regulation.

Class C and Class E Bermuda insurers must file annual statutory financial statements and annual audited financial statements prepared in accordance with accounting principles generally accepted in the US (GAAP), International Financial Reporting Standards, accounting principles generally accepted in the UK or accounting principles generally accepted in Canada within four months of the end of each fiscal year, unless such deadline is specifically extended. The Bermuda Insurance Act also prescribes rules for the preparation and substance of statutory financial statements, which include, in statutory form, an insurer information sheet, an auditor's report, a balance sheet, income statement, a statement of capital and surplus and notes thereto. The statutory financial statements include detailed information and analysis regarding premiums, claims, reinsurance and investments of the insurer.

In addition, each year Class C and Class E insurers are required to file with the BMA a capital and solvency return along with its annual statutory financial return. The prescribed form of capital and solvency return is comprised of: the BMA's BSCR model or an approved internal capital model in lieu thereof; a statutory economic balance sheet; the approved actuary's opinion; and several prescribed schedules, including a schedule of fixed income and equity investments by BSCR rating, a schedule of funds held by ceding reinsurers in segregated accounts/trusts by BSCR rating, a schedule of risk management and a schedule of eligible capital, among others. The capital and solvency return is not available for public inspection.

The Bermuda Insurance Act provides the BMA with powers to set standards on public disclosure. Using this power, the BMA requires all commercial insurers and insurance groups, subject to certain exceptions, to prepare and publish a Financial Condition Report on their website.

Market Conduct Regulation

State insurance laws and regulations include numerous provisions governing the marketplace activities of insurers, including provisions governing claims settlement practices, the form and content of disclosure to consumers, illustrations, advertising, sales and complaint process practices. State regulatory authorities generally enforce these provisions through periodic market conduct examinations. In addition, our US insurance subsidiaries must file, and in many jurisdictions and for some lines of business, obtain regulatory approval for, rates and forms relating to the insurance written in the jurisdictions in which they operate. Our US insurance subsidiaries are currently undergoing the following market conduct examinations, each in the ordinary course of business: (1) the NYSDFS is conducting a market conduct examination of AANY, (2) the Massachusetts Division of Insurance is conducting a limited scope market analysis of AAIA and AADE, (3) the Maryland Insurance Administration is conducting a market conduct examination of AAIA, (4) the Illinois Department of Insurance is conducting a market conduct examination of AAIA and (5) the Minnesota Department of Commerce is conducting a market conduct examination of AAIA and AADE. The California Department of Insurance is completing a review of the rating and underwriting practices of AAIA, AADE and AANY. The IID concluded its market conduct examination of AAIA in October 2020. The exam resulted in no significant findings.

Capital Requirements

Each of our insurance and reinsurance subsidiaries is subject to regulatory capital requirements based upon the laws and regulations of its jurisdiction of incorporation. Regulators of each jurisdiction in which we operate have discretionary authority in connection with our insurance and reinsurance subsidiaries' continued licensing to limit or prohibit sales to policyholders within their respective jurisdiction or to restrict continued operation of insurers or reinsurers domiciled in their respective jurisdiction if, in their judgment, such entities have not maintained the required level of minimum surplus or capital or that the further transaction of business would be hazardous to policyholders or reinsurance counterparties.

In order to enhance the regulation of insurers' solvency, the NAIC adopted a model law to implement RBC requirements for life, health and property and casualty insurance and reinsurance companies. All states have adopted the NAIC's model law or a substantively similar law. The NAIC Risk-Based Capital for Insurers Model Act requires life insurance companies to submit an annual report (the Risk-Based Capital Report), which compares an insurer's total adjusted capital (TAC) to its authorized control level RBC (ACL), each such term as defined pursuant to applicable state law. A company's RBC is calculated by using a specified formula that applies factors to various risks inherent in the insurer's operations, including risks attributable to its assets, underwriting experience, interest rates and other business expenses. The factors are higher for those items deemed to have greater underlying risk and lower for items deemed to have less underlying risk. Statutory RBC is measured on two bases, ACL and company action level RBC (CAL), with ACL calculated as one-half of CAL. Regulators typically use ACL in assessing companies and reviewing solvency requirements. Companies themselves typically report and are compared using the CAL standard.

The Risk-Based Capital Report is used by regulators to set in motion appropriate regulatory actions relating to insurers that show indications of weak or deteriorating status. RBC is an additional standard for MCR that insurers must meet to avoid being placed in rehabilitation or liquidation by regulators. The annual Risk-Based Capital Report, and the information contained therein, is not intended by the NAIC as a means to rank insurers.

RBC is a method of measuring the level of capital appropriate for an insurance company to support its overall business operations, in light of its size and risk profile. It provides a means of assessing capital adequacy, where the degree of risk taken by the insurer is the primary determinant. The value of an insurer's TAC in relation to its RBC, together with its trend in its TAC, is used as a basis for determining regulatory action that a state insurance regulator may be authorized or required to take with respect to an insurer. The four action levels include:

- CAL: The insurer is required to submit a plan for corrective action when its TAC is equal to or less than 200% of ACL;
- Regulatory Action Level: The insurer is required to submit a plan for corrective action and is subject to examination, analysis and specific corrective action when its TAC is equal to or less than 150% of ACL;
- ACL: Regulators may place the insurer under regulatory control when its TAC is equal to or less than 100% of ACL; and
- Mandatory Control Level: Regulators are required to place the insurer under regulatory control when its TAC is equal to or less than 70% of ACL.

TAC and RBC are calculated annually by insurers, as of December 31 of each year. As of December 31, 2020, each of our US insurance subsidiaries' TAC was significantly in excess of the levels that would prompt regulatory action under the laws of the Athene Domiciliary States. As of December 31, 2020, the CAL RBC ratio of AADE (US RBC ratio) was 425%. The calculation of RBC requires certain judgments to be made, and, accordingly, our US insurance subsidiaries' current RBC may be greater or less than the RBC calculated as of any date of determination.

Both Class C and Class E Bermuda insurers 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. The Bermuda Insurance Act mandates certain actions and filings with the BMA if an insurer fails to meet and/or maintain its ECR or MMS 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 MMS that a Class C insurer is required to maintain with respect to its long-term business is the greater of (1) $500,000, (2) 1.5% of assets or (3) 25% of the ECR as reported at the end of the relevant year. The MMS that a Class E insurer is required to maintain with respect to its long-term business is the greater of (1) $8 million, (2) 2% of the first $500 million of assets plus 1.5% of applicable assets above $500 million or (3) 25% of the ECR as reported at the end of the relevant year.

The BMA has embedded an economic balance sheet (EBS) framework as part of the BSCR that forms the basis for an insurer's ECR. The premise underlying the EBS framework is the idea that assets and liabilities should be valued on a consistent economic basis. Under the Bermuda Regulatory Framework there are two solvency calculations: (1) Class C and Class E Insurers must have total statutory capital and surplus as reported on the insurer's statutory balance sheet greater than the applicable MMS calculated pursuant to the Insurance Account Rules 2016; and (2) under the Insurance (Prudential Standards) (Class C, Class D and Class E Solvency Requirement) Rules 2011 an insurer is required to maintain available statutory economic capital and surplus in an amount that is equal to or exceeds the value of its ECR.

A Class C insurer's ECR is established by reference to the Class C BSCR model, while a Class E insurer's ECR is established by reference to the Class E BSCR model. Each BSCR model provides a method for determining an insurer's capital requirements (statutory economic capital and surplus) by taking into account the risk characteristics of different aspects of the insurer's business. The BSCR formula establishes capital requirements for fourteen categories of risk: 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. For each category, the capital requirement is determined by applying shocks to asset, premium, reserve, creditor, probable maximum loss and operation items, with higher shocks applied to items with greater underlying risk and lower shocks for less risky items.

The Insurance (Prudential Standards) (Class C, Class D, and Class E Solvency Requirement) Amendment Rules 2018 provide updates to certain aspects of the EBS framework and increase the ECR over a 10-year grade-in period commencing January 1, 2019. We do not expect this change to have a material impact on our business.

As of December 31, 2020 and 2019, ALRe's EBS capital and surplus resulted in BSCR ratios, computed as available statutory economic capital and surplus divided by ECR, of 254% and 310%, respectively. While not specifically referred to in the Bermuda Insurance Act, target capital level (TCL) is also an important threshold for statutory capital and surplus. TCL is equal to 120% of ECR as calculated pursuant to the BSCR formula. TCL serves as an early warning tool for the BMA. If an insurer fails to maintain statutory capital at least equal to its TCL, such failure will likely result in increased regulatory oversight by the BMA. A Class C or Class E insurer which at any time fails to meet its applicable ECR shall, upon becoming aware of such failure or upon having reason to believe that such a failure has occurred, immediately notify the BMA in writing. Within 14 days of such notification, such insurer shall file with the BMA a written report containing details of the circumstances leading to the failure and a plan detailing the specific actions to be taken to rectify the failure, and the time within which the insurer intends to rectify the failure. Within 45 days of becoming aware of such failure, or of having reason to believe that such a failure has occurred, such insurer shall furnish the BMA with (1) unaudited statutory economic balance sheets and unaudited interim financial statements prepared in accordance with GAAP covering such period as the BMA may require; (2) an opinion of the approved actuary in relation to total long-term business insurance technical provisions as set out in the statutory economic balance sheet, where applicable; (3) a long-term business solvency certificate in respect of the financial statements; and (4) a capital and solvency return reflecting an ECR prepared using post-failure data where applicable.

To enable the BMA to better assess the quality of the insurer's capital resources, both Class C and Class E insurers are required to disclose the makeup of its capital in accordance with the '3-tiered capital system.' Under this system, all of the insurer's capital instruments must be classified as either basic or ancillary capital. All capital instruments are further classified into one of three tiers based on their "loss absorbency" characteristics. Highest quality capital will be classified as Tier 1 Capital, lesser quality capital will be classified as either Tier 2 Capital or Tier 3 Capital. Under this regime, up to certain specified percentages of Tier 1, Tier 2 and Tier 3 Capital may be used to support the insurer's MMS, ECR and TCL. The Bermuda Insurance Act requires that Class E insurers have Tier 1 Capital equal to or greater than 50% of the value of its ECR, Tier 2 Capital not greater than Tier 1 Capital and Tier 3 Capital of not more than 17.65% of the aggregate of its Tier 1 Capital and Tier 2 Capital.

The characteristics of the capital instruments that must be satisfied to qualify as Tier 1, 2 and 3 Capital are set forth in the Insurance (Eligible Capital) Rules 2012, and any amendments thereto. Under those rules, Tier 1, 2 and 3 Capital may, until January 1, 2026, include capital instruments with the following characteristics: (1) non-redeemable or settled only with the issuance of an instrument of equal or higher quality upon a breach in the ECR (Tier 1, 2 and 3 Capital); (2) coupon payment on the instrument be cancellable or deferrable indefinitely, upon breach in the ECR (Tier 1 and 2 Capital); or (3) coupon payment on the instrument be cancellable or deferrable indefinitely upon breach in the MMS (Tier 3 Capital).

Where the BMA has previously approved the use of certain instruments for capital purposes, the BMA's consent will need to be obtained if such instruments are to remain eligible for use in satisfying the MMS and the ECR. We do not currently use any such instruments.

Restrictions on Dividends and Other Distributions

Current law of two of the Athene Domiciliary States, Delaware and Iowa, permits the payment of dividends or distributions which, together with dividends or distributions paid during the preceding twelve months do not exceed the greater of (a) 10% of the insurer's surplus as regards policyholders as of the immediately preceding year end or (b) the net gain from operations of the insurer for the preceding twelve-month period ending as of the immediately preceding year end. Current law of New York permits the payment of dividends or distributions which, together with dividends or distributions paid during any calendar year, (1) is out of earned surplus and does not exceed the greater of (a) 10% of the insurer's surplus as regards policyholders as of the end of the immediately preceding calendar year or (b) the net gain from operations of the insurer for the immediately preceding calendar year, not including realized capital gains, not to exceed 30% of the insurer's surplus as regards policyholders as of the end of the immediately preceding calendar year or (2) do not exceed the lesser of (a) 10% of the insurer's surplus as regards policyholders as of the end of the immediately preceding calendar year or (b) the net gain from operations of the insurer for the immediately preceding calendar year, not including realized capital gains. Any proposed dividend in excess of these amounts is considered an extraordinary dividend or extraordinary distribution 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 Commissioner. Additionally, under current law of the Athene Domiciliary States, AAIA may only pay dividends from the insurer's earned profits on its business, which shall not include contributed capital or contributed surplus, AADE may only pay dividends from that part of its available and accumulated surplus funds which is derived from realized net operating profits on its business and realized capital gains, and ALICNY may only pay dividends pursuant to the "greater of" standard described above from that part of its positive unassigned funds, excluding 85% of the change in net unrealized capital gains or losses less capital gains tax, for the immediately preceding calendar year. The Athene Domiciliary States' insurance laws and regulations also require that each of our US insurance subsidiaries' surplus as regards policyholders following any dividend or distribution be reasonable in relation to such US insurance subsidiary's outstanding liabilities and adequate to meet its financial needs.

Under the Bermuda Insurance Act, an insurer is prohibited from declaring or paying a dividend if in breach of its ECR or MMS or if the declaration or payment of such dividend would cause such a breach. Where an insurer fails to meet its MMS on the last day of any financial year, it is prohibited from declaring or paying any dividends during the next financial year without the approval of the BMA. The Bermuda Insurance Act also prohibits our Bermuda reinsurance subsidiaries from paying a dividend in an amount exceeding 25% of the prior year's total statutory capital and surplus, unless at least two members of the respective Bermuda reinsurance subsidiary's board of directors and its principal representative sign and submit to the BMA an affidavit attesting that a dividend in excess of this amount would not cause such Bermuda reinsurance subsidiary to fail to meet its relevant margins. In certain instances, our Bermuda reinsurance subsidiaries would also be required to provide prior notice to the BMA in advance of the payment of dividends. In the event that such an affidavit is submitted to the BMA in accordance with the Bermuda Insurance Act, and further subject to the applicable Bermuda reinsurance subsidiary meeting its MMS and ECR, such Bermuda reinsurance subsidiary is permitted to distribute up to the sum of 100% of statutory surplus and an amount less than 15% of its total statutory capital. Distributions in excess of this amount require the approval of the BMA. Further, each of our Bermuda reinsurance subsidiaries must obtain the BMA's prior approval before reducing its total statutory capital as shown in its previous financial year statutory balance sheet by 15% or more. Each of our Bermuda reinsurance subsidiaries is also prohibited from declaring or paying any dividends unless the value of its long-term business assets exceeds its long-term business liabilities, as certified by its approved actuary, by the amount of the dividend and at least the MMS. These 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) which apply to all Bermuda companies. Under the Companies Act, a company 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.

Insurance Regulatory Information System Ratios

The NAIC has established the Insurance Regulatory Information System (IRIS) to assist state insurance departments in their oversight of the financial condition of insurance companies operating in their respective states. IRIS is a series of financial ratios calculated by the NAIC based on financial information submitted by insurers on an annual basis. Each ratio has an established "usual range" of results. The NAIC shares the IRIS ratios calculated for each insurer with the interested state insurance departments. Generally, an insurance company will be required to explain ratios that fall outside the usual range, and may be subject to regulatory scrutiny and action if one or more of its ratios fall outside the specified ranges. None of our US insurance subsidiaries are currently subject to non-ordinary course regulatory scrutiny based on their IRIS ratios.

Regulation of Investments

Each of our US insurance subsidiaries is subject to laws and regulations in each Athene Domiciliary State that require diversification of its investment portfolio and limit the amounts of investments in certain asset categories, such as below-investment grade fixed income securities, real estate-related equity, partnerships, other equity investments, derivatives and alternative investments. Failure to comply with these laws and regulations would cause investments exceeding regulatory limitations to be treated as non-admitted assets for purposes of measuring statutory surplus and, in some instances, could require the divestiture of such non-qualifying investments. Accordingly, the investment laws in the Athene Domiciliary States could prevent our US insurance subsidiaries from pursuing investment opportunities which they believe are beneficial to their shareholders, which could in turn preclude us from realizing our investment objectives.

Restrictions on Business Operations

Pursuant to the Bermuda Insurance Act, as Class C and Class E insurers, our Bermuda reinsurance subsidiaries are not permitted to engage in non-insurance business unless such non-insurance business is ancillary to its core business. Non-insurance business means any business other than insurance business and includes carrying on investment business, managing an investment fund as operator, carrying on business as a fund administrator, carrying on banking business, underwriting debt or securities or otherwise engaging in investment banking, engaging in commercial or industrial activities and carrying on the business of management, sales or leasing of real property.

Guaranty Associations

All 50 states, Puerto Rico and the District of Columbia have insurance guaranty fund laws requiring insurance companies doing business within those jurisdictions to participate in guaranty associations. Guaranty associations are organized to cover, subject to limits, contractual obligations under insurance policies issued by life insurance companies which later become impaired or insolvent. These associations levy assessments, up to prescribed limits, on each member insurer doing business in a particular state on the basis of their proportionate share of the premiums written by all member insurers in the lines of business in which the impaired or insolvent insurer previously engaged. Most states limit assessments in any year to 2% of the insurer’s average annual premium for the three years preceding the calendar year in which the impaired insurer became impaired or insolvent. Some states permit member insurers to recover assessments paid through full or partial premium tax offsets, usually over a period of years.

For purposes of guaranty association assessments, long-term care insurance is typically classified as a health insurance product. Following the March 2017 liquidation of Penn Treaty Network America Insurance Co. and American Network Insurance Co., together, “Penn Treaty,” both of which were Pennsylvania-domiciled life insurance companies that sold long-term care insurance policies, there have been proposals to expand the assessment base for long-term care insurer insolvencies by requiring life and health insurers to contribute to potential long-term care insurer insolvencies. In December 2017, the NAIC adopted amendments to the Life and Health Insurance Guaranty Association Model Act to provide a fifty-fifty split between life insurers and health insurers (including health maintenance organizations) for future long-term care insolvencies. Several states are now considering, or have adopted, legislation to codify the NAIC changes into law, and more states are expected to propose legislation. Iowa and Delaware have adopted the 2017 amendments to the Life and Health Insurance Guaranty Association Model Act; however, these changes have not yet been adopted by New York and we cannot predict whether New York will do so in the future. These changes may result in an increase in future assessments against life insurers such as our US insurance subsidiaries.

Assessments levied against our US insurance subsidiaries by guaranty associations during the year ended December 31, 2020 were not material. While we cannot accurately predict the amount of future assessments or future insolvencies of competitors which would lead to such assessments, we believe that assessments with respect to pending insurance company impairments and insolvencies will not have a material effect on our financial condition, results of operations or cash flows.

US Federal Oversight

Although the insurance business in the United States is primarily regulated by the states, federal initiatives can affect the businesses of our US insurance subsidiaries in a variety of ways. From time to time, federal measures are proposed which may significantly affect the insurance business. These areas include financial services regulation, securities regulation, derivatives regulation, pension regulation, money laundering, privacy regulation, taxation and the economic and trade sanctions implemented by the Office of Foreign Assets Control (OFAC). OFAC maintains and enforces economic sanctions against certain foreign countries and groups and prohibits US persons from engaging in certain transactions with certain persons or entities. OFAC has imposed civil penalties on persons, including insurance and reinsurance companies, arising from violations of its economic sanctions program. In addition, various forms of direct and indirect federal regulation of insurance have been proposed from time to time, including proposals for the establishment of an optional federal charter for insurance companies.

Title I of the Dodd-Frank Act established the Financial Stability Oversight Council (FSOC) and authorized the FSOC to designate non-bank financial companies as systemically important financial institutions (SIFIs), thereby subjecting them to enhanced prudential standards and supervision by the Board of Governors of the Federal Reserve System (Federal Reserve). The prudential standards for non-bank SIFIs include enhanced RBC requirements, leverage limits, liquidity requirements, single counterparty exposure limits, governance requirements for risk management, stress test requirements, special debt-to-equity limits for certain companies, early remediation procedures, and recovery and resolution planning. There are currently no such non-bank financial companies designated by FSOC as “systemically significant.” The Economic Growth, Regulatory Relief and Consumer Protection Act, which became effective May 24, 2018, made limited changes to Title I of the Dodd-Frank Act. In December 2019, the FSOC released final interpretive guidance regarding a revised process for designating non-bank SIFIs that incorporates an activities-based approach to risk assessment. Pursuant to such guidance, the FSOC will pursue entity-specific determinations only if a potential risk or threat cannot be addressed through the activities-based approach. In addition, it is possible that, as a result of the most recent US presidential election, the FSOC may take a more active approach in the coming years with respect to the designation of non-bank SIFIs. As a result, there is considerable uncertainty as to the future determination of non-bank SIFIs and/or systemically important activities.

The Dodd-Frank Act, which effected the most far-reaching overhaul of financial regulation in the US in decades, established the Federal Insurance Office within the Treasury Department. While he or she does not currently have general supervisory or regulatory authority over the business of insurance, the Director of the Federal Insurance Office performs various functions with respect to insurance, including serving as a non-voting member of the FSOC and making recommendations to the FSOC regarding non-bank financial companies to be designated as SIFIs.

The Dodd-Frank Act also authorizes the Federal Insurance Office to assist the Secretary of the Treasury Department in negotiating covered agreements. A covered agreement is an agreement between the United States and one or more foreign governments, authorities or regulatory entities, regarding prudential measures with respect to insurance or reinsurance. The Federal Insurance Office is further charged with determining, in accordance with the procedures and standards established under the Dodd-Frank Act, whether state laws are preempted by a covered agreement. Pursuant to this authority, in September 2017, the US and the EU signed a covered agreement to address, among other things, reinsurance collateral requirements (EU Covered Agreement) and the United States released a "Statement of the United States on the Covered Agreement with the European Union," (Policy Statement) providing the United States' interpretation of certain provisions in the EU Covered Agreement. The Policy Statement provides that the United States expects that the group capital calculation developed by the NAIC will satisfy the EU Covered Agreement's group capital assessment requirement. In addition, on December 18, 2018, the Bilateral Agreement between the US and the UK on Prudential Measures Regarding Insurance and Reinsurance (UK Covered Agreement) was signed in anticipation of the UK's exit from the EU. US state regulators have until September 22, 2022 to adopt reinsurance reforms removing reinsurance collateral requirements for EU and UK reinsurers that meet the prescribed minimum conditions set forth in the applicable EU Covered Agreement or UK Covered Agreement or else state laws imposing such reinsurance collateral requirements may be subject to federal preemption. The NAIC has adopted amendments to the Credit for Reinsurance Model Law and Regulation that would, if adopted by state legislatures, implement the reinsurance collateral provisions of the EU Covered Agreement and UK Covered Agreement. See –*Credit for Reinsurance Ceded*. Iowa has adopted the 2019 amendments to the Credit for Reinsurance Model Law and Regulation and, in December 2020, the NYSDFS announced proposed changes to the New York regulations on credit for reinsurance for New York-domiciled insurers to implement the changes set forth in the amended Credit for Reinsurance Model Law and Regulation. Delaware does not yet have any legislation to adopt the amendments to the Credit for Reinsurance Model Law and Regulation; however, the NAIC has recently adopted a new accreditation standard that requires states to adopt the revisions no later than September 1, 2022. The reinsurance collateral provisions of the EU Covered Agreement and the UK Covered Agreement may increase competition, in particular with respect to pricing for reinsurance transactions, by lowering the cost at which competitors of ALRe are able to provide reinsurance to US insurers. We cannot predict with any certainty what impact the EU Covered Agreement or UK Covered Agreement will have on our business, whether either agreement will be implemented or what the impact of such implementation will be on our business.

Regulation of FIAs and other Annuity Products

In recent years, the SEC and state securities regulators have questioned whether FIAs, such as those sold by our US insurance subsidiaries, should be treated as securities under the federal and state securities laws rather than as insurance products exempted from such laws. On December 17, 2008, the SEC voted to approve Rule 151A, and apply federal securities oversight to FIAs issued on or after January 12, 2011. On July 12, 2010, the District of Columbia Circuit Court of Appeals vacated Rule 151A. Under the Dodd-Frank Act, annuities that meet specific requirements are specifically exempted from being treated as securities by the SEC. We expect that the types of FIAs that our US insurance subsidiaries currently sell will meet applicable requirements for exemption from treatment as securities and therefore will remain exempt from being treated as securities by the SEC and state securities regulators. However, there can be no assurance that federal or state securities laws or state insurance laws and regulations will not be amended or interpreted to impose further requirements on FIAs. Treatment of these products as securities would require additional registration and licensing of these products and the agents selling them, as well as cause our US insurance subsidiaries to seek new or additional marketing relationships for these products, any of which may impose significant restrictions on their ability to conduct business as currently operated.

NYSDFS Insurance Regulation 210: Life Insurance and Annuity Non-Guaranteed Elements establishes standards for the determination and readjustment of non-guaranteed elements (NGEs) that may vary at the insurer's discretion for life insurance policies and annuity contracts delivered or issued in New York. In addition, the regulation establishes guidelines for related disclosure to NYSDFS and policy owners prior to any adverse change in NGEs. The regulation applies to all individual life insurance policies, individual annuity contracts and certain group life insurance and group annuity certificates that contain NGEs. NGEs include premiums, expense charges, cost of insurance rates and interest credits.

The NAIC is considering amendments to the Annuity Disclosure Model Regulation, which would prohibit annuity issuers from illustrating the performance of an index that is made up of components that have been in existence for less than 15 calendar years, unless certain criteria are met and certain additional disclosures are made. If adopted, the inability to illustrate indexed returns for an index that is made up of component that have been in existence for less than 15 calendar years could have an adverse impact on the ability of issuers, such as our US insurance subsidiaries, to sell annuities that use indices made up of such components.

Unclaimed Property Laws

Each of our US insurance subsidiaries is subject to the laws and regulations of states and other jurisdictions concerning the identification, reporting and escheatment of abandoned or unclaimed money or property. State treasurers, controllers and revenue departments have been scrutinizing escheatment practices of life insurance companies with regard to unclaimed life insurance and annuity death benefits. As with state insurance regulators, state revenue authorities have been looking at how life insurance companies handle unreported deaths, maturity of life insurance and annuity contracts, and contracts that have exceeded limiting age to determine if the companies are appropriately determining when death benefits or other payments under the contracts should be treated as unclaimed property. State treasurers, controllers and revenue departments have audited life insurance companies, required escheatments and imposed interest penalties on amounts escheated for failure to escheat death benefits or other contract benefits when beneficiaries could not be found at the expiration of statutory dormancy periods.

Several states have enacted new laws or adopted new regulations mandating the use by insurance companies of the US Social Security Administration's Social Security Death Index (Death Master File) or other similar databases to identify deceased persons and to implement more rigorous processes to find beneficiaries. In 2013, prior to our acquisition of Aviva USA, it entered into multi-state settlement agreements with the insurance regulators and treasurers for 48 states in connection with certain of its subsidiaries' use of the Death Master File. As part of the settlement, AAIA and its subsidiary ALICNY agreed to pay a $4 million assessment for examination, compliance and monitoring costs without admitting any liability or wrongdoing, and further agreed to adopt policies and procedures reasonably designed to ensure timely payment of valid claims to beneficiaries in accordance with insurance laws and to timely report and remit unclaimed proceeds to the appropriate states in connection with unpaid property laws. Our US insurance subsidiaries could continue to be subject to risks related to unpaid benefits, the Death Master File, and the procedures required by the prior multi-state settlement as they relate to our annuity business. Furthermore, administrative challenges associated with implementing the procedures described above may make compliance with the multi-state settlement and applicable law difficult and could have a material and adverse effect on our results of operations.

AADE is currently undergoing a multi-state unclaimed property examination led by Verus Financial, on behalf of California, Florida, Georgia, Indiana, Louisiana, North Carolina, Ohio, Pennsylvania, Tennessee and Texas (Verus Audit). The Verus Audit relates primarily to life policies issued by Liberty Life, AADE's predecessor, which were reinsured to Protective Life Insurance Company (Protective) upon our acquisition of Liberty Life. Protective has acknowledged responsibility for defending the Verus Audit, but has also sought indemnification from the Royal Bank of Canada, Liberty Life's previous owner. We believe that the parties are close to negotiating a resolution of the indemnification issue and Protective is seeking an immaterial amount from us to fully resolve and release all parties. We do not expect this matter will have a material adverse effect on our business, financial condition, results of operations or cash flows. AADE was also a defendant in a lawsuit filed by the West Virginia Treasurer, State of West Virginia ex rel. John D. Perdue v. Liberty Life Ins. Co., Case No. 12-C-419, pursuant to which the Treasurer alleged that Liberty Life, now known as AADE, failed to adopt reasonable procedures, such as using the Death Master File, to identify deceased insureds with unpaid death benefits and timely escheat those unclaimed benefits to the state. The Treasurer accordingly sought to recover unpaid death benefits, statutory interest and penalties. During September 2019, AADE resolved the matter with the Treasurer for an immaterial amount.

Regulation of OTC Derivatives

We use derivatives to mitigate a wide range of risks in connection with our businesses, including options purchased to hedge the derivatives embedded in the FIAs that we have issued, and swaps, futures and/or options may be used to manage the impact of increased benefit exposures from our annuity products that offer guaranteed benefits as well as market exposures. Title VII of the Dodd-Frank Act creates a comprehensive framework for the federal oversight and regulation of the OTC derivatives market and entities, such as us, that participate in the derivatives market and requires US regulators to promulgate rules and regulations implementing its provisions. Regulations have been finalized and implemented in many areas and are being finalized for implementation in others.

Title VII of the Dodd-Frank Act divides the regulatory responsibility for swaps in the United States between the SEC and the Commodity Futures Trading Commission (CFTC). The CFTC regulates swaps and swap entities, and the SEC regulates security-based swaps and security-based swap entities. The CFTC and the SEC have jointly finalized certain regulations under Title VII of the Dodd-Frank Act, including critical rulemakings on the definitions of "swap," "security-based swap," "swap dealer," and "security-based swap dealer." In addition, the CFTC has substantially finalized and implemented its required rulemaking under Title VII of the Dodd-Frank Act, including regulations relating to the registration and regulation of swap dealers and swap execution facilities, reporting, recordkeeping, mandatory clearing, mandatory on-facility trade execution and mandatory minimum margin requirements. The SEC also recently finalized its regulatory regime for security-based swaps and market participants transacting in security-based swaps and those regulations will start to become effective in the third quarter of 2021. As a result of this bifurcation, the different pace at which the agencies have promulgated and implemented regulations and the different approaches taken by the agencies, different transactions are subject to different levels of regulation and in some cases, different rules.

Title VII of the Dodd-Frank Act and the CFTC rules thereunder require us, in connection with certain swap transactions, to comply with mandatory clearing and on-facility trade execution requirements, and it is anticipated that the types of swaps subject to these requirements will be expanded over time. In addition, regulations promulgated under Title VII of the Dodd-Frank Act require us to comply with mandatory minimum margin requirements for uncleared swaps and, in some instances, uncleared security-based swaps. Derivative clearing requirements and mandatory margin requirements have increased the cost of our risk mitigation and have had other implications as well. For example, increased margin requirements, combined with netting restrictions and limitations on eligible collateral have reduced our liquidity and required increased holdings of cash and highly liquid securities with lower yields, which could have an adverse impact on income. In addition, the requirement that certain trades be centrally cleared through clearinghouses subjects us to documentation that is significantly more counterparty-favorable and entitles counterparties to unilaterally change terms such as trading limits and the amount of margin required. The ability of such counterparties to take such actions could create trading disruptions and liquidity concerns. Finally, the requirement that certain trades be centrally cleared through clearinghouses concentrates counterparty risk in both clearinghouses and clearing members. The failure of a clearinghouse could have a significant impact on the financial system. Even if a clearinghouse does not fail, large losses could force significant capital calls on clearinghouse members during a financial crisis, which could lead clearinghouse members to default. Because clearinghouses are still developing, the related regulations are evolving and the related bankruptcy process is untested, it is difficult to anticipate or identify all risks related to the concentration of counterparty risk in clearinghouses and clearing members and the risk of a clearinghouse default.

Title VII of the Dodd-Frank Act and regulations thereunder and similar regulations adopted by non-US jurisdictions that may indirectly apply to us could significantly increase the cost of derivative contracts, reduce the availability of derivatives to protect against risks we encounter, reduce our ability to monetize or restructure our existing derivative contracts, and increase our credit risk exposure. If we reduce our use of derivatives as a result of such regulations, our results of operations may become more volatile and our cash flows may be less predictable which could adversely affect our financial performance. Additionally, we have always been subject to the risk that hedging and other management procedures might prove ineffective in reducing the risks to which insurance policies expose us or that unanticipated policyholder behavior or mortality, combined with adverse market events, could produce economic losses beyond the scope of the risk management techniques employed. Any such losses could be increased by the increased cost of entering into derivatives and the reduced availability of customized derivatives that might result from the implementation of Title VII of the Dodd-Frank Act and other similar regulations.

Consumer Protection Laws and Privacy and Data Security Regulation

Federal and state consumer protection laws affect our operations. As part of the Dodd-Frank Act, Congress established the Consumer Financial Protection Bureau (CFPB) to supervise and regulate institutions that provide certain financial products and services to consumers. Although the consumer financial services subject to the CFPB’s jurisdiction generally exclude insurance business of the kind in which our US insurance subsidiaries engage, the CFPB does have authority to regulate non-insurance consumer services which are offered by issuers of securities in our US insurance subsidiaries’ investment portfolio.

Federal and state laws and regulations require financial institutions, including insurers, to protect the security and confidentiality of nonpublic personal information, including certain health-related and customer information, and to notify customers and other individuals about their policies and practices relating to their collection and disclosure of health-related and customer information and their practices relating to protecting the security and confidentiality of that information. State laws regulate use and disclosure of Social Security numbers and federal and state laws require notice to affected individuals, law enforcement, regulators and others if there is a breach of the security of certain nonpublic personal information, including Social Security numbers. In addition, state laws and regulations restrict the disclosure of the medical record and health status information obtained by insurers.

Federal and state lawmakers and regulatory bodies may be expected to consider additional or more detailed regulation regarding these subjects and the privacy and security of nonpublic personal information. Furthermore, the issues surrounding data security and the safeguarding of consumers’ protected information are under increasing regulatory scrutiny by state and federal regulators, particularly in light of the number and severity of recent US companies’ data breaches. The Federal Trade Commission, the Federal Bureau of Investigation, the Federal Communications Commission, the NYSDFS and the NAIC have undertaken various studies, reports and actions regarding data security for entities under their respective supervision. Some states have enacted new insurance laws that require certain regulated entities to implement and maintain comprehensive information security programs to safeguard the personal information of insureds and enrollees.

On March 1, 2017, the NYSDFS enacted 23 NYCRR 500, a cybersecurity regulation governing financial companies. This rule requires banks, insurance companies, and other financial services institutions regulated by the NYSDFS, including us, to establish and maintain a cybersecurity program “designed to protect consumers and ensure the safety and soundness of New York State’s financial services industry.” Since the rule’s effective date, we have committed significant time and resources to comply with the rule’s requirements. We anticipate that the NYSDFS will continue to examine the cybersecurity programs of financial institutions in the future and such examinations may result in additional regulatory scrutiny, expenditure of resources and possible regulatory actions and reputational harm.

In October 2017, the NAIC adopted a new Insurance Data Security Model Law, which is intended to establish the standards for data security and standards for the investigation and notification of data breaches applicable to insurance licensees in states adopting such law, with provisions that are generally consistent with the NYSDFS cybersecurity regulation discussed above. Under the model law, it is intended that companies that are compliant with the NYSDFS cybersecurity regulation are, in general, in compliance with the model law. As with all NAIC model laws, this model law must be adopted by a state before becoming law in such state. The model law has only been adopted in a small number of states, which include Delaware. Iowa has not yet adopted a version of the Insurance Data Security Model Law. We anticipate that more states will begin adopting the model law in the near term. The NAIC has also adopted a guidance document that sets forth twelve principles for effective insurance regulation of cybersecurity risks based on similar regulatory guidance adopted by the Securities Industry and Financial Markets Association and the “Roadmap for Cybersecurity Consumer Protections,” which describes the protections to which the NAIC believes consumers should be entitled from their insurance companies, agents and other businesses concerning the collection and maintenance of consumers’ personal information, as well as what consumers should expect when such information has been involved in a data breach. We expect cybersecurity risk management, prioritization and reporting to continue to be an area of significant regulatory focus by such regulatory bodies and self-regulatory organizations.

The California Consumer Privacy Act of 2018 (CCPA) was signed in June 2018 and was later amended in September 2018. The CCPA became effective on January 1, 2020. The CCPA, along with the Attorney General Regulations implementing the CCPA, imposes stringent data privacy and data protection requirements for the data of California residents, including providing the right to request that a business provide access to or delete any personal information about the consumer under certain circumstances, and the right to opt out of the sale of personal information. We have committed significant time and resources to comply with the CCPA's requirements. In November 2020, Proposition 24, the California Privacy Rights Act (CPRA), passed by popular referndum. The CPRA will further expand privacy rights and obligations in California when it goes into effect in 2023, and also establish a new privacy regulator in the state which may result in additional regulatory scrutiny and risk. Regulations to implement the CPRA will be proposed in the coming months and years. Additional states are considering similar comprehensive privacy legislation that may add additional regulatory complexity and other legal risks. We anticipate that additional expenditure of resources will be necessary to respond to the evolving regulatory regimes, and possibly respond to regulatory actions and mitigate reputational harm. We expect that data privacy and cybersecurity will continue to be an area of significant regulatory focus, and it is possible that other jurisdictions consider or enact data privacy regulations.

The Gramm-Leach-Bliley Act of 1999, which implemented fundamental changes in the regulation of the financial services industry in the United States, includes privacy requirements for financial institutions, including obligations to protect and safeguard consumers' nonpublic personal information and records, and limitations on the re-disclosure and re-use of such information.

The Bermuda Personal Information Protection Act 2016 (PIPA) regulates how any individual, entity or public authority may use personal information. PIPA reflects a set of internationally accepted privacy principles and good business practices for the use of personal information. Although PIPA was passed on July 27, 2016, the sections that are currently in effect are limited to those that relate to the establishment and appointment of the PIPA commissioner (PIPA Commissioner), the hiring of the PIPA Commissioner's staff, and the general authority of the PIPA Commissioner to inform the public about PIPA. Following the PIPA Commissioner's appointment, effective January 20, 2020, the Commissioner's office has begun communicating with the public and stakeholders regarding the full implementation of PIPA.

The GDPR went into effect on May 25, 2018. It was enacted by the European Commission to regulate and protect data of individuals located within the EU. As tax residents of the UK, AHL, ALRe and ACRA 1A are likely subject to the territorial scope of the GDPR under Article 3(1). To the extent that AHL, ALRe and/or ACRA 1A is under the territorial scope of the GDPR, the regulation would only apply to the processing of personal data carried out in the context of such entity's UK activities. Currently, the volume of personal data processed in connection with each entity's UK activities is insignificant and limited to management and governance matters. We regularly monitor our business activities to ensure we are prepared for compliance, should the GDPR ever apply to our business more broadly.

Environmental Regulation

Our investment in a limited partnership which is in the business of originating residential mortgage loans (RML), as well as our direct investment in any residential or other mortgage loans, may expose us to various environmental and other regulation. For example, to the extent that we hold whole mortgage loans as part of our investment portfolio, we may be responsible for certain tax payments or subject to liabilities under the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980. Additionally, we may be subject to regulation by the CFPB as a mortgage holder or property owner. We are currently unable to predict the impact of such regulation on our business.

Broker-dealers

Our securities operations, principally conducted by our limited purpose SEC-registered broker-dealer, Athene Securities, LLC, are subject to federal and state securities and related laws, and are regulated principally by the SEC, state securities authorities and the Financial Industry Regulatory Authority (FINRA). Athene Securities, LLC does not hold customer funds or safekeep customer securities. Athene Securities, LLC is the principal underwriter for the RILA product that we offer and previously served as the principal underwriter of a block of variable annuity contracts which has been closed to new investors since 2002. The closed block of variable annuity contracts was issued by a predecessor of AAIA. Athene Securities, LLC continues to receive concessions on those variable annuity contracts. Athene Securities, LLC also provides supervisory oversight to Athene employees who are registered representatives.

Athene Securities, LLC and employees or personnel registered with Athene Securities, LLC are subject to the Exchange Act and to regulation and examination by the SEC, FINRA and state securities commissioners. The SEC and other governmental agencies and self-regulatory organizations, as well as state securities commissions in the United States, have the power to conduct administrative proceedings that can result in censure, penalties and fines, disgorgement of profits, restitution to customers, cease-and-desist orders or suspension, termination or limitation of the activities of the regulated entity or its employees.

As a registered broker-dealer and member of various self-regulatory organizations, Athene Securities, LLC is subject to the SEC's net capital rule, which specifies the minimum level of net capital a broker-dealer is required to maintain and requires a minimum part of its assets to be kept in relatively liquid form. These net capital requirements are designed to measure the financial soundness and liquidity of broker-dealers. The net capital rule imposes certain requirements that may have the effect of preventing a broker-dealer from distributing or withdrawing capital and may require that prior notice to the regulators be provided prior to making capital withdrawals. Compliance with net capital requirements could limit operations that require the intensive use of capital, such as trading activities and underwriting, and may limit the ability of our broker-dealer subsidiary to pay dividends to us.

Employee Retirement Income Security Act of 1974, as amended (ERISA)

We also may be subject to regulation by the US Department of Labor (DOL) when providing a variety of products and services to employee benefit plans governed by ERISA. ERISA is a comprehensive federal statute that applies to US employee benefit plans sponsored by private employers and labor unions. Plans subject to ERISA include pension and profit-sharing plans and welfare plans, including health, life and disability plans. Among other things, ERISA imposes reporting and disclosure obligations, prescribes standards of conduct that apply to plan fiduciaries and prohibits transactions known as “prohibited transactions,” such as conflict-of-interest transactions, self-dealing and certain transactions between a benefit plan and a “party in interest.” ERISA also provides for a scheme of civil and criminal penalties and enforcement. We are also subject to ERISA’s prohibited transaction rules for transactions with ERISA plans, which may affect our ability to, or the terms upon which we may, enter into transactions with those plans, even in businesses unrelated to those giving rise to “party in interest” status. The applicable provisions of ERISA and the US Internal Revenue Code of 1986, as amended (Internal Revenue Code) are subject to enforcement by the DOL, the Internal Revenue Service (IRS) and the US Pension Benefit Guaranty Corporation. Severe penalties are imposed for breach of duties under ERISA.

In April 2016, the DOL issued regulations expanding the definition of “investment advice” and broadening the circumstances under which distributors and manufacturers of insurance and annuity products could be considered “fiduciaries” and subject to certain standards in providing advice. These regulations were vacated effective June 2018. Thereafter, the DOL issued proposed regulatory action to address the vacated definition and issued final regulatory action on December 15, 2020. The DOL’s final guidance confirms the reinstatement of the definition of “investment advice” that applied prior to 2016 but broadens the circumstances under which financial institutions, including insurance companies, could be considered fiduciaries under ERISA in connection with recommendations to “rollover” assets from a qualified retirement plan to an IRA. This guidance reverses an earlier DOL interpretation suggesting that rollover advice did not constitute investment advice giving rise to a fiduciary relationship. In connection with the final regulatory action, the DOL issued a prohibited transaction class exemption that would allow fiduciaries to receive compensation in connection with providing investment advice, including advice about rollovers, that would otherwise be prohibited as a result of their fiduciary relationship to the ERISA Plan. In order to be eligible for the exemption, the investment advice fiduciary would be required, among other conditions, to acknowledge its fiduciary status, refrain from putting its own interests ahead of the plan beneficiaries’ interests or making material misleading statements, act in accordance with ERISA’s “prudent person” standard of care, and receive no more than reasonable compensation for the advice. We are reviewing the final guidance to determine how it might apply to our business.

SEC and State Fiduciary Standards

The SEC adopted a new rule under the Exchange Act that establishes a standard of conduct for broker-dealers and associated persons of a broker-dealer when they make a recommendation to a retail customer of any securities transaction or investment strategy involving securities. This new rule, called “Regulation Best Interest,” enhances the broker-dealer standard of conduct and aligns the standard of conduct with retail customers’ reasonable expectations by requiring broker-dealers, among other things, to: act in the best interest of the retail customer at the time the recommendation is made, without placing the financial or other interest of the broker-dealer ahead of the interests of the retail customer; and address conflicts of interest by establishing, maintaining, and enforcing policies and procedures reasonably designed to identify and fully and fairly disclose material facts about conflicts of interest, and in certain identified areas where the SEC has determined that disclosure is insufficient to reasonably address the conflict, to mitigate or, in certain instances, eliminate the conflict. The standard of conduct established by Regulation Best Interest cannot always be satisfied through disclosure alone. Regulation Best Interest became effective on June 30, 2020. It is possible that, as a result of the recent change in presidential administration, the SEC may revisit Regulation Best Interest and could, in the future, ultimately require a full fiduciary standard. Though Regulation Best Interest does not directly impact the sale of our annuity products, with the exception of our RILA product, it will impact how some of our retail distribution partners monitor insurance sales.

In addition, certain states, for example Massachusetts, Nevada, and New Jersey, have proposed measures that would make broker-dealers and sales agents subject to a fiduciary duty when providing products and services to customers. The Massachusetts Securities Division adopted a fiduciary duty rule applicable to broker-dealers when making recommendations concerning securities or investment strategies, effective September 1, 2020; however, consistent with the Massachusetts Uniform Securities Act, this rule does not apply to advice concerning commodities or insurance products, including life insurance and annuities. The SEC did not indicate an intent to preempt state regulation in this area, and some of the state proposals would allow for a private right of action. As a result of these changes, it is possible that it may become more costly to provide our products and services in the states subject to the new rules.

The NAIC has adopted the Suitability in Annuity Transactions Model Regulation (SAT), which places responsibilities upon issuing insurance companies with respect to the suitability of annuity sales, including responsibilities for training agents. Many states, including Athene Domiciliary States, have already enacted laws and/or regulations based on SAT, thus imposing suitability standards with respect to sales of FIAs. The NYSDFS issued a circular letter emphasizing insurers' obligations under laws and regulations based on SAT when replacing a deferred annuity contract with an immediate annuity contract. On July 22, 2018, the NYSDFS issued amendments to its regulation based on SAT to incorporate a "best interest" standard with respect to the suitability of life insurance and annuity sales, which amendments took effect on August 1, 2019 with respect to annuity contracts and became effective on February 1, 2020 with respect to life insurance policies. Future changes in such laws and regulations, including those that impose a "best interest" standard could adversely impact the way we market and sell our annuity products. On February 13, 2020, the NAIC adopted amendments to the SAT to incorporate a "best interest" or similar standard with respect to the suitability of annuity sales. The amendments include a requirement for producers to act in the "best interest" of a retail customer when making a recommendation of an annuity. A producer is considered to have acted in the best interest of the customer if they have satisfied certain prescribed obligations regarding care, disclosure, conflict of interest and documentation. State adoption of these revisions, and any future changes in such laws and regulations, could adversely affect the way our US insurance subsidiaries market and sell their annuity products. Iowa has adopted a version of the revised SAT that includes a best interest concept.

Regulation of an Insurer's Shareholders

The BMA maintains supervision over the "controllers" of all registered insurers in Bermuda. For these purposes, a "controller" includes (1) the managing director of the registered insurer or its parent company, (2) the chief executive of the registered insurer or of its parent company, (3) a shareholder controller, and (4) any person in accordance with whose directions or instructions the directors of the registered insurer or its parent company are accustomed to act.

The definition of shareholder controller is set out in the Bermuda Insurance Act but generally refers to (1) a person who holds 10% or more of the shares carrying rights to vote at a shareholders' meeting of the registered insurer or its parent company, (2) a person who is entitled to exercise 10% or more of the voting power at any shareholders' meeting of such registered insurer or its parent company or (3) a person who is able to exercise significant influence over the management of the registered insurer or its parent company by virtue of its shareholding or its entitlement to exercise, or control the exercise of, the voting power at any shareholders' meeting.

Under the Bermuda Insurance Act, shareholder controller ownership is defined as follows:

Actual Shareholder Controller Voting Power	Defined Shareholder Controller Voting Power
10% or more but less than 20%	10%
20% or more but less than 33%	20%
33% or more but less than 50%	33%
50% or more	50%

Where the shares of a registered insurer, or the shares of its parent company, are traded on a recognized stock exchange, and such shareholder becomes a 10%, 20%, 33%, or 50% shareholder controller of the insurer, that shareholder shall, within 45 days, notify the BMA in writing that such shareholder has become, or as a result of a disposition ceased to be, a controller of any such category.

Under our bye-laws, we have imposed restrictions on the ownership by holders of our Class A common shares (other than the Apollo Group) controlling more than 9.9% of the voting power associated with our common shares. The voting rights exercisable by shareholders of the Company other than the Apollo Group will be limited so that Control Groups are not deemed to hold more than 9.9% of the total voting power conferred by our shares. In addition, our board of directors retains certain discretion to make adjustments to the aggregate number of votes attaching to the shares of any person or group that they consider fair and reasonable in all the circumstances to ensure that such person or group will not hold more than 9.9% of the total voting power represented by our then outstanding shares. As a result of the voting power restrictions imposed by our bye-laws, we believe that no shareholder, other than the Apollo Group (at the 33% shareholder controller level), would be considered a shareholder controller of any of our Bermuda reinsurance subsidiaries under the Bermuda Insurance Act.

Any person or entity who contravenes the Bermuda Insurance Act by failing to give notice or knowingly becoming a controller of any description before the required 45 days has elapsed is guilty of an offense under Bermuda law and liable to a fine of $25,000 on summary conviction.

The BMA may file a notice of objection to any person or entity who has become a controller of any category when it appears that such person or entity is not, or is no longer, fit and proper to be a controller of the registered insurer. Before issuing a notice of objection, the BMA is required to serve upon the person or entity concerned a preliminary written notice stating the BMA's intention to issue formal notice of objection. Upon receipt of the preliminary written notice, the person or entity served may, within 28 days, file written representations with the BMA which shall be taken into account by the BMA in making its final determination. Any person or entity who continues to be a controller of any description after having received a notice of objection is guilty of an offense and liable on summary conviction to a fine of $25,000 (and a continuing fine of $500 per day for each day that the offense is continuing) or, if convicted on indictment, to a fine of $100,000 and/or 2 years in prison.

The permission of the BMA is required, pursuant to the provisions of the Exchange Control Act 1972 and related regulations, for all issuances and transfers of shares (which includes the Class A common shares) of Bermuda companies to or from a non-resident of Bermuda for exchange control purposes, other than in cases where the BMA has granted a general permission. The BMA, in its notice to the public dated June 1, 2005, has granted a general permission for the issue and subsequent transfer of any securities of a Bermuda company from and/or to a non-resident of Bermuda for exchange control purposes for so long as any "Equity Securities" of the company (which includes the Class A common shares) are listed on an "Appointed Stock Exchange" (which includes the New York Stock Exchange (NYSE)).

Notification of Material Changes

All registered insurers are required to give notice to the BMA of their intention to effect a material change within the meaning of the Bermuda Insurance Act. For the purposes of the Bermuda Insurance Act, the following changes are material: (1) the transfer or acquisition of insurance business, including portfolio transfers or corporate restructurings, pursuant to a court-approved scheme of arrangement under Section 25 of the Bermuda Insurance Act or Section 99 of the Companies Act, (2) the amalgamation with or acquisition of another firm, (3) engaging in unrelated business that is retail business, (4) the acquisition of a controlling interest in an undertaking that is engaged in non-insurance business which offers services and products to persons who are not affiliates of the insurer, (5) outsourcing all or substantially all of the company's actuarial, risk management, compliance or internal audit functions, (6) outsourcing all or a material part of an insurer's underwriting activity, (7) the transfer other than by way of reinsurance of all or substantially all of a line of business, (8) the expansion into a material new line of business, (9) the sale of an insurer and (10) outsourcing of an "officer" role, as such term is defined by the Bermuda Insurance Act.

As registered insurers, our Bermuda reinsurance subsidiaries may not take any steps to give effect to such a material change unless they have first served notice on the BMA that they intend to effect such material change and before the end of 30 days, either the BMA has notified the applicable Bermuda reinsurance subsidiary in writing that the BMA has no objection to such change or that period has lapsed without the BMA having issued a notice of objection.

Before issuing a notice of objection, the BMA is required to serve upon the applicable Bermuda reinsurance subsidiary a preliminary written notice stating the BMA's intention to issue formal notice of objection. Upon receipt of the preliminary written notice, the applicable Bermuda reinsurance subsidiary may, within 28 days, file written representations with the BMA, which the BMA would take into account in making its final determination.

Economic Substance Act 2018 (ESA)

In December 2018, the ESA came into effect in Bermuda. Under the provisions of the ESA, every Bermuda registered entity, other than an entity which is resident for tax purposes in certain jurisdictions outside of Bermuda, that carries on as a business in any one or more "relevant activities" referred to in the ESA must satisfy economic substance requirements by maintaining a substantial economic presence in Bermuda. Under the ESA, certain activities, including insurance or holding entity activities (both as defined in the ESA and Economic Substance Regulations 2018) are relevant activities. The ESA applies to our entities registered in Bermuda that carry on "relevant activities" and are not resident for tax purposes in a jurisdiction outside of Bermuda. We are required to file annual declarations with the Registrar of Companies in Bermuda demonstrating that an entity is either a non-resident entity for tax purposes or is otherwise in compliance with economic substance requirements.

Any entity that must satisfy economic substance requirements but fails to do so could face automatic disclosure to competent authorities in the E.U. of the information filed by the entity with the Bermuda Registrar of Companies in connection with the economic substance requirements and may also face financial penalties, restriction or regulation of its business activities and/or removal from the list of registered entities in Bermuda.

Corporation Tax Act 2010 (UK Tax Act)

AHL and certain of its subsidiaries (collectively, UK Resident Companies) are treated as resident in the United Kingdom for UK tax purposes. Our UK Resident Companies will each be treated as a fiscally opaque company from a UK tax perspective, and will be resident in the United Kingdom for tax purposes due to being centrally managed and controlled in the UK. Our UK Resident Companies are generally subject to UK corporation tax on their respective worldwide profits. In practice, however, it is not expected that our UK Resident Companies will be liable to account for any material UK corporation tax on the basis that: (i) in the case of AHL, its income and gains should be primarily derived from its holding of shares in direct subsidiaries; or (ii) in the case of ALRe and ACRA 1A, the majority of profits will be attributable to their permanent establishments in Bermuda in respect of which "foreign branch elections" (set out in s.18A Corporation Tax Act 2009) have been made. Any dividends received by our UK Resident Companies should be exempt from UK corporation tax and any gains arising to our UK Resident Companies on a disposal of a subsidiary should be exempt from UK corporation tax on chargeable gains as a result of the application of the UK substantial shareholding exemption set out in Schedule 7AC of the Taxation of Chargeable Gains Act 1992.

The UK Resident Companies, as UK tax residents, will remain subject to a number of specific UK tax regimes, including the controlled foreign company regime, the anti-hybrids and other mismatches regime and the diverted profits tax. In practice, however, (subject to a change in law – see *Item 1A. Risk Factors—Risks Relating to Taxation—Changes in UK tax law could increase the amount of UK tax we are required to pay*) none of these specific regimes are expected to materially impact the UK tax position of the UK Resident Companies.

Item 1. Business

Available Information

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to such reports are made available, free of charge, on or through the “Investors” portion of our website www.athene.com. Information contained on our website is not part of, nor is it incorporated by reference in, this report or any of our periodic reports. Reports filed with or furnished to the SEC will also be available as soon as reasonably practicable after they are filed with or furnished to the SEC and are available at the SEC’s website at www.sec.gov.

Item 1A. Risk Factors

Certain metrics discussed in this section are based on management view and therefore may not correspond to amounts disclosed in our condensed consolidated financial statements or the notes thereto. For example, investment figures cited represent our invested assets, which include assets held by cedants that correspond to liabilities ceded to us. In the context discussed, we believe that these metrics provide the most comprehensive view of our risk exposures. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Key Operating and Non-GAAP Measures–Net Invested Assets for further discussion.

Risks Relating to Our Business Operations

Our business, financial condition, results of operations, liquidity and cash flows depend on the accuracy of our management's assumptions and estimates, and we could experience significant gains or losses if these assumptions and estimates differ significantly from actual results.

We make and rely on certain assumptions and estimates regarding many matters related to our business, including interest rates, investment returns, expenses and operating costs, tax assets and liabilities, tax rates, business mix, surrender activity, mortality and contingent liabilities. We also use these assumptions and estimates to make decisions crucial to our business operations, including establishing pricing, target returns and expense structures for our insurance subsidiaries' products and PRT transactions; determining the amount of reserves we are required to hold for our policy liabilities; determining the price we will pay to acquire or reinsure business; determining the hedging strategies we employ to manage risks to our business and operations; and determining the amount of regulatory and rating agency capital that our insurance subsidiaries must hold to support their businesses. The factors influencing these assumptions and estimates cannot be calculated or predicted with certainty, and if our assumptions and estimates differ significantly from actual outcomes and results, our business, financial condition, results of operations, liquidity and cash flows may be materially and adversely affected. Certain of the assumptions relevant to our business are discussed in greater detail below.

- *Insurance Products and Liabilities* – Pricing of our annuity and other insurance products, whether issued by us or acquired through reinsurance or acquisitions, is based upon assumptions about persistency, mortality and the rates at which optional benefits are elected. A factor which may affect persistency for some of our products is the value of guaranteed minimum benefits. An increase in the value of guaranteed minimum benefits could result in our policies remaining in force longer than we have estimated, which could adversely affect our results of operations. This could be caused by extended periods of poor equity market performance and/or low interest rates, developments affecting customer perception and other factors outside our control. Alternatively, our persistency estimates could be negatively affected during periods of rising equity markets or interest rates or by other factors outside our control, which could result in fewer policies remaining in force than estimated. Therefore, our results will vary based on deviations from expected policyholder behavior.

  If emerging or actual experience deviates from our assumptions, such deviations could have a significant effect on our business, financial condition, results of operations, liquidity and cash flows. For example, a significant portion of our in-force and newly issued products contain riders that offer guaranteed lifetime income or death benefits. These riders expose us to mortality, longevity and policyholder behavior risks. If actual utilization of certain rider benefits is adverse when compared to our estimates used in setting our reserves for future policy benefits, these reserves may prove to be inadequate and we may be required to increase such reserves. More generally, deviations from our pricing expectations could result in our subsidiaries earning less of a spread between the investment income earned on our subsidiaries' assets and the interest credited to such products and other costs incurred in servicing the products, or may require our subsidiaries to make more payments under certain products than our subsidiaries had projected.

- *Determination of Fair Value* – We hold securities, derivative instruments and other assets and liabilities that must be, or at our election are, measured at fair value. Fair value represents the anticipated amount that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction. The determination of fair value involves the use of various assumptions and estimates, and considerable judgment may be required to estimate fair value. Accordingly, estimates of fair value are not necessarily indicative of the amounts that could be realized in a current or future market exchange. As such, changes in or deviations from the assumptions used in such valuations can significantly affect our financial condition and results of operations. During periods of market disruption, including periods of rapidly changing credit spreads or illiquidity, if trading becomes less frequent or market data becomes less observable, it will likely be difficult to value certain of our investments. Further, rapidly changing credit and equity market conditions could materially impact the valuation of investments as reported within our financial statements, and the period-to-period changes in value could vary significantly. Even if our assumptions and valuations are accurate at the time that they are made, the market value of these investments could subsequently decline, which could materially and adversely impact our financial condition, results of operations or cash flows.

- *Hedging Strategies* – We use, and may in the future use, derivatives and reinsurance contracts to hedge risks related to current or future changes in the fair value of our assets and liabilities; current or future changes in cash flows; changes in interest rates, equity markets and credit spreads; the occurrence of credit defaults; currency fluctuations; and changes in mortality and longevity. We use equity derivatives to hedge the liabilities associated with our FIAs. Our hedging strategies rely on assumptions and projections regarding our assets and liabilities, as well as general market factors and the creditworthiness of our counterparties, any or all of which may prove to be incorrect or inadequate. Accordingly, our hedging activities may not have the desired impact. We may also incur significant losses on hedging transactions.

- *Financial Statements* – The preparation of our consolidated financial statements requires management to make various estimates and assumptions that affect the amounts reported therein. These estimates include, but are not limited to, the fair value of investments; impairment of investments and valuation allowances; the valuation of derivatives, including embedded derivatives; DAC, DSI and VOBA; future policy benefit reserves; valuation allowances on deferred tax assets; and stock-based compensation. The assumptions and estimates required for these calculations involve judgment and by their nature are imprecise and subject to changes and revisions over time. Accordingly, our financial condition and results of operations may be adversely affected if actual results differ from assumptions or if assumptions are materially revised.

Major public health issues, and specifically the pandemic caused by the spread of COVID-19, could have an adverse impact on our financial condition, results of operations, liquidity, cash flows and other aspects of our business.

We closely monitor developments related to the COVID-19 pandemic to assess its impact on our business. While still evolving, the COVID-19 pandemic has caused significant economic and financial turmoil both in the US and around the world. Though vaccines believed to be highly effective at preventing symptomatic COVID-19 have been produced and are currently in the process of being distributed, it is not possible to estimate how long it will take to halt the spread of the virus or the longer term-effects that the COVID-19 pandemic could have on our business. The extent to which the COVID-19 pandemic impacts our business, results of operations, financial condition, liquidity or prospects will depend on future developments, which are highly uncertain, including new information which may emerge concerning the severity of the COVID-19 pandemic and the actions taken to contain or address its impact, including the rate of vaccine adoption, the efficacy of vaccines in the broader population, potential future changes in monetary policy enacted by the Federal Reserve and potential future fiscal stimulus measures implemented by the federal government.

While we have implemented risk management and contingency plans and taken preventive measures and other precautions, the ultimate impact of the COVID-19 pandemic on our business is uncertain. We have taken measures to reduce the risk of transmission among employees, including implementing social distancing measures and face covering and contact tracing protocols; however, our efforts may prove ineffective. Should our efforts prove ineffective or should the virus continue to spread in the communities in which we operate, we may deem it appropriate to extend or re-implement remote work arrangements. An extended period of remote work arrangements could strain our business continuity plans, introduce operational risk, including but not limited to cybersecurity risks, and impair our ability to manage our business. We also outsource certain critical business activities to third parties. As a result, we rely upon the successful implementation and execution of the business continuity and repopulation planning of such entities in the current environment. While we closely monitor the business continuity activities of these third parties, successful implementation and execution of their business continuity and repopulation strategies are largely outside our control. If one or more of the third parties to whom we outsource certain critical business activities experience operational failures as a result of the impacts from the spread of COVID-19, or claim that they cannot perform due to a force majeure, it may have a material adverse effect on our business, financial condition, results of operations, liquidity and cash flows.

With certain exceptions, each of the Non-US Companies (as defined below) currently intends to operate in a manner that will not cause it to be subject to current US federal income taxation on its net income, and certain of them intend to be UK tax residents by reason of having their central management and control exercised in the UK. However, our directors and personnel reside in various jurisdictions and often must travel to carry out their duties in accordance with such intended tax positions. Travel restrictions imposed as a result of the COVID-19 pandemic have limited, and may continue to limit, such travel. While we have implemented contingency plans to mitigate the impact of such travel restrictions, no assurances can be provided that we will not become subject to greater tax liabilities than anticipated due to restrictions on the ability of our directors and personnel to carry out their activities from the intended jurisdictions.

Increased economic uncertainty and increased unemployment resulting from the economic impacts of the spread of COVID-19 may also result in policyholders seeking sources of liquidity and withdrawing at rates greater than we previously expected. If policyholder lapse and surrender rates significantly exceed our expectations, it could have a material adverse effect on our business, financial condition, results of operations, liquidity and cash flows. Measures undertaken to combat the spread of COVID-19, including social distancing practices and stay at home orders, as well as increased economic uncertainty, have resulted in a difficult sales environment for the origination of new policies. These factors have had a significant impact on the IMO channel, which benefits from a high degree of customer interaction. Should these conditions persist or worsen, we may see declines in our retail sales and/or flow reinsurance volumes. In addition, such events or conditions could result in a decrease in economic activity in large geographic areas, adversely affecting our business within such geographic areas and/or adversely affecting the general economic climate.

The effects of the spread of COVID-19 on economic conditions and the financial markets may trigger or exacerbate the market and credit risk discussed elsewhere in this report. Specifically, our investment portfolio (and, namely, the valuations of invested assets we hold) has been, and may continue to be, adversely affected. Moreover, changes in interest rates, reduced liquidity or a continued slowdown in the US or in global economic conditions may also adversely affect the values of and cash flows generated by these assets. Within our investment portfolio, there is exposure to certain segments of the economy that have been disproportionately affected by the spread of COVID-19, including but not limited to, aviation, real estate (including CMLs, triple net lease investments, RMLs, CMBS, RMBS and related servicer investments), retail, hospitality, energy and financial services. These investments are subject to increased credit or valuation risk, which could ultimately result in increased investment losses. Our investments in mortgages and mortgage-backed securities have been and could further be negatively affected by delays or failures of borrowers to make payments of principal and interest when due and delays and moratoriums on foreclosures and enforcement actions with respect to delinquent or defaulted mortgages imposed by governmental authorities. Further, extreme market volatility may leave us unable to react to market events in a prudent manner consistent with our historical investment practices in dealing with more orderly markets. Market dislocations, decreases in observable market activity or unavailability of information, in each case, arising from the spread of COVID-19, 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 the allowance for credit losses. Restricted access to such inputs may make our financial statement balances and estimates and assumptions used to run our business subject to greater variability and subjectivity.

As a result of the adverse economic consequences brought about by the spread of COVID-19, certain of the securities that we hold may be subject to ratings downgrade or we may be unable to obtain the securities ratings needed for admissibility of the securities for statutory reporting purposes. In each case, it may have an adverse impact on our statutory capital or the statutory capital that we are required to hold and may result in a downgrade of our financial strength ratings and have a material adverse effect on our financial condition, results of operations, liquidity and cash flow.

While governmental and non-governmental organizations are engaging in efforts to combat the spread and severity of the COVID-19 pandemic and related public health issues, these measures may not be effective. We also cannot predict how legal and regulatory responses to concerns about the COVID-19 pandemic and related public health issues will impact our business. Such events or conditions could result in additional regulation or restrictions affecting the conduct of our business in the future.

Interruption or other operational failures in telecommunications, information technology and other operational systems or a failure to maintain the security, integrity, confidentiality or privacy of sensitive data residing on those systems, including as a result of human error, could have a material adverse effect on our business.

We are highly dependent on automated and information technology systems to record and process our internal transactions and transactions involving our customers, as well as to calculate reserves, value our investment portfolio and complete certain other components of our financial statements. We could experience a failure of one of these systems, our employees or agents could fail to monitor and implement enhancements or other modifications to a system in a timely and effective manner or our employees or agents could fail to complete all necessary data reconciliation or other conversion controls when implementing a new software system or modifications to an existing system. Additionally, anyone who is able to circumvent our security measures and penetrate our information technology systems could access, view, misappropriate, alter or delete information in the systems, including personally identifiable customer information and proprietary business information. Information security risks also exist with respect to the use of portable electronic devices, such as laptops, which are particularly vulnerable to loss and theft.

We believe that we have established and implemented appropriate security measures, controls and procedures to safeguard our information technology systems and to prevent unauthorized access to such systems and any data processed or stored in such systems, and we periodically evaluate and test the adequacy of such systems, controls and procedures. In addition, we have established a business continuity plan which is designed to ensure that we are able to maintain all aspects of our key business processes in the midst of certain disruptive events, including any disruptions to or breaches of our information technology systems. Despite the implementation of security and back-up measures, our information technology systems may be vulnerable to physical or electronic intrusions, viruses or other attacks, programming errors and similar disruptions. We may also be subject to disruptions of any of these systems arising from events that are wholly or partially beyond our control (for example, natural disasters, acts of terrorism, epidemics, computer viruses and electrical or telecommunications outages). All of these risks are also applicable where we rely on outside vendors to provide services to us and/or our customers. The failure of any one of these systems for any reason, or errors made by our employees or agents, could in each case cause significant interruptions to our operations, which could harm our reputation, adversely affect our internal control over financial reporting or have a material adverse effect on our business, financial condition and results of operations. We are also subject to data privacy and security laws applicable to our business in relevant jurisdictions. See *Item 1. Business–Regulation–Consumer Protection Laws and Privacy and Data Security Regulation* for more information.

Item 1A. Risk Factors

We retain confidential information in our information technology systems and those of our business partners, and we rely on industry standard commercial technologies to maintain the security of those systems. Despite our implementation of network security measures, our servers could be subject to physical and electronic intrusions, and similar disruptions from unauthorized tampering with our computer systems, and, given the increasing sophistication of cyberattacks, in some cases, such incidents could occur and persist for an extended period of time without detection. While we perform penetration tests and have adopted a number of measures to protect the security of customer and company data, and to our knowledge have not experienced a successful cyber-attack that has resulted in any material compromise in the security of our information technology systems, there is no guarantee that such an attack will not occur or be successful in the future. Due to recent heightened tensions between the United States and the Middle East, we, like other financial services firms, have experienced a significant increase in the volume of unsuccessful cyber-attacks. We are sharing information with industry groups and the US Department of Homeland Security and are closely monitoring threat actors in the region.

Any compromise of the security of our information technology systems that results in inappropriate disclosure or use of confidential information, including personally identifiable customer information, could damage the reputation of our brand in the marketplace, deter purchases of our products, subject us to heightened regulatory scrutiny or significant civil and criminal liability and require us to incur significant technical, legal and other expenses.

Even in the absence of a compromise in the security of our information technology systems, inappropriate disclosure or use of personally identifiable customer information may occur in the event of a compromise in the security of the information technology systems of our third-party advisors or business partners with whom we share such data. Any such inappropriate disclosure or use could likewise damage the reputation of our brand in the marketplace, deter purchases of our products, subject us to heightened regulatory scrutiny or significant civil and criminal liability and require us to incur significant technical, legal and other expenses.

A financial strength rating downgrade, potential downgrade or any other negative action by a rating agency could make our product offerings less attractive, inhibit our ability to acquire future business through acquisitions or reinsurance and increase our cost of capital, which could have a material adverse effect on our business.

Various NRSROs review the financial performance and condition of insurers and reinsurers, including our subsidiaries, and publish their financial strength ratings as indicators of an insurer’s ability to meet policyholder obligations. These ratings are important to maintain public confidence in our insurance subsidiaries’ products, our insurance subsidiaries’ ability to market their products and our competitive position. Factors that could negatively influence this analysis include:

- changes to our business practices or organizational business plan in a manner that no longer supports our ratings;
- unfavorable financial or market trends;
- a need to increase reserves to support our outstanding insurance obligations;
- our inability to retain our senior management and other key personnel;
- rapid or excessive growth, especially through large reinsurance transactions or acquisitions, beyond the bounds of capital sufficiency or management capabilities as judged by the NRSROs;
- significant losses to our investment portfolio; and
- changes in NRSROs’ capital adequacy assessment methodologies in a manner that would adversely affect the financial strength ratings of our insurance subsidiaries.

Some other factors may also relate to circumstances outside of our control, such as views of the NRSRO and general economic conditions. Any downgrade or other negative action by a NRSRO with respect to the financial strength ratings of our insurance subsidiaries, or an entity we acquire, or our credit ratings, could materially adversely affect us and our ability to compete in many ways, including the following:

- reducing new sales of insurance products;
- harming relationships with or perceptions of distributors, IMOs, sales agents, banks and broker-dealers;
- increasing the number or amount of policy lapses or surrenders and withdrawals of funds, which may result in a mismatch of our overall asset and liability position;
- requiring us to offer higher crediting rates or greater policyholder guarantees on our insurance products in order to remain competitive;
- increase our borrowing costs;
- reducing our level of profitability and capital position generally or hindering our ability to raise new capital; or
- requiring us to collateralize obligations under or result in early or unplanned termination of hedging agreements and harming our ability to enter into new hedging agreements.

In order to improve or maintain their financial strength ratings, our subsidiaries may attempt to implement business strategies to improve their capital ratios. We cannot guarantee any such measures will be successful. We cannot predict what actions NRSROs may take in the future, and failure to improve or maintain current financial strength ratings could materially and adversely affect our business, financial condition, results of operations and cash flows.

Item 1A. Risk Factors

We rely significantly on third parties for various services, and we may be held responsible for obligations that arise from the acts or omissions of third parties under their respective agreements with us if they are deemed to have acted on our behalf.

We rely significantly on third parties to provide various services that are important to our business, including investment, distribution and administrative services. As such, our business may be affected by the performance of those parties. Additionally, our operations are dependent on various technologies, some of which are provided or maintained by certain key outsourcing partners and other parties. See *Item 1. Business–Outsourcing* for certain of the functions that we outsource to third parties.

Many of our subsidiaries' products and services are sold through third-party intermediaries. In particular, our insurance businesses are reliant on such intermediaries to describe and explain these products and services to potential customers, and although we take precautions to avoid this result, such intermediaries may be deemed to have acted on our behalf. If that occurs, the intentional or unintentional misrepresentation of our subsidiaries' products and services in advertising materials or other external communications, or inappropriate activities by an intermediary or personnel employed by an intermediary could result in liability for us and have an adverse effect on our reputation and business prospects, as well as lead to potential regulatory actions or litigation involving or against us. In addition, we rely on third-party administrators (TPAs) to administer a portion of our annuity contracts, as well as our legacy life insurance business. Some of our reinsurers also use TPAs to administer business we reinsure to them. To the extent any of these TPAs do not administer such business appropriately, we have and may in the future experience customer complaints, regulatory intervention and other adverse impacts, which could affect our future growth and profitability. If any of these TPAs or their employees are found to have made material misrepresentations to our policyholders, violated applicable insurance, privacy or other laws and regulations or otherwise engaged in misconduct, we could be held liable for their actions and be subject to regulatory scrutiny, which could adversely affect our reputation, business prospects, financial condition, results of operations and cash flows.

Our US insurance subsidiaries have experienced increased service and administration complaints related to the conversion and administration of the block of life insurance business acquired in connection with our acquisition of Aviva USA and reinsured to affiliates of Global Atlantic. The life insurance policies included in this block have been and are currently being administered by AllianceOne, a subsidiary of DXC Technology Company, which was retained by such Global Atlantic affiliates to provide services on such policies. AllianceOne also administers certain annuity policies that were on Aviva USA's legacy policy administration systems that were also converted in connection with the acquisition of Aviva USA and have experienced similar service and administration issues.

As a result of the difficulties experienced with respect to the conversion and administration of such policies, we have received notifications from several state regulators, including but not limited to the NYSDFS, the California Department of Insurance (CDI) and the Texas Department of Insurance (TDI), indicating, in each case, that the respective regulator was undertaking a market conduct examination or enforcement proceeding of the applicable US insurance subsidiary relating to the treatment of policyholders subject to our reinsurance agreements with affiliates of Global Atlantic and the conversion of such annuity policies, including the administration of such blocks by AllianceOne. We have entered into consent orders with several state regulators, including the NYSDFS, the CDI and the TDI, to resolve the underlying matters with those regulators. All fines and costs, including those associated with remediation plans, paid in connection with consent orders arising out of the administration of life policies or the conversion of life and annuity policies are subject to indemnification by Global Atlantic or affiliates of Global Atlantic. Fines and costs paid in connection with consent orders arising out of the administration of annuity contracts may be subject to indemnification by AllianceOne.

In addition to the foregoing, we have received inquiries, and expect to continue to receive inquiries, from other regulatory authorities regarding the conversion matter. In addition to the examinations and proceedings initiated to date, it is possible that other regulators may pursue similar formal examinations, inquiries or enforcement proceedings and that any examinations, inquiries and/or enforcement proceedings may result in fines, administrative penalties and payments to policyholders. While we do not expect the amount of any such fines, penalties or payments arising from these matters to be material to our financial condition, results of operations or cash flows, it is possible that such amounts could be material.

Pursuant to the terms of the reinsurance agreements between us and the relevant affiliates of Global Atlantic, the applicable affiliates of Global Atlantic have financial responsibility for the ceded life block and are subject to significant administrative service requirements, including compliance with applicable law. The agreements also provide for indemnification to us, including for administration issues.

Additionally, past or future misconduct by agents that distribute our subsidiaries' products or employees of our vendors could result in violations of law by us, regulatory sanctions and/or serious reputational or financial harm and the precautions we take to prevent and detect this activity may not be effective in all cases. Although we employ controls and procedures designed to monitor associates' business decisions and to prevent us from taking excessive or inappropriate risks, associates may take such risks regardless of such controls and procedures.

Item 1A. Risk Factors

Uncertainty relating to the LIBOR calculation process and the phasing out of LIBOR after a future date may adversely affect the value of our investment portfolio, our ability to achieve our hedging objectives and our ability to issue funding agreements bearing a floating rate of interest.

On July 27, 2017, the UK Financial Conduct Authority (FCA) announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. At that time, the FCA indicated that it expected that the current member banks would voluntarily sustain LIBOR until the end of 2021, but they had no obligation to do so, and may discontinue their activities at any time. On December 4, 2020, the Intercontinental Exchange Benchmark Administrator (IBA) published a consultation on its intention to cease publication of one week and two month USD LIBOR settings immediately following the LIBOR publication on December 31, 2021 and the overnight and 1-, 3-, 6- and 12-month USD LIBOR settings immediately following the LIBOR publication on June 30, 2023. The consultation closed on January 25, 2021 and the IBA is expected to share results of the consultation with the FCA and to publish a feedback statement summarizing responses from the consultation in short order. The FCA issued a statement in support of the IBA's USD LIBOR consultation. If the IBA's plan for USD LIBOR publication is implemented, LIBOR rates for substantially all of our contracts with exposure to LIBOR would cease publication after June 30, 2023. At this time, it is not possible to predict the implementation of any other reforms to LIBOR that may be enacted in the UK or elsewhere.

The Alternative Reference Rate Committee of the New York office of the Board of Governors of the Federal Reserve (ARRC), and the International Swaps and Derivatives Association (ISDA), have taken significant steps toward the development of consensus-based fallbacks and alternatives to LIBOR, which appear constructive for end-users, such as life insurers. The fallback proposals are intended to minimize disruptions if LIBOR is no longer usable. In addition, the ISDA has amended and/or provided a means for amendment through protocol of its applicable standard documentation to implement fallbacks for certain key interbank offered rates (IBORs). The fallbacks apply if enumerated temporary, permanent and pre-cessation triggers relating to the relevant IBOR occur. We adhered to the ISDA's IBOR fallbacks protocol in January 2021. There can be no assurance, however, that the alternative rates and fallbacks will be effective at preventing or mitigating disruption as a result of the transition. Should such disruption occur, it may adversely affect, among other things, (1) the trading market for LIBOR-based securities, including those held in our investment portfolio, (2) the market for derivative instruments, including those that we use to achieve our hedging objectives, and (3) our ability to issue funding agreements bearing a floating rate of interest.

The ARRC has endorsed the Secured Overnight Financing Rate (SOFR) as its preferred replacement benchmark for U.S. dollar LIBOR. SOFR is calculated and published by the Federal Reserve Bank of New York and reflects the combination of three overnight U.S. Treasury Repo Rates. The rate is different from LIBOR, in that it is a risk-free rate, is backward-looking instead of forward-looking and is a secured rate. In addition, unlike LIBOR, which is reported daily for a variety of tenors ranging from overnight to 12-months, SOFR is currently available primarily as an overnight rate.

The effect of the discontinuation of LIBOR on legacy or new contracts to which we have exposure or the activities in our businesses will vary depending on (1) the character of existing fallback provisions in individual contracts and (2) whether, how, and when industry participants develop and widely adopt new reference rates and fallbacks for both legacy and new contracts. Accordingly, it is difficult to predict the full impact of the transition away from LIBOR on our contracts whose value is tied to LIBOR. The value or profitability of these contracts may be adversely affected.

To manage the uncertainty surrounding the discontinuation of LIBOR, we have established a LIBOR transition team and a transition plan. Our plan is subject to change as we gain additional information. We have created an Executive Steering Committee composed of senior executives to coordinate and oversee execution of our plan. Although we expect that we will be successful at fully implementing our plan prior to the discontinuation of LIBOR, we can provide no assurance at this time. Failure to fully implement our plan prior to the discontinuation of LIBOR may have a material adverse effect on our business, financial position, results of operations and cash flows. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Industry Trends and Competition-Discontinuation of LIBOR* for further discussion.

Our most significant LIBOR exposure area as it relates to legacy contracts is our portfolio of floating rate investments tied to LIBOR. As of December 31, 2020, $24.1 billion or 57% of the notional value of our contracts tied to LIBOR extending beyond 2021 were contracts relating to investments within our investment portfolio. As our asset manager, Apollo manages the relationship with relevant market participants, including investees and trustees; negotiates and maintains the relevant investment documentation; and inputs key information, such as interest rates, into systems integrated with our financial reporting system. We are therefore reliant upon Apollo to complete important functions in the LIBOR transition process as it relates to our investment portfolio, including negotiating for relevant fallbacks, where appropriate, and inputting the appropriate replacement interest rates into the applicable information systems in advance of LIBOR's transition. Should Apollo fail to timely complete all of its responsibilities prior to the discontinuation of LIBOR, it could have an adverse impact on our results of operations and ability to timely report accurate financial information.

We are subject to significant operating and financial restrictions imposed by our credit agreement and we are also subject to certain operating restrictions imposed by the indenture to which we are a party.

On December 3, 2019, AHL, ALRe, AUSA Corporation (AUSA) and AARe, as borrowers, entered into a credit agreement with a syndicate of banks, including Citibank, N.A., as administrative agent, and the other lenders named therein (Credit Facility). The Credit Facility contains various restrictive covenants which limit, among other things, subject to certain exceptions:

- the ability of material subsidiaries of the borrowers to incur additional indebtedness and make guarantees;

- the ability to create liens on the borrowers' assets and on the equity interests of material subsidiaries;
- the ability of any borrower or any material subsidiary thereof to make fundamental changes;
- the ability of any borrower or any subsidiary thereof to engage in certain transactions with affiliates; and
- the ability to make changes in the nature of the borrowers' business.

These covenants, some of which are financial, may prevent or restrict us from capitalizing on business opportunities, including making additional acquisitions or growing our business. In addition, if AHL undergoes a "change of control" as defined in the Credit Facility, the lenders under the Credit Facility will have the right to terminate the facility and/or accelerate the maturity of all outstanding loans. As of December 31, 2020, no borrowings under the Credit Facility were outstanding. As a result of these restrictions and their effects on us, we may be limited in how we conduct our business and may be unable to raise additional debt financing to compete effectively or to take advantage of new business opportunities.

In addition to the covenants to which we are subject pursuant to our Credit Facility, AHL is also subject to certain limited covenants pursuant to the Indenture, dated January 12, 2018, by and between us and US Bank National Association, as trustee (Base Indenture), as supplemented by the applicable supplemental indenture, by and among us and US Bank National Association, as trustee (together with the Base Indenture, Indenture). The Indenture contains restrictive covenants which limit, subject to certain exceptions, AHL's and, in certain instances, some or all of its subsidiaries' ability to make fundamental changes, create liens on any capital stock of certain of AHL's subsidiaries, and sell or dispose of the stock of certain of AHL's subsidiaries. These covenants may prevent or restrict takeovers or business combinations that our shareholders might consider in their best interest.

The terms of any future indebtedness we may incur may contain additional restrictive covenants.

We operate in a highly competitive industry that includes a number of competitors, which could limit our ability to achieve our growth strategies and could materially and adversely affect our business, financial condition, results of operations, cash flows and prospects.

We operate in highly competitive markets and compete with large and small industry participants. These companies compete for an increasing pool of retirement assets, driven primarily by aging of the US population and the reduction in, and concerns about the viability of, financial safety nets historically provided by governments and employers. We face intense competition, including from US and non-US insurance and reinsurance companies, broker-dealers, financial advisors, asset managers and diversified financial institutions, with respect to both the products we offer and the acquisition and block reinsurance transactions we pursue. We compete based on a number of factors including perceived financial strength, credit ratings, brand recognition, reputation, quality of service, performance of our products, product features, scope of distribution and price. A decline in our competitive position as to one or more of these factors could adversely affect our profitability. In addition, we may in the future sacrifice our competitive or market position in order to improve our short-term profitability, particularly in the highly competitive retail markets, which may adversely affect our long-term growth and results of operations. Alternatively, we may sacrifice short-term profitability to maintain market share and long-term growth.
Many of our competitors are large and well-established and some have greater market share or breadth of distribution; offer a broader range of products, services or features; assume a greater level of risk; or have higher financial strength, claims-paying or credit ratings than we do. Our competitors may also have lower operating costs or return on capital requirements than we do which may allow them to price products, reinsurance arrangements or acquisitions more competitively. In recent years, there has been substantial consolidation among companies in the financial services industry due to economic turmoil resulting in increased competition from large, efficient, well-capitalized financial services firms. The competitive pressures arising from consolidation could result in increased pressure on the pricing of certain of our products and services, and could harm our ability to maintain or increase profitability. Despite the general trend in industry consolidation, we also face competition from new market entrants, both those seeking to replicate our business model and existing life insurance companies seeking to expand into the channels in which we operate. In an effort to gain market share, these new entrants often engage in aggressive, non-economic pricing. If new entrants engage in aggressive pricing practices for prolonged periods or if our financial strength and credit ratings remain lower than the ratings of certain of our competitors, we may experience increased surrenders and/or an inability to reach sales targets, which may have a material and adverse effect on our growth, business, financial condition, results of operations, cash flows and prospects.

If we are unable to attract and retain IMOs, agents, banks and broker-dealers, sales of our products may be adversely affected.

We distribute our annuity products through a variable cost distribution network, which includes approximately 54 IMOs, approximately 59,000 independent agents, 17 banks and 102 regional broker-dealers. We must attract and retain such marketers, agents and financial institutions to sell our products. In particular, insurance companies compete vigorously for productive agents. We compete with other life insurance companies for marketers, agents and financial institutions primarily on the basis of our financial position, support services, compensation, credit ratings and product features. Such marketers, agents and financial institutions may promote products offered by other life insurance companies that may offer a larger variety of products than we do. Our competitiveness for such marketers, agents and financial institutions also depends upon the long-term relationships we develop with them. There can be no assurance that such relationships will continue in the future. In addition, our growth plans include increasing the distribution of annuity products through small and mid-size banks and regional broker-dealers. If we are unable to attract and retain sufficient marketers and agents to sell our products or if we are not successful in expanding our distribution channels within the bank and broker-dealer markets, our ability to compete and our sales volumes and results of operations could be adversely affected.

Item 1A. Risk Factors

Our growth strategy includes acquisitions and block reinsurance transactions, and our ability to consummate these transactions on economically advantageous terms acceptable to us in the future is unknown.

We have grown and intend to grow our business in the future in part by acquisitions of other insurance companies and businesses, and through block reinsurance, each of which could require additional capital, systems development and skilled personnel. We may experience challenges identifying, financing, consummating and integrating such acquisitions and block reinsurance transactions. While we have reviewed various opportunities and have successfully completed transactions in the past to facilitate our growth, competition exists in the market for profitable blocks of insurance and businesses. Such competition is likely to intensify as insurance businesses become more attractive targets. It is also possible that merger and acquisition transactions will become less frequent, which could also make it more difficult for us to implement our growth strategy as we have done in the past. Thus, in the future, we may not be able to find suitable acquisition or block reinsurance opportunities that are available at attractive valuations, or at all. Even if we do find suitable opportunities, we may not be able to consummate the transactions on commercially acceptable terms. In addition, to the extent we determine to finance an acquisition or block reinsurance transaction, suitable financing arrangements may not be available on acceptable terms, on a timely basis, or at all. Our acquisition and block reinsurance transaction activities may also divert the attention of our management from our business, which may have an adverse effect on our business and results of operations.

Our business in Bermuda could be adversely affected by Bermuda employment restrictions.

As of December 31, 2020, we employed 44 non-Bermudians in our Bermuda office (other than spouses of Bermudians and holders of permanent residents' certificates). We may hire additional non-Bermudians as our business grows. Under Bermuda law, non-Bermudians (other than spouses of Bermudians, holders of permanent residents' certificates, and holders of working residents' certificates) generally may not engage in any gainful occupation in Bermuda without a valid government work permit (with certain exceptions). A work permit is generally granted or renewed upon showing that, after proper public advertisement, no Bermudian, spouse of a Bermudian, or holder of a permanent resident's certificate who meets the minimum standards reasonably required by the employer has applied for the job. Work permit terms that are available for request range from three months to five years. We may not be able to use the services of one or more of our non-Bermudian employees if we are not able to obtain, or in certain instances renew, work permits for them, which could have a material adverse effect on our business, financial condition and results of operations.

Risk Relating to Liquidity and Regulatory Capital

As a financial services company, we are exposed to liquidity risk, which is the risk that we are unable to meet near-term obligations as they come due.

Liquidity risk is a manifestation of events that are driven by other risk types (e.g. market, policyholder behavior, operational). A liquidity shortfall may arise in the event of insufficient funding sources or an immediate and significant need for cash or collateral. In addition, it is possible that expected liquidity sources, such as our credit agreement, may be unavailable or inadequate to satisfy the liquidity demands described below. In particular, the spread of COVID-19 has introduced tremendous volatility into the financial markets and may restrict the liquidity sources available to us and further may result in an increase of our liquidity demands.

We have four primary sources of liquidity exposure and associated drivers that trigger material liquidity demand. Those sources are:

- Collateral market exposure: Abrupt changes to interest rate, equity, and/or currency markets, such as that experienced during the first and second quarters of 2020, had and may in the future increase collateral requirements to counterparties and may create liquidity risk. As of December 31, 2020, we had collateral with a value of $3.9 billion pledged to third-parties.
- Asset liability mismatch: There are liquidity risks associated with liabilities coming due prior to the matching asset cash flows. Structural maturities mismatch can occur in activities such as securities lending, where the liabilities are effectively overnight open transactions or otherwise short-term in nature and may be used to fund longer-term assets. We also face potential liquidity risks from unexpected cash demands due to severe mortality, policyholder withdrawals or lapse events. If such events were to occur, we may face unexpectedly high levels of claim payments to policyholders.
- Funding availability: We have availed ourselves of the financial markets for funding (such as through the issuance of senior notes, securities lending and repurchase arrangements and other forms of borrowing in the capital markets). These sources might not be available during times of stress, or may only be available on unfavorable terms, which can result in a decrease in our profitability and a significant reduction in our financial flexibility.
- Funding commitments: We are contractually obligated to fund capital calls of or otherwise make investments in certain entities. These obligations may become due at any time upon counterparty request. Substantial economic stress, such as that brought about by COVID-19, may accelerate the timing and increase the frequency of capital calls. To the extent that a significant amount of such obligations becomes due at any given time, it may give rise to liquidity risk. As of December 31, 2020, we had commitments to make investments in the amount of $7.5 billion, excluding commitments of third-party cedants to investees associated with assets backing obligations reinsured to us.

If a material liquidity demand is triggered and we are unable to satisfy the demand with the sources of liquidity readily available to us, it may have a material adverse impact on our business, financial condition, results of operations, liquidity and cash flows.

Item 1A. Risk Factors

See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Liquidity and Capital Resources* for a discussion of our liquidity and sources and uses of liquidity, including information about legal and regulatory limits on the ability of our subsidiaries to pay dividends.

The amount of statutory capital that our insurance and reinsurance subsidiaries have, or that they are required to hold, can vary significantly from time to time and is sensitive to a number of factors outside of our control.

Our US insurance subsidiaries are subject to state regulations that provide for MCR based on RBC formulas for life insurance companies relating to insurance, business, asset, interest rate and certain other risks. Similarly, our Bermuda reinsurance subsidiaries are subject to MCR imposed by the BMA through the BMA's ECR and MMS.

In any particular year, our subsidiaries' capital ratios and/or statutory surplus amounts may increase or decrease depending on a variety of factors, some of which are outside of our control and some of which we can only partially control, including, but not limited to, the following:

- the amount of statutory income or loss generated by our insurance subsidiaries;
- the amount of additional capital our insurance subsidiaries must hold to support their business growth;
- changes in reserve requirements applicable to our insurance subsidiaries;
- changes in market value of certain securities in our investment portfolio;
- recognition of write-downs or other losses on investments held in our investment portfolio;
- changes in the credit ratings of investments held in our investment portfolio;
- changes in the value of certain derivative instruments;
- changes in interest rates;
- credit market volatility;
- changes in policyholder behavior;
- changes in corporate tax rates;
- changes to the RBC formulas and interpretations of the NAIC instructions with respect to RBC calculation methodologies; and
- changes to the ECR, BSCR, or TCL formulas and interpretations of the BMA's instructions with respect to ECR, BSCR, or TCL calculation methodologies.

Nationally Recognized Statistical Rating Organizations (NRSROs) may also implement changes to their internal models, which differ from the RBC and BSCR capital models, that have the effect of increasing or decreasing the amount of statutory capital our subsidiaries must hold in order to maintain their current ratings. To the extent that one of our insurance subsidiary's solvency or capital ratios is deemed to be insufficient by one or more NRSROs to maintain their current ratings, we may take actions either to increase the capitalization of the insurer or to reduce the capitalization requirements. If we are unable to accomplish such actions, NRSROs may view this as a reason for a ratings downgrade. In addition, as further discussed at *Item 1. Business–Regulation–Regulation of an Insurance Group–Group Capital*, in December 2020, the NAIC finalized a group capital calculation tool using an RBC aggregation methodology for all the entities within an insurance holding company system group, including non-US entities. The NAIC has stated that the calculation will be a regulatory tool and does not constitute a requirement or standard; however, these regulatory developments may increase the amount of capital that we are required to hold and could result in us being subject to increased regulatory requirements.

If a subsidiary's solvency or capital ratios reach certain minimum levels, it could subject us to further examination or corrective action imposed by our insurance regulators. Corrective actions may include limiting our subsidiaries' ability to write additional business, increased regulatory supervision, or seizure or liquidation of the subsidiary's business, each of which could materially and adversely affect our business, financial condition, results of operations, cash flows and prospects.

Repurchase agreement programs subject us to potential liquidity and other risks.

We may engage in repurchase agreement transactions whereby we sell fixed income securities to third parties, primarily major brokerage firms or commercial banks, with a concurrent agreement to repurchase such securities at a determined future date. These repurchase agreements provide us with liquidity and in certain instances also allow us to earn spread income. Under such agreements we may be required to deliver additional securities or cash as margin to the counterparty if the value of the securities sold decreases prior to the repurchase date. If we are required to return significant amounts of cash collateral or post cash or securities as margin on short notice or have inadequate cash on hand as of the repurchase date, we may be forced to sell securities to meet such obligations and may have difficulty doing so in a timely manner or may be forced to sell securities in a volatile or illiquid market for less than we otherwise would have been able to realize under normal market conditions. Rehypothecation of subject securities by the counterparty may also create risk with respect to the counterparty's ability to perform its obligations to tender such securities on the repurchase date. Such facilities may not be available to us on favorable terms or at all in the future.

Item 1A. Risk Factors

Risk Relating to Market and Credit Risk

Our investments are subject to market and credit risks that could diminish their value and these risks could be greater during periods of extreme volatility or disruption in the financial and credit markets, which could adversely impact our business, financial condition, results of operations, liquidity and cash flows.

Our investments and derivative financial instruments are subject to risks of credit defaults and changes in market values. Periods of macroeconomic weakness or recession, heightened volatility or disruption in the financial and credit markets could increase these risks, potentially resulting in other-than-temporary impairment of assets in our investment portfolio. We are also subject to the risk that cash flows generated from the collateral underlying the structured products we own may differ from our expectations in timing or amount. In addition, many of our classes of investments, but in particular our alternative investments, may produce investment income that fluctuates significantly from period to period. Any event reducing the estimated fair value of these securities, other than on a temporary basis, could have a material and adverse effect on our business, results of operations, financial condition, liquidity and cash flows. If our investment manager, Apollo, fails to react appropriately to difficult market, economic and geopolitical conditions, our investment portfolio could incur material losses. Certain of our investments are more vulnerable to these risks than others, as described more fully below.

- *Fixed maturity and equity securities* – As of December 31, 2020, 75.6% of our net invested assets were invested in fixed maturity securities, equity securities, and short-term investments, including our investments in investment grade and high-yield corporate bonds and structured products, which include RMBS and CLOs. An economic downturn affecting the issuers or underlying collateral of these securities, ratings downgrades affecting the issuers or guarantors of such securities, or similar trends and issues could cause the estimated fair value of our fixed income securities portfolio and our earnings to decline and the default rates of the fixed income securities in our portfolio to increase.

- *Collateralized loan obligations* – As of December 31, 2020, 9.7% of our net invested assets were invested in CLOs. Control over the CLOs in which we invest is exercised through collateral managers, who may take actions that could adversely affect our interests, and we may not have the right to direct collateral management. There may also be less information available to us regarding the underlying debt instruments held by CLOs than if we had invested directly in the debt of the underlying companies. Additionally, the estimated fair values of subordinated tranches of CLOs tend to be much more sensitive to adverse economic downturns and underlying borrower defaults than those of more senior securities. For example, as the secondary market pricing of the loans underlying CLOs deteriorated during the fourth quarter of 2008, it is our understanding that many investors were forced to raise cash by selling their interests in performing loans which resulted in a forced deleveraging cycle of price declines, compulsory sales and further price declines. While loan prices have recovered from the low levels experienced during the financial crisis, conditions in the large corporate leveraged loan market may deteriorate again, which may cause pricing levels to decline. Furthermore, our investments in CLOs are also subject to liquidity risk as there is a limited market for CLOs. Accordingly, we may suffer unrealized depreciation and could incur realized losses in connection with the sale of our CLO interests.

We have a risk management framework in place to identify, assess and prioritize risks, including the market and credit risks to which our investments are subject. As part of that framework, we test our investment portfolio based on various market scenarios. Under certain stressed market scenarios, unrealized losses on our investment portfolio could lead to material reductions in its carrying value. Under some extreme scenarios, total shareholders' equity could be negative for the period of time prior to any potential market recovery. See *Item 7A. Quantitative and Qualitative Disclosures About Market Risks*.

Interest rate fluctuations could adversely affect our business, financial condition, results of operations, liquidity and cash flows.

Interest rate risk is a significant market risk for us. We define interest rate risk as the risk of an economic loss due to changes in interest rates. This risk arises from our holdings in interest rate-sensitive assets (e.g., fixed income assets) and liabilities (e.g., fixed deferred and immediate annuities). Substantial and sustained increases or decreases in market interest rates could materially and adversely affect our business, financial condition, results of operations, liquidity and cash flows, including in the following respects:

- Significant changes in interest rates expose us to the risk of not realizing anticipated spreads between overall net investment earned rates and our cost of funds.
- Changes in interest rates may negatively affect the value of our assets and our ability to realize gains or avoid losses from the sale of those assets. Significant volatility in interest rates may have a larger adverse impact on certain assets in our investment portfolio that are highly structured or have limited liquidity.
- Changes in interest rates may cause changes in prepayment rates on certain fixed income assets within our investment portfolio. For instance, falling interest rates may accelerate the rate of prepayment on mortgage loans, while rising interest rates may decrease such prepayments below the level of our expectations. At the same time, falling interest rates may result in the lengthening of duration for our policies and liabilities due to the guaranteed minimum benefits contained in our products, while rising interest rates could lead to increased policyholder withdrawals and a shortening of duration for our liabilities. In either case, we could experience a mismatch in our assets and liabilities and potentially incur significant economic losses.

- During periods of declining interest rates or a prolonged period of low interest rates, our annuity products may be relatively more attractive to existing policyholders than other investment opportunities available to them. This may cause our assumptions regarding persistency to prove inaccurate as our policyholders opt not to surrender or take withdrawals from their products, which may result in us experiencing greater claim costs than we had anticipated and/or cash flow mismatches between assets and liabilities.
- During periods of declining interest rates, we may have to reinvest the cash we receive as interest or return of principal on our investments into lower-yielding high-grade instruments or seek higher-yielding, but higher-risk instruments in an effort to achieve returns comparable with those attained during more stable interest rate environments.
- Certain securitized financial assets are accounted for based on expectations of future cash flows. To the extent future interest rates are lower than we have projected, we will experience slower accretion of discounts on these assets and will have a lower yield on our portfolio.
- An extended period of declining interest rates or a prolonged period of low interest rates may cause us to decrease the crediting rates of our products, thereby reducing their attractiveness.
- In periods of rapidly increasing interest rates, withdrawals from and/or surrenders of annuity contracts may increase as policyholders choose to seek higher investment returns elsewhere. Obtaining cash to satisfy these obligations may require our insurance subsidiaries to liquidate fixed income investments at a time when market prices for those assets are depressed. This may result in realized investment losses.
- An increase in market interest rates could reduce the value of certain of our investments held as collateral under reinsurance agreements and require us to provide additional collateral, thereby reducing our available capital and potentially creating a need for additional capital which may not be available to us on favorable terms, or at all.

We are subject to the credit risk of our counterparties, including ceding companies who reinsure business to ALRe, reinsurers who assume liabilities from our subsidiaries, plan sponsors who transfer pension obligations to our subsidiaries and derivative counterparties.

Our insurance subsidiaries may cede certain risks to third-party insurance companies through reinsurance. In connection with the acquisitions of our two largest US insurance subsidiaries, we entered into reinsurance agreements with Accordia Life and Annuity Company (Accordia), First Allmerica Financial Life Insurance Company (FAFLIC) and Protective to effectuate a sale of substantially all of the life insurance business that we received in connection with such acquisitions. Because these agreements involve reinsurance of entire business segments, each covers a much larger volume of business than would a traditional reinsurance agreement, thereby exposing us to a concentration of credit risk with respect to each of these three counterparties.

As of December 31, 2020, we had outstanding obligations, represented by statutory reserves, ceded under the coinsurance agreements with Accordia, which remain unnovated, of $1.9 billion. Accordia maintains a custody account and a trust account under these agreements or related retrocession agreements, with assets equal to or greater than an agreed-upon required statutory balance that, as of December 31, 2020, was $1.8 billion and $593 million, respectively. As of December 31, 2020, we have outstanding obligations, represented by statutory reserves, ceded pursuant to the FAFLIC reinsurance agreements of $1.2 billion. Pursuant to the funds withheld agreement with FAFLIC, we maintain a funds withheld account with an agreed-upon statutory balance that, as of December 31, 2020, was $298 million. Pursuant to the terms of the coinsurance agreements with FAFLIC, FAFLIC maintains trust accounts with agreed-upon required statutory balances that, as of December 31, 2020, were $631 million, in the aggregate. As of December 31, 2020, we had outstanding obligations, represented by statutory reserves, ceded under the coinsurance agreement with Protective, which remain unnovated, of $1.3 billion. As of December 31, 2020, Protective maintained a trust account under this agreement with assets equal to $1.4 billion. We do not have a security interest in the assets in the custody accounts supporting the Accordia and FAFLIC reinsurance agreements. Therefore, in the event of an insolvency of Accordia or FAFLIC, our claims would be subordinated to those of such insurance company's policyholders and the assets in the relevant custody accounts may be available to satisfy the claims of such insurance company's general creditors in addition to our claims.

As with any reinsurance agreement, we remain liable to our policyholders if our counterparties fail to perform. Although each agreement provides that the respective counterparty agrees to indemnify us for losses sustained in connection with their respective performances of each agreement, such indemnification may not be adequate to compensate us for losses actually incurred in the event that the counterparty is either unable or unwilling to perform according to the agreements' terms. In addition to possible losses that could be incurred if our subsidiaries are forced to recapture these blocks, such subsidiaries may also face a substantial shortfall in capital to support the recaptured business, possibly resulting in material declines to the insurer's RBC ratio and/or creditworthiness and potentially expose the insurer to ratings downgrades, regulatory intervention, increased policyholder withdrawals or other negative effects.

ALRe and certain of our US insurance subsidiaries reinsure liabilities from other insurance companies. Changes in the ratings, creditworthiness or market perception of such ceding companies or problems with the administration of policies reinsured to us could cause policyholders to surrender or lapse their policies in unexpected amounts. In addition, to the extent such ceding companies do not perform under their reinsurance agreements with us, we may not achieve the results we intended and could suffer unexpected losses. Our exposure to our subsidiaries' reinsurance counterparties could materially adversely affect our business, financial condition, results of operations and cash flows. In particular, our reinsurance agreements with Venerable Insurance and Annuity Company (VIAC) and Jackson expose us to risks associated with impairments in financial strength or perceived financial strength of VIAC and its parent company Venerable Holdings, Inc (together with its subsidiaries, Venerable), on the one hand, and Jackson, on the other hand. An impairment to any of these counterparties may result in the surrender of policies earlier and in quantities greater than expected at the time the respective transaction was priced. In addition, Venerable and Jackson will administer the fixed annuity blocks being reinsured. To the extent that either Venerable or Jackson fails to perform under our reinsurance agreement and associated arrangements, we may not achieve the return targets expected at the time the respective transaction was priced and our financial position and results of operations may thereby or otherwise be adversely affected.

We assume pension obligations from plan sponsors, including obligations in respect of current employees of the plan sponsor. The transfer of these obligations expose us to the credit risk of the plan sponsor. If the plan sponsor were to experience financial distress that resulted in bankruptcy or significant terminations or otherwise experienced substantial turnover of employees active under the plan, such employees might be entitled to rights under the pension plan, such as lump sum payments. To the extent that a plan sponsor experienced a significant turnover event, we may not achieve the targeted return expected at the time the PRT transaction was priced and our financial position, results of operations, liquidity and cash flow may be adversely affected.

In addition, we are exposed to credit loss in the event of nonperformance by our counterparties on derivative agreements. We seek to reduce the risk associated with such agreements by entering into such agreements with large, well-established financial institutions. However, there can be no assurance that we will not suffer losses in the event a derivative counterparty fails to perform or fulfill its obligations.

Our investment portfolio may be subject to concentration risk, particularly with respect to single issuers, including MidCap, AmeriHome, Athora and PK AirFinance; industries, including financial services; and asset classes, including real estate.

Concentration risk arises from exposure to significant asset defaults of a single issuer, industry or class of securities, based on economic conditions, geography or as a result of adverse regulatory or court decisions. When an investor's assets are concentrated and that particular asset or class of assets experiences significant defaults, the default of such assets could threaten the investor's financial condition, results of operations and cash flows. We face single issuer concentration risk both in the context of strategic alternative investments, in which we occasionally hold significant equity positions, and large asset trades, in which we generally hold significant debt positions. Our most significant concentration risk exposures arising in the context of strategic alternative investments, on a risk-adjusted basis, are our investments in MidCap, a provider of revolving and term debt facilities to middle market companies in North America and Europe; A-A Mortgage and its indirect investment in AmeriHome, a mortgage lender and mortgage servicer; and Athora, an insurance holding company focused on the European life insurance market. Our most significant concentration risk exposure arising in the context of large asset trades, on a risk-adjusted basis, is our investment in the securities issued by PK AirFinance, a provider and arranger of loans principally to airlines and aircraft leasing companies secured by commercial aircraft. From time to time, in order to facilitate certain large asset trades and in exchange for commitment fees, we may commit to purchasing a larger portion of an investment than we ultimately expect to retain, and in such instances we are reliant upon Apollo's ability to syndicate the transaction to other investors. If Apollo is unsuccessful in its syndication efforts, we may be exposed to greater concentration risk than what we would deem desirable from a risk appetite perspective and the commitment fee that we receive may not adequately compensate us for this risk.

Our exposure, including any loaned amounts, to these single issuers was as follows:

	December 31, 2020		
(In millions, except percentages)	Amount	Percentage of AHL shareholders' equity	Percentage of net invested assets
PK AirFinance	1,797	9.6 %	1.2 %
MidCap	935	5.0 %	0.6 %
AmeriHome	770	4.1 %	0.5 %
Athora	661	3.5 %	0.4 %

Given our significant exposure to these issuers, we are subject to the idiosyncratic risk inherent in their business. For example:

- AmeriHome relies upon a subservicer to perform servicing operations on the loans for which it has mortgage servicing rights. If the subservicer were to experience financial distress or fail to provide adequate or timely services, AmeriHome may have difficulty finding another subservicer to perform servicing operations and may experience a significant decline in its financial performance. Such risks may be heightened in the current economic environment. In addition, mortgage servicers are obligated to advance certain amounts not paid by borrowers, including amounts arising from the forbearance of certain payments as mandated by the CARES Act. AmeriHome may require significant liquidity in order to make these advances and adequate sources of liquidity could be unavailable to AmeriHome to satisfy these obligations.
- As a life insurer, Athora is subject to credit risk with respect to its investment portfolio and mortality risk with respect to its product liabilities, each of which may be exacerbated by unforeseen events, including but not limited to the spread of the COVID-19 pandemic. Further, Athora has significant European operations, which expose it to volatile economic conditions and risks relating to European member countries and withdrawals thereof, such as the UK. In addition, Athora is subject to multiple legal and regulatory regimes that may hinder or prevent it from achieving its business objectives.
- Our investment in the PK AirFinance securitization of loans is subject to risks to the aircraft and airline industries generally, and specifically in connection with the decrease in air travel as a result of the spread of COVID-19, which has resulted in delinquent loan payments and has resulted in a reduction in aircraft valuations. While our investment is supported by significant equity subordination provided by borrowers, if borrowers default on their loans, PK AirFinance may pursue foreclosure and re-market the related aircraft or may restructure the defaulted loans. To the extent that the proceeds from any such restructuring or re-marketing were not sufficient to satisfy the corresponding principal balance in the securitization, significant losses on our investment could be recognized, beginning with the equity tranche of the securitization that we hold.

In addition to the large single-issuer position described above, that was acquired in connection with our core investment strategies, we also hold a significant investment in the AOG through the units that we acquired in connection with the strategic transaction with Apollo. See *Note 14 – Related Parties – Other Related Party Transactions – Apollo Share Exchange and Related Transactions* to the consolidated financial statements for further discussion. To the extent that we suffer a significant loss on our investment in MidCap, A-A Mortgage, Athora, the AOG or the securities issued by PK AirFinance, our financial condition, results of operations and cash flows could be adversely affected.

MidCap, AmeriHome and PK AirFinance are nonbank lenders focused on providing financing to individuals or entities. As a result, through these investments, we have significant exposure to credit risk, which has increased as a result of the economic conditions brought about by the spread of COVID-19. As a result of the current economic environment, certain of our investees in this sector have experienced a decrease in origination volumes and may experience increased credit and/or liquidity risk as borrowers defer loan payments or default on their obligations. To the extent that the current downturn causes a deterioration in the creditworthiness of the counterparties of such investees or adversely affects the securitization market for the loans originated by these entities, we may suffer significant losses on our investments in these entities and our financial condition, results of operations and cash flows could be adversely affected. In addition to the concentration risk arising from our investments in single issuers within the nonbank lending sector of the financial services industry, we have significant exposure to the financial services industry more broadly as a result of the composition of investments in our investment portfolio. As of December 31, 2020, 12.1% of our net invested assets were invested in issuers within the financial services industry, excluding CLOs. The current economic downturn or any further macroeconomic, regulatory or other changes having an adverse impact on the financial services industry more broadly, could have a material and adverse effect on our business, financial condition, results of operations and cash flows.

As of December 31, 2020, 22.1% of our net invested assets were invested in real estate-related assets. Any significant decline in the value of real estate generally or the occurrence of any of the risks described elsewhere in this report with respect to our real estate-related investments could materially and adversely affect our financial condition and results of operations. Specifically, through our investments in CML and CMBS, we have exposure to certain categories of commercial property, including office buildings, hospitality and retail, that have been adversely affected by the spread of COVID-19. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Consolidated Investment Portfolio–Mortgage Loans* for a breakdown of our CML portfolio by property type of the underlying collateral.

Many of our invested assets are relatively illiquid and we may fail to realize profits from these assets for a considerable period of time, or lose some or all of the principal amount we invest in these assets if we are required to sell our invested assets at a loss at inopportune times to cover policyholder withdrawals or to meet our insurance, reinsurance or other obligations.

We offer certain products that allow policyholders to withdraw their funds under defined circumstances. In order to meet such obligations, we seek to manage our liabilities and configure our investment portfolios to provide and maintain sufficient liquidity to support expected withdrawal demands and contract benefits and maturities. However, in order to provide necessary long-term returns and to achieve our strategic goals, a certain portion of our assets are relatively illiquid. Many of our investments are in securities that are not publicly traded or that otherwise lack liquidity, such as our privately placed fixed maturity securities, below investment grade securities, investments in mortgage loans and alternative investments.

We record our relatively illiquid types of investments at fair value. If we were forced to sell certain of our assets, there can be no assurance that we would be able to sell them for the values at which such assets are recorded and we might be forced to sell them at significantly lower prices. In many cases, we may be prohibited by contract or applicable securities laws from selling such securities for a period of time. When we hold a security or position, it is vulnerable to price and value fluctuations and may experience losses if we are unable to timely sell, hedge or transfer the position. Thus, it may be impossible or costly for us to liquidate positions rapidly in order to meet unexpected withdrawal or recapture obligations. This potential mismatch between the liquidity of our assets and liabilities could have a material and adverse effect on our business, financial condition, results of operations and cash flows.

Our investments linked to real estate are subject to credit risk, market risk, servicing risk, loss from catastrophic events and other risks, which could diminish the value that we obtain from such investments.

As of December 31, 2020, 22.1% of our net invested assets were linked to real estate, including 7.7% fixed maturity and equity securities, such as CMBS and RMBS, and 3.2% mortgage loans, including commercial mortgage loans (CML) and RML. 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. For example, the value of our real estate-related assets depends in part on the financial condition of the borrowers, the value of the real properties underlying the mortgages and, for commercial properties, the financial condition of the tenants of the properties underlying those mortgages, as well as general and specific economic trends affecting the overall default rate. An unexpectedly high rate of default on mortgages held by a CMBS or RMBS may limit substantially the ability of the issuer of such security to make payments to holders of such securities, reducing the value of those securities or rendering them worthless. The risk of such defaults is generally higher in the case of mortgage securitizations that include "sub-prime" or "alt-A" mortgages. As of December 31, 2020, 13.1% of our holdings in assets linked to real estate were invested in such "sub-prime" mortgages and "alt-A" mortgages. Changes in laws and other regulatory developments relating to mortgage loans may impact the investments of our portfolio linked to real estate in the future. Additionally, cash flow variability arising from an unexpected acceleration in the rate of mortgage prepayments can be significant, and could cause a decline in the estimated fair value of certain "interest only" securities.

The CML we hold, and CML underlying the CMBS that we hold, face both default and delinquency risk. Legislative proposals that would allow or require modifications to the terms of CML, an increase in the delinquency or default rate of our CML portfolio or geographic or sector concentration within our CML portfolio could materially and adversely impact our financial condition and results of operations. Our investments in RML and RMBS also present credit risk. Higher than expected rates of default or loss severities on our RML investments and the RML underlying our RMBS investments may adversely affect the value of such investments. A significant number of the mortgages underlying our RML and RMBS investments are concentrated in certain geographic areas. Any event that adversely affects the economic or real estate market in any of these areas could have a disproportionately adverse effect on our RML and RMBS investments. While we actively monitor our exposure to these and other risks inherent in this strategy, we cannot assure you that our hedging and risk management strategies will be effective. Any failure to manage these risks effectively could materially and adversely affect our financial condition and results of operations. A rise in home prices, concern regarding further changes to government policies designed to alter prepayment behavior, increased availability of housing-related credit and lower interest rates could combine to increase expected or actual prepayment speeds, which would likely lower the valuations of RML and the valuations of RMBS that we carry at a premium to par prices or that are structured as interest only securities and inverse interest only securities. In general, any significant weakness in the broader macro economy or significant problems in a particular real estate market may cause a decline in the value of residential properties securing the mortgages in that market, thereby increasing the risk of delinquency, default and foreclosure. This could, in turn, have a material adverse effect on our credit loss experience. As of December 31, 2020, of the mortgage loans we held, 0.2% were in the process of foreclosure.

Control over the underlying assets in all of our real estate-related investments is exercised through servicers that we do not control. If a servicer is not vigilant in seeing that borrowers make their required periodic payments, borrowers may be less likely to make these payments, resulting in a higher frequency of delinquency and default. If a servicer takes longer to liquidate nonperforming mortgages, our losses related to those loans may be higher than we expected. Any failure by a servicer to service RMLs in which we are invested or which underlie a RMBS in which we are invested in a prudent, commercially reasonable manner could negatively impact the value of our investments in the related RML or RMBS.

Our investments in assets linked to real estate are also subject to loss in the event of catastrophic events, such as earthquakes, hurricanes, floods, tornadoes and fires. Climate change has exacerbated these risks and is likely to further increase both the likelihood of occurrence and the magnitude of impact in future periods. We have significant concentrations of real estate investments and collateral underlying investments linked to real estate in areas of the United States prone to catastrophe, including California, sections of the northeastern US, the South Atlantic states and the Gulf Coast. While loss experience in the event of a catastrophic event is contingent upon many factors, including the insured status of the underlying property and the seniority of our investment, in the case of structured securities, a catastrophic event impacting one or more of the aforementioned regions may cause some portion of the invested assets invested in assets linked to real estate to become impaired, which may have a material adverse impact on our financial condition and results of operations.

In addition to the credit and market risk that we face in relation to all of our real estate-related investments, certain of these investments may expose us to various environmental, regulatory and other risks. For example, our investment in RML could result in claims being assessed against us as a mortgage holder or property owner, including assignee liability, responsibility for tax payments, environmental hazards and other liabilities, including liabilities under the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980. We may continue to be liable under such claims after foreclosing on a property securing a mortgage loan held by us. Additionally, we may be subject to regulation by the CFPB as a mortgage holder or property owner. We are currently unable to predict the impact of such regulation on our business. Any adverse environmental claim or regulatory action against us resulting from our investment in RML could adversely impact our reputation, business, financial condition and results of operations.

Our investment portfolio may include investments in securities of issuers based outside the US, including emerging markets, which may be riskier than securities of US issuers.

We may invest in securities of issuers organized or based outside the US that may involve heightened risks in comparison to the risks of investing in US securities, including unfavorable changes in currency rates and exchange control regulations, reduced and less reliable information about issuers and markets, less stringent accounting standards, illiquidity of securities and markets, higher brokerage commissions, transfer taxes and custody fees, local economic or political instability and greater market risk in general. In particular, investing in securities of issuers located in emerging market countries involves additional risks, such as exposure to economic structures that are generally less diverse and mature than, and to political systems that can be expected to have less stability than, those of developed countries; national policies that restrict investment by foreigners in certain issuers or industries of that country; the absence of legal structures governing foreign investment and private property; an increased risk of foreclosure on collateral located in such countries; a lack of liquidity due to the small size of markets for securities of issuers located in emerging markets; and price volatility.

As of December 31, 2020, 34% of the carrying value of our available-for-sale (AFS) securities, including related parties, was comprised of securities of issuers based outside of the US and debt securities of foreign governments. Of our total AFS securities, including related parties, as of December 31, 2020, 10% were invested in CLOs of Cayman Islands issuers (for which the underlying assets are largely loans to US issuers) and 24% were invested in other non-US issuers. While we invest in securities of non-US issuers, the currency denominations of such securities usually match the currency denominations of the liabilities that the assets support. When the currency denominations of the assets and liabilities do not match, we generally undertake hedging activities to eliminate or mitigate currency mismatch risk. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Consolidated Investment Portfolio* for further information on international exposure.

Foreign currency fluctuations may reduce our net income and our capital levels, adversely affecting our financial condition.

We are exposed to foreign currency exchange rate risk through the investments in our investment portfolio that are denominated in currencies other than the US dollar or are issued by entities which primarily conduct their business outside of the US. We are also exposed to foreign currency exchange risk through our investment in certain subsidiaries domiciled in foreign jurisdictions, both as a result of our direct investment and as a result of currency mismatches between the assets and liabilities of those subsidiaries. We may employ various strategies (including hedging) to manage our exposure to foreign currency exchange risk. To the extent that these exposures are not fully hedged or the hedges are ineffective, our results or equity may be reduced by fluctuations in foreign currency exchange rates that could materially adversely affect our financial condition and results of operations.

Risks Relating to Our Relationship with Apollo

The interest of the Apollo Group, which currently controls approximately 35% of, and is expected to continue to control a significant portion of, the total voting power of AHL and holds a number of the seats on our board of directors, may conflict with that of other shareholders and could make it more difficult for you and other shareholders to influence significant corporate decisions.

The Apollo Group currently controls approximately 35% of, and is expected to continue to control a significant portion of, the total voting power of AHL. As a result, the Apollo Group could exercise significant influence over matters requiring shareholder approval and other corporate matters for the foreseeable future, including approval of significant corporate transactions, appointment of members of our management, election of directors, approval of the termination of our IMAs and determination of our corporate policies, which may reduce the market price of our common shares. Our shareholders agreement with relevant members of the Apollo Group provides for, among other things, such members having the right to nominate a number of directors to the board of directors on a proportionate basis to their beneficial ownership of Class A common shares (including any Class A common shares to which a valid proxy has been granted to affiliates of Apollo under a voting agreement).

The interests of our existing shareholders, particularly members of the Apollo Group, may conflict with the interests of our other shareholders. Actions that members of the Apollo Group take as shareholders may not be favorable to our other shareholders. For example, the concentration of voting power held by the Apollo Group, the significant representation on our board of directors by individuals who are employees of the Apollo Group, or the limitations on our ability to terminate any IMA with Apollo could delay, defer or prevent a change of control of us or impede a merger, takeover or other business combination which another shareholder may otherwise view favorably. Members of the Apollo Group may, in their role as shareholders, vote in favor of a merger, takeover or other business combination transaction which our other shareholders might not consider in their best interests, including those transactions in which the Apollo Group may have an interest.

Our conflicts committee and our disinterested directors analyze these conflicts to protect against potential harm resulting from conflicts of interest in connection with transactions that we have entered into or will enter into with Apollo or its affiliates. Specifically, our bye-laws require that the conflicts committee (in accordance with its charter and procedures) approve certain material transactions by and between us and Apollo or its affiliates, including entering into material agreements or the imposition of any new fee or increase in the rate at which fees are charged to us, subject to certain exceptions. See *Item 13. Certain Relationships and Related Transactions, and Director Independence*. These conflicts provisions will not, by themselves, prohibit transactions with Apollo or its affiliates. In addition, our conflicts committee may exclusively rely on information provided by Apollo, including with respect to fees charged by Apollo or its affiliates, and with respect to the historical performance or fees of unrelated service providers used for comparison purposes, and may not independently verify the information so provided.

Apollo charges us management fees based on the composition and value of our assets. Substantially all of our net invested assets are managed by Apollo. Our investment policies permit Apollo to invest in securities of issuers with which it is affiliated, including funds managed by Apollo. Apollo may make such investments at its discretion, subject only to the approval of our conflicts committee in certain cases and/or certain regulatory approvals. Accordingly, Apollo may have a conflict of interest in managing our investments, which could increase amounts payable by us for asset management services or cause us to receive a lower return on our investments than if our investment portfolio was managed by another party. Asset management fees are paid based on the amount of our net invested assets regardless of the results of our operations or investment performance. Therefore, Apollo could be incentivized to exercise its influence to cause us to increase our net invested assets, which may have an adverse impact on our financial condition, results of operations and cash flows.

Item 1A. Risk Factors

We have made investments in collective investment vehicles managed by Apollo affiliates, including seed investments in new investment vehicles or investment strategies offered by Apollo which have limited track records, as well as junior and subordinated tranches of structured investment vehicles which may assist Apollo in meeting certain regulatory requirements applicable to Apollo as the sponsor of such vehicles. Such Apollo affiliates may charge us or such vehicles management or other fees, that independently, or when taken together with other fees charged by Apollo, may not be the lowest fee available for similar investment management services offered by unrelated managers. In addition, it is possible that such unrelated managers may perform better than Apollo. Apollo is not obligated to devote any specific amount of time to our affairs, or to the funds in which we are invested and our bye-laws impose restrictions on our right to terminate any IMA or sub-advisory arrangement. Affiliates of Apollo manage and expect to continue to manage other client accounts, some of which have objectives similar to ours, including collective investment vehicles managed by Apollo and in which Apollo may have an equity interest. We will compete with other Apollo clients not only in terms of time spent on management of our portfolio, but also for allocation of assets that do not have significant supply. In addition, there may be different Apollo investment teams investing in the same strategies for different clients, including us. As a result, we may compete with other Apollo clients for the same investment opportunities, potentially disadvantaging us. Apollo may also manage accounts whose asset management fee schedules, investment objectives and policies differ from ours, which may cause Apollo to allocate securities in a manner that may have an adverse effect on our ability to source appropriate assets and meet our strategic objectives.

Under the Seventh Amended and Restated Fee Agreement, dated as of June 10, 2019, between us and AAM (Fee Agreement), Apollo receives higher sub-allocation fees for investing in asset classes with higher alpha generating abilities. There is no assurance that higher returns will be achieved by investing in these asset classes. Accordingly, Apollo is incentivized to increase the amount of investments subject to higher sub-allocation fees, which may result in greater risk to the returns in our investment portfolio. While we believe that we and Apollo have each implemented appropriate risk governance regarding asset allocation, it is possible that such incentives could result in increased holdings of assets with higher alpha generating abilities, and if such investments fail to perform, it could have an adverse impact on our investment results.

From time to time, Apollo may acquire investments on our behalf which are senior or junior to other instruments of the same issuer that are held by, or acquired for, another Apollo client (for example, we may acquire junior debt while another Apollo client may acquire senior debt). In the event such an issuer enters bankruptcy or becomes otherwise insolvent, the client holding securities which are senior in preference may have the right to aggressively pursue the issuer’s assets to fully satisfy the issuer’s indebtedness to the client, and the client holding the investment which is junior in the capital structure may not have access to sufficient assets of the issuer to completely satisfy its claim against the issuer and may suffer a loss. It is our understanding that Apollo has adopted procedures that are designed to enable it to address such conflicts and to ensure that clients are treated fairly and equitably in these situations. However, given Apollo’s fiduciary obligations to the other client, Apollo may be unable to manage our investment in the same manner as would have been possible without the conflict of interest. In such event, we may receive a lower return on such investment than if another Apollo client was not in a different part of the capital structure of the issuer.

Apollo and its affiliates have diverse and expansive private equity, credit and real estate investment platforms, investing in numerous companies across many industries. If Apollo acquires or forms a company with a business strategy competing with ours, additional conflicts may arise between us and Apollo or between us and such company in executing our plans, including with respect to the allocation of investments or the ability to execute on corporate opportunities. Our bye-laws provide that Apollo and its members and affiliates (including certain of our directors) generally have no duty to refrain from engaging, directly or indirectly, in the same or similar business activities or lines of business that we do.

Apollo and its affiliates regularly obtain material non-public information regarding various potential acquisition or trading targets. When Apollo and its affiliates obtain material non-public information regarding a potential acquisition or trading target, Apollo becomes restricted from trading in such acquisition or trading target’s outstanding securities. Some of such securities may be potential investment opportunities for us, or may be owned by us and be potential disposition opportunities. The inability of Apollo to purchase or sell such investments on our behalf as a result of these restrictions may result in us acquiring investments that may otherwise underperform the restricted investments that Apollo would have acquired, or incurring losses on investments that Apollo would have sold, on our behalf, had such restrictions not been in place.

James R. Belardi, our Chief Executive Officer, also serves as Chief Executive Officer of ISG and receives compensation from ISG for services he provides. Mr. Belardi also owns a 5% profit interest in ISG (Interest). It is expected that the Interest will be revised such that Mr. Belardi will receive a lesser interest in the equity of ISG and also receive a specified percentage of other fee streams earned by Apollo from us, potentially comprised of or including the sub-allocation fees. See *Note 14 – Related Parties – Apollo – Current fee structure* to the consolidated financial statements for additional information regarding the sub-allocation fees. Under this arrangement, it is expected that Mr. Belardi would retain the Interest only during employment; and if Mr. Belardi remains employed with ISG through December 31, 2023, then following his employment termination, he would be eligible to receive a one-time payment equal to a multiple of the annual amount historically earned through the Interest. Accordingly, Mr. Belardi’s involvement as a member of our board of directors and management team and as an officer and director of ISG may lead to a conflict of interest. Furthermore, certain members of our board of directors also serve on the board of directors of ISG or are employees of Apollo or its affiliates, which could also lead to potential conflicts of interest. See *Item 13. Certain Relationships and Related Transactions, and Director Independence*.

Item 1A. Risk Factors

We rely on our investment management agreements with Apollo for the management of our investment portfolio. Apollo may terminate these arrangements at any time, and there are limitations on our ability to terminate such arrangements, which may adversely affect our investment results.

We rely on Apollo to provide us with investment management services pursuant to various investment management agreements (IMAs). Apollo relies in part on its ability to attract and retain key people, and the loss of services of one or more of the members of Apollo or any of its subsidiaries' senior management could delay or prevent Apollo from fully implementing our investment strategy.

IMA Termination Rights

Our bye-laws currently provide that we may not, and will cause our subsidiaries not to, terminate any IMA among us or any of our subsidiaries, on the one hand, and a member of the Apollo Group (as defined in our bye-laws), on the other hand, other than on June 4, 2023 or any two year anniversary of such date (each such date, an IMA Termination Election Date) and any termination on an IMA Termination Election Date requires (i) the approval of two-thirds of our Independent Directors (as defined in the bye-laws) and (ii) prior written notice to the applicable Apollo subsidiary of such termination at least 30 days, but not more than 90 days, prior to an IMA Termination Election Date. If our Independent Directors make such election to terminate and notice of such termination is delivered, the termination will be effective no earlier than the second anniversary of the applicable IMA Termination Election Date (IMA Termination Effective Date). Notwithstanding the foregoing, (A) except as set forth in clause (B) below, our board of directors may only elect to terminate an IMA on an IMA Termination Election Date if two-thirds of our Independent Directors determine, in their sole discretion and acting in good faith, that either (i) there has been unsatisfactory long-term performance materially detrimental to us by the applicable Apollo subsidiary or (ii) the fees being charged by the applicable Apollo subsidiary are unfair and excessive compared to a comparable asset manager (provided, that in either case such Independent Directors must deliver notice of any such determination to the applicable Apollo subsidiary and the applicable Apollo subsidiary will have until the applicable IMA Termination Effective Date to address such concerns, and provided, further, that in the case of such a determination that the fees being charged by the applicable Apollo subsidiary are unfair and excessive, the applicable Apollo subsidiary has the right to lower its fees to match the fees of such comparable asset manager) and (B) upon the determination by two-thirds of our Independent Directors, we or our subsidiaries may also terminate an IMA with the applicable Apollo subsidiary, on a date other than an IMA Termination Effective Date, as a result of either (i) a material violation of law relating to the applicable Apollo subsidiary's advisory business, or (ii) the applicable Apollo subsidiary's gross negligence, willful misconduct or reckless disregard of its obligations under the relevant agreement, in each case of this clause (B), that is materially detrimental to us, and in either case of this clause (B), subject to the delivery of written notice at least 30 days prior to such termination; provided, that in connection with an event described in clause (B)(i) or (B)(ii), the applicable Apollo subsidiary shall have the right to dispute such determination of the Independent Directors within 30 days after receiving notice from us of such determination, in which case the matter will be submitted to binding arbitration and such IMA shall continue to remain in effect during the period of the arbitration (the events described in the foregoing clauses (A) and (B) are referred to in more detail in our bye-laws as "AHL Cause"). For purposes of these provisions of the bye-laws, an "Independent Director" cannot be (x) an officer or employee of ours or any of our subsidiaries or (y) an officer or employee of (1) any member of the Apollo Group described in clauses (i) through (iv) of the definition of "Apollo Group" as set forth in our bye-laws or (2) AGM or any of its subsidiaries (excluding any subsidiary that constitutes any portfolio company (or investment) of (A) an investment fund or other investment vehicle whose general partner, managing member or similar governing person is owned, directly or indirectly, by AGM or by one or more of its subsidiaries or (B) a managed account agreement (or similar arrangement) whereby AGM or one or more of its subsidiaries serves as general partner, managing member or in a similar governing position). The limitations on our ability to terminate the IMAs with the applicable Apollo subsidiary could have a material adverse effect on our financial condition and results of operations.

Our organizational documents give our Independent Directors complete discretion, while acting in good faith, as to whether to determine if an AHL Cause event has occurred with respect to any IMA with the applicable Apollo subsidiary, and therefore our Independent Directors are under no obligation to make, and accordingly may exercise their discretion never to make, such a determination.

The boards of directors of AHL's subsidiaries may terminate an IMA with the applicable Apollo subsidiary relating to the applicable subsidiary if such subsidiary's board of directors determines that such termination is required in the exercise of its fiduciary duties. If our subsidiaries do elect to terminate any such agreement, other than as provided above, we may be in breach of our bye-laws, which could subject us to regulatory scrutiny, expose us to shareholder lawsuits and could have a negative effect on our financial condition and results of operations.

Termination by Apollo

Conversely, we may be adversely affected if Apollo elects to terminate an IMA at a time when such agreement remains advantageous to us. We depend upon Apollo to implement our investment strategy. However, Apollo does not face the restrictions described above with regards to its ability to terminate any of its agreements with us and may terminate such agreements at any time. If Apollo chooses to terminate such agreements, there is no assurance that we could find a suitable replacement or that certain of the opportunities made available to us as a result of our relationship with Apollo would be offered by a suitable replacement, and therefore our financial condition and results of operations could be adversely impacted by our failure to retain a satisfactory investment manager.

Item 1A. Risk Factors

Interruption or other operational failures in telecommunications, information technology and other operational systems at Apollo or a failure to maintain the security, integrity, confidentiality or privacy of sensitive data residing on Apollo's systems, including as a result of human error, could have a material adverse effect on our business.

We are highly dependent on Apollo, as our investment manager, to maintain information technology and other operational systems to record and process its transactions with respect to our investment portfolio, which includes providing information that enables us to value our investment portfolio and may affect our financial statements. Apollo could experience a failure of one of these systems, its employees or agents could fail to monitor and implement enhancements or other modifications to a system in a timely and effective manner or its employees or agents could fail to complete all necessary data reconciliation or other conversion controls when implementing a new software system or modifications to an existing system. Additionally, anyone who is able to circumvent Apollo's security measures and penetrate its information technology systems could access, view, misappropriate, alter or delete information in the systems, including proprietary information relating to our investment portfolio. The maintenance and implementation of these systems at Apollo is not within our control. Should Apollo's systems fail to accurately record information pertaining to our investment portfolio, we may inadvertently include inaccurate information in our financial statements and experience a lapse in our internal control over financial reporting. The failure of any one of these systems at Apollo for any reason, or errors made by its employees or agents, could cause significant interruptions to its operations, which could adversely affect our internal control over financial reporting or have a material adverse effect on our business, financial condition and results of operations.

The historical performance of Apollo should not be considered as indicative of the future results of our investment portfolio, our future results or any returns expected on our common shares.

Our investment portfolio's returns have benefited historically from investment opportunities and general market conditions that currently may not exist and may not repeat themselves, and there can be no assurance Apollo will be able to avail itself of profitable investment opportunities in the future. Furthermore, the historical returns of our investments managed by Apollo are not directly linked to returns on our common shares, which are affected by various factors, one of which is the value of our investment portfolio. In addition, Apollo is compensated based on the aggregate value of the assets it manages on our behalf and on the allocation of those assets to certain fee categories, rather than on the investment returns achieved. Accordingly, there can be no guarantee Apollo will be able to achieve any particular return for our investment portfolio in the future.

The returns that we expect to achieve on our investment portfolio may not be realized.

We make certain assumptions regarding our future financial performance, including but not limited to, target returns on our organic and inorganic channels and target net spreads. Included within these assumptions are estimates regarding the level of returns to be achieved on our investment portfolio, including assumptions regarding the expected future performance of assets directly originated by Apollo. These returns are subject to market and other factors and we can give no assurance that they will ultimately be achieved. Actual results may differ, perhaps significantly, from our current expectations. To the extent that such differences occur, our future financial performance may be materially and adversely different than that communicated herein and elsewhere.

Risks Relating to Insurance and Other Regulatory Matters

Our industry is highly regulated and we are subject to significant legal restrictions and these restrictions may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects.

We are subject to a complex and extensive array of laws and regulations that are administered and enforced by many regulators, including the BMA, US state insurance regulators, US state securities administrators, US state banking authorities, the SEC, FINRA, the DOL, the IRS and the Office of the Comptroller of the Currency. See *Item 1. Business–Regulation* for a summary of certain of the laws and regulations applicable to our business. Failure to comply with these laws and regulations could subject us to administrative penalties imposed by a particular governmental or self-regulatory authority, unanticipated costs associated with remedying such failure or other claims, harm to our reputation, revocation of our certificate of incorporation or interruption of our operations, any of which could have a material and adverse effect on our financial position, results of operations and cash flows.

In addition to the foregoing risks, the financial services industry is the focus of increased regulatory scrutiny as various US state and federal governmental agencies and self-regulatory organizations conduct inquiries and investigations into the products and practices of the companies within this industry. Governmental authorities in the United States and worldwide have become increasingly interested in potential risks posed by the insurance industry as a whole, and to commercial and financial activities and systems in general, as indicated by the recent adoption of the revised global insurance capital standard by the IAIS, as well as the US NAIC group capital calculation. See *Item 1. Business–Regulation–Regulation of an Insurance Group* for further discussion. While we cannot predict the exact nature, timing or scope of possible governmental initiatives, there may be increased regulatory intervention in the insurance and financial services industry in the future.

Item 1A. Risk Factors

Our failure to obtain or maintain licenses and/or other regulatory approvals as required for the operations of our insurance subsidiaries may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects.

Each regulator retains the authority to license insurers in its jurisdiction and an insurer generally may not operate in a jurisdiction in which it is not licensed. We have US domiciled insurance subsidiaries that collectively are currently licensed to do business in all 50 states, Puerto Rico and the District of Columbia. Our ability to retain these licenses depends on our and our subsidiaries' ability to meet requirements established by the NAIC and adopted by each state, such as RBC standards and surplus requirements. Some of the factors influencing these requirements, particularly factors such as changes in equity market levels, the value of certain derivative instruments that do not receive hedge accounting, the value and credit ratings of certain fixed-income and equity securities in our investment portfolio, interest rate changes, changes to the applicable RBC formulas and the interpretation of the NAIC's instructions with respect to RBC calculation methodologies, are out of our control.

In addition, licensing regulations differ as to products and jurisdictions and may be subject to interpretation as to whether certain licenses are required with respect to the manner in which we may sell or service some of our products in certain jurisdictions. The degree of complexity is heightened in the context of products that are issued through our institutional channel, including our PRT products, where one product may cover risks in multiple jurisdictions.

If the factors discussed above adversely affect us or a state regulator interprets a licensing requirement differently than we do and we are unable to meet the requirements above, our subsidiaries could lose their licenses to do business in certain states; be subject to additional regulatory oversight; have their licenses suspended; be subject to rescission requests, fines, administrative penalties or payments to policyholders; or be subject to seizure of assets. A loss or suspension of any of our subsidiaries' licenses or an inability of any of our insurance subsidiaries to be able to sell or service certain of our insurance products in one or more jurisdictions may negatively impact our reputation in the insurance market and result in our subsidiaries' inability to write new business, distribute funds or pursue our investment/overall business strategy.

On January 23, 2019, we received a letter from the NYSDFS, with respect to a PRT transaction, which expressed concerns with our interpretation and reliance upon certain exemptions from licensing in New York in connection with certain activities performed by employees in our PRT channel, including specific activities performed within New York. On April 13, 2020, we entered into a consent order with the NYSDFS to resolve this matter.

The licenses currently held by our insurance subsidiaries are limited in scope with respect to the products that may be sold within the respective jurisdictions. To the extent that our insurance subsidiaries seek to sell products for which we are not currently licensed, such subsidiaries would be required to become licensed in each of the respective jurisdictions in which such products are expected to be sold. There is no assurance that our insurance subsidiaries would be able to obtain the relevant licenses and the subsidiaries' inability to do so may impair our competitive position and reduce our growth prospects, causing our financial position, results of operations and cash flows to fall below our current expectations.

Our Bermuda reinsurance subsidiaries, as Bermuda domiciled insurers, are also required to maintain licenses. Each of our Bermuda reinsurance subsidiaries is licensed as a reinsurer in Bermuda. Bermuda insurance statutes and regulations and policies of the BMA require that our Bermuda reinsurance subsidiaries, among other things, maintain a minimum level of capital and surplus; satisfy solvency standards; restrict dividends, distributions and reductions of capital; obtain prior approval or provide notification to the BMA, as the case may be, of ownership, transfer and disposition of shareholder controller shares; maintain a head office and have certain officers resident in Bermuda; appoint and maintain a principal representative in Bermuda; and provide for the performance of certain periodic examinations of itself and its financial condition. A failure to meet these conditions may result in the suspension or revocation of a Bermuda reinsurance subsidiary's license to do business as a reinsurance company in Bermuda, which would mean that such Bermuda reinsurance subsidiary would not be able to enter into any new reinsurance contracts until the suspension ended or it became licensed in another jurisdiction. Any such suspension or revocation of a Bermuda reinsurance subsidiary's license would negatively impact its and our reputation in the reinsurance marketplace and could have a material adverse effect on our results of operations.

UK law imposes licensing and other regulatory requirements in respect of insurance and reinsurance business carried out in the UK. AHL, ALRe and ACRA 1A are UK tax resident companies but do not have the UK regulatory licenses required to write or carry out insurance business in the UK. Accordingly, their business does not involve transactions with UK domiciled clients and we believe that their operations and governance arrangements are otherwise undertaken to comply with UK regulatory requirements. ALReI is a Bermuda domiciled and regulated reinsurance subsidiary that is not a UK tax resident and does not have the UK regulatory licenses required to write or carry out insurance business in the UK. ALReI assumed reinsurance business from a UK domiciled client in December 2019, and will continue to seek other such opportunities going forward, in accordance with and as permitted under UK law. We believe ALReI's business, operations and governance arrangements are undertaken to comply with UK law. We will continue to monitor developments in UK regulation to seek to cause AHL, ALRe, ACRA 1A and ALReI to comply with UK law and regulation at all times; however, there can be no assurance that the UK regulatory authorities will not interpret the application of the relevant rules in a manner that differs from our interpretation and challenge the existing or future arrangements.

The process of obtaining licenses is time consuming and costly, and we may not be able to become licensed in jurisdictions other than those in which our subsidiaries are currently licensed and/or for products for which we are currently licensed. The modification of the conduct of our business resulting from our and our subsidiaries becoming licensed in certain jurisdictions or for certain products could significantly and negatively affect our business. In addition, our inability to comply with insurance statutes and regulations could significantly and adversely affect our business by limiting our ability to conduct business as well as subjecting us to penalties and fines.

Item 1A. Risk Factors

Changes in the laws and regulations governing the insurance industry or otherwise applicable to our business, may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects.

Certain of the laws and regulations to which we are subject are summarized in *Item 1. Business–Regulation*. Changes in the laws and regulations relevant to our business may have a material adverse effect on our business, financial condition, results of operations, liquidity, cash flows and prospects. Certain of the risks associated with changes in these laws and regulations are discussed in greater detail below.

The Dodd-Frank Act made sweeping changes to the regulation of financial services entities, products and markets. Historically, the federal government had not directly regulated the insurance business, however, the Dodd-Frank Act generally provides for enhanced federal supervision of financial institutions, including some insurance companies in defined circumstances, as well as financial activities that are deemed to represent a systemic risk to financial stability or the economy. Certain provisions of the Dodd-Frank Act are or may become applicable or relevant to us, our competitors or those entities with which we do business, including, but not limited to: the establishment of a comprehensive federal regulatory regime with respect to derivatives; the establishment of consolidated federal regulation and resolution authority over SIFIs and/or systemically important financial activities; the establishment of the Federal Insurance Office; changes to the regulation of broker-dealers and investment advisors; changes to the regulation of reinsurance; changes to regulations affecting the rights of shareholders; the imposition of additional regulation over credit rating agencies; the imposition of concentration limits on financial institutions that restrict the amount of credit that may be extended to a single person or entity; and mandatory on-facility execution and clearing of certain derivative contracts.

Legislative or regulatory requirements imposed by or promulgated in connection with the Dodd-Frank Act may impact us in many ways, including, but not limited to: placing us at a competitive disadvantage relative to our competition or other financial services entities; changing the competitive landscape of the financial services sector or the insurance industry; making it more expensive for us to conduct our business; requiring the reallocation of significant company resources to government affairs; increasing our legal and compliance related activities and the costs associated therewith as the Dodd-Frank Act may permit the preemption of certain state laws when inconsistent with international agreements, such as the EU Covered Agreement and the UK Covered Agreement; and otherwise having a material adverse effect on the overall business climate as well as our financial condition and results of operations.

Heightened standards of sales conduct as a result of the implementation of SAT or the adoption of other similar proposed rules or regulations could also increase the compliance and regulatory burdens on our representatives, and could lead to increased litigation and regulatory risks, changes to our business model, a decrease in the number of our securities-licensed representatives and a reduction in the products we offer to our clients, any of which could have a material adverse effect on our business, financial condition and results of operations.

In addition, we expect the worldwide demographic trend of population aging will cause policymakers to continue to focus on the framework of US and non-US retirement systems, which may drive additional changes regarding the manner in which individuals plan for and fund their retirement, the extent of government involvement in retirement savings and funding, the regulation of retirement products and services and the oversight of industry participants. Any incremental requirements, costs and risks imposed on us in connection with such current or future legislative or regulatory changes, may constrain our ability to market our products and services to potential customers, and could negatively impact our profitability and make it more difficult for us to pursue our growth strategy.

Although we are subject to regulation in each state in which we conduct business, in many instances the state insurance laws and regulations emanate from the NAIC. State insurance regulators and the NAIC regularly re-examine existing laws and regulations applicable to insurance companies and their products. Any proposed or future legislation or NAIC initiatives, if adopted, may be more restrictive on our ability to conduct business than current regulatory requirements or may result in higher costs or increased statutory capital and reserve requirements. Changes in these laws and regulations or interpretations thereof are often made for the benefit of the consumer and at the expense of the insurer and could have a material adverse effect on our domestic insurance subsidiaries' businesses, financial condition and results of operations. We are also subject to the risk that compliance with any particular regulator's interpretation of a legal or accounting issue may not result in compliance with another regulator's interpretation of the same issue, particularly when compliance is judged in hindsight. There is an additional risk that any particular regulator's interpretation of a legal or accounting issue may change over time to our detriment, or that changes to the overall legal or market environment, even absent any change of interpretation by a particular regulator, may cause us to change our views regarding the actions we need to take from a legal risk management perspective, which could necessitate changes to our practices that may, in some cases, limit our ability to grow and improve profitability.

Risks Relating to Taxation

The BEAT may significantly increase our tax liability.

The Tax Act introduced a new tax called the BEAT. The BEAT operates as a minimum tax and is generally calculated as a percentage (10% in 2019 – 2025, and 12.5% in 2026 and thereafter) of the "modified taxable income" of an "applicable taxpayer." Modified taxable income is calculated by adding back to a taxpayer's regular taxable income the amount of certain "base erosion tax benefits" with respect to certain payments made to foreign affiliates of the taxpayer, as well as the "base erosion percentage" of any net operating loss deductions. The BEAT applies for a taxable year only to the extent it exceeds a taxpayer's regular corporate income tax liability for such year (determined without regard to certain tax credits).

Certain of our reinsurance agreements require our US subsidiaries (including any non-US subsidiaries subject to US federal income taxation) to pay or accrue substantial amounts to our non-US reinsurance subsidiaries that would be characterized as "base erosion payments" with respect to which there are "base erosion tax benefits." These and any other "base erosion payments" may cause us to be subject to the BEAT.

The application of the BEAT to our reinsurance arrangements could be affected by further legislative action, administrative guidance or court decisions, any of which could have retroactive effect. In addition, tax authorities may disagree with our BEAT calculations, or the interpretations on which those calculations are based, and assess additional taxes, interest and penalties. We will establish our tax provision in accordance with GAAP.

However, there can be no assurance that this provision will accurately reflect the amount of federal income tax that we ultimately pay, as that amount could differ materially from the estimate. There may be material adverse consequences to our business if tax authorities successfully challenge our BEAT calculations, in light of the uncertainties described above.

In addition, we have made estimates regarding the effective tax rate we expect to experience, which take into account the impacts of federal income tax and the BEAT. The determination of each such figure, or range of figures, involves numerous estimates and assumptions, including estimates and assumptions regarding our BEAT calculations. Such estimates and assumptions may prove incorrect. To the extent that actual experience differs from the estimates and assumptions inherent in our projections, our future effective tax rate may deviate materially from the estimates provided and our financial condition and results of operations may be materially less favorable than are implied by the projections provided.

AHL or its non-US subsidiaries may be subject to US federal income taxation in an amount greater than expected.

AHL and certain of its subsidiaries are treated as foreign corporations under the Internal Revenue Code (such subsidiaries, the Non-US Subsidiaries, and together with AHL, the Non-US Companies). Any Non-US Company that is considered to be engaged in a trade or business in the US generally will be subject to US federal income taxation on a net basis on its income that is effectively connected with such US trade or business (including branch profits tax on the portion of its earnings and profits that is attributable to such income), unless otherwise provided under an applicable income tax treaty. In addition, a Non-US Company generally will be subject to US federal income taxation on a gross basis on certain US-source income, and a US federal excise tax on certain premiums earned on insurance with respect to US risks, that are not effectively connected with a US trade or business, unless otherwise provided under an applicable income tax treaty.

With certain exceptions, each of the Non-US Companies currently intends to operate in a manner that will not cause it to be subject to US federal income taxation on a net basis. However, the enactment of the BEAT, the reduction of the federal income tax rate applicable to corporations included in the Tax Act and other factors may cause some or all of the Non-US Companies to conduct business differently. Moreover, there is considerable uncertainty as to when a foreign corporation is engaged in a trade or business within the United States, as the law is unclear and the determination is highly factual and must be made annually, and therefore there can be no assurance that the IRS will not successfully contend that a Non-US Company that does not intend to be treated as engaged in a trade or business in the US is nonetheless so engaged. If any such Non-US Company is treated as engaged in a trade or business in the US, it may incur greater tax costs than expected on any income not exempt from taxation under an applicable income tax treaty, which could have a material adverse effect on our financial condition, results of operations and cash flows.

AHL is a UK tax resident and expects to qualify for the benefits of the UK Treaty because its Class A common shares are listed and regularly traded on the NYSE. In addition, the UK Resident Companies expect to qualify for the benefits of the UK Treaty by reason of being subsidiaries of AHL or by reason of satisfying an ownership and base erosion test. Accordingly, our UK Resident Companies are expected to qualify for certain exemptions from, or reduced rates of, the US taxes described above that are provided for by the UK Treaty. However, there can be no assurances that our UK Resident Companies will continue to qualify for treaty benefits or satisfy all of the requirements for the tax exemptions and reductions they intend to claim. If any of our UK Resident Companies fails to qualify for such benefits or satisfy such requirements, it may incur greater tax costs than expected, which could have a material adverse effect on our financial condition, results of operations and cash flows.

US persons who own our equity securities may be subject to US federal income taxation at ordinary income rates on our undistributed earnings and profits.

For any taxable year in which a Non-US Company is treated as a controlled foreign corporation (CFC), a "10% US Shareholder" of the Non-US Company that held our equity securities directly or indirectly through certain entities as of the last day in such taxable year that the Non-US Company was a CFC would generally be required to include in gross income as ordinary income its pro rata share of the Non-US Company's income, regardless of whether that income was actually distributed to such US person (with certain adjustments). A "10% US Shareholder" of an entity treated as a foreign corporation for US federal income tax purposes is a US person who owns (directly, indirectly through certain entities or constructively) 10% or more of the total value of all classes of shares of the corporation or 10% or more of the total combined voting power of all classes of voting shares of the corporation. Any US person that owns (or is treated as owning) 10% or more of the value of AHL should consult with their tax advisor regarding their investment in AHL.

In general, a non-US corporation is a CFC if 10% US Shareholders, in the aggregate, own (or are treated as owning) stock of the non-US corporation possessing more than 50% of the voting power or value of such corporation's stock. However, this threshold is lowered to 25% for purposes of taking into account the insurance income of a non-US corporation. Further, special rules apply for purposes of taking into account any related person insurance income (RPII) of a non-US corporation, as described below.

In addition, if a US person disposes of shares in a non-US corporation and the US person owned (directly, indirectly through certain entities or constructively) 10% or more of the total combined voting power of the voting stock of the corporation at any time when the corporation was a CFC during the five-year period ending on the date of disposition, any gain from the disposition will generally be treated as a dividend to the extent of the US person's share of the corporation's undistributed earnings and profits that were accumulated during the period or periods that the US person owned the shares while the corporation was a CFC (with certain adjustments). Also, a US person may be required to comply with specified reporting requirements, regardless of the number of shares owned.

We do not believe that AHL is a CFC. However, we believe that all of the Non-US Subsidiaries are CFCs, except that we believe ALRe is a CFC only for purposes of taking into account certain insurance income. Specifically, the Tax Act eliminated the prohibition on "downward attribution" from non-US persons to US persons under former Section 958(b)(4) of the Internal Revenue Code for purposes of determining constructive stock ownership under the CFC rules. As a result, our US subsidiaries are deemed to own all of the stock of the Non-US Subsidiaries (other than ALRe) for CFC purposes. Further, we believe that 10% US Shareholders of ALRe collectively own more than 25%, but less than 50%, of the vote and value of ALRe by reason of downward attribution from certain of our direct or indirect shareholders. The legislative history under the Tax Act indicates that this change in law was not intended to cause a foreign corporation to be treated as a CFC with respect to a 10% US Shareholder that is not related to the US persons receiving such downward attribution. However, it is not clear whether a court would interpret the change made by the Tax Act in a manner consistent with such indicated intent. Moreover, no assurances can be provided that any of the Non-US Companies would not be a CFC, even without regard to the downward attribution of stock from non-US persons to US persons, as such classification depends upon the identity and relationships of the beneficial owners of our equity securities, over which we have limited knowledge and control. Accordingly, any US person that owns (or is treated as owning) 10% or more of the voting power or value of AHL should consult with their tax advisor regarding their investment in AHL.

US persons who own our equity securities may be subject to US federal income taxation at ordinary income rates on a disproportionate share of our undistributed earnings and profits attributable to RPII.

If any of the Non-US Companies is treated as recognizing RPII in a taxable year and is also treated as a CFC for such taxable year, each US person that owns our equity securities directly or indirectly through certain entities as of the last day in such taxable year must generally include in gross income its pro rata share of the RPII, determined as if the RPII were distributed proportionately only to all such US persons, regardless of whether that income is distributed (with certain adjustments). For this purpose, a Non-US Company generally will be treated as a CFC if US persons in the aggregate are treated as owning (directly or indirectly through certain entities) 25% or more of the total voting power or value of the Non-US Company's stock at any time during the taxable year. We believe that the Non-US Companies are treated as CFCs for this purpose, based on the current ownership of our equity securities.

RPII generally is any income of a non-US corporation attributable to insuring or reinsuring risks of a US person that owns (or is treated as owning) stock of such non-US corporation, or risks of a person that is "related" to such a US person. For this purpose, (1) a person is "related" to another person if such person "controls," or is "controlled" by, such other person, or if both are "controlled" by the same persons, and (2) "control" of a corporation means ownership (or deemed ownership) of stock possessing more than 50% of the total voting power or value of such corporation's stock and "control" of a partnership, trust or estate means ownership (or deemed ownership) of more than 50% by value of the beneficial interests in such partnership, trust or estate.

The Non-US Companies that are insurance enterprises (Non-US Insurance Companies) may derive income that is considered RPII. We believe that an exception under the RPII rules for CFCs with *de minimis* RPII currently applies to such Non-US Insurance Companies, such that US persons are not required to include any RPII in their gross income with respect to any of the Non-US Companies. However, AGM and its affiliates and related parties own a substantial number of our Class A common shares, have rights to acquire additional Class A common shares and hold proxies to vote Class A common shares owned by certain of our employees. Further, Athene and AGM may have considerable overlap in ownership. If it is determined that AGM controls Athene, or that the same persons control both Athene and AGM through owning (or being treated as owning) more than 50% of the vote or value of both Athene and AGM, substantially all of the income of the Non-US Insurance Companies derived from the reinsurance of affiliates likely will constitute RPII. This would trigger the adverse RPII consequences described above to all US persons that hold our equity securities directly or indirectly through certain entities and could have a material adverse effect on the value of their investment in our equity securities.

Our bye-laws currently limit to 9.9% the voting power of AHL owned by persons who, together with their affiliates, beneficially own more than 9.9% of the voting power of AHL, subject to exemptions authorized by our board of directors (the "9.9% Voting Cutback"). If the 9.9% Voting Cutback is applicable to any person, excess voting power generally will be reallocated to all other Class A common shares, including those held by AGM and its affiliates. Further, the voting power of Class A common shares that are owned (or treated as owned) by certain persons who own (or are treated as owning) any AGM stock would also be reallocated to all other Class A common shares, including those held by AGM and its affiliates. Our bye-laws limit these reallocations of voting power so that AGM, and any person or persons who control AGM, would not own (or be treated as owning) more than 49.9% of the total voting power of our stock if they do not own (and are not treated as owning) more than 50% of the total value of our stock. These rules are intended to prevent any such reallocation of voting power from causing AGM to be considered to control us or to be controlled by the same persons who control us for purposes of the RPII provisions. However, because the relevant attribution rules are complex and there is no definitive legal authority on whether these voting provisions are effective for these purposes, there can be no assurance that this will be the case.

Our bye-laws also generally provide that no person (nor certain direct or indirect beneficial owners or related persons to such person) who owns our equity securities may acquire any shares of AGM or otherwise make any investment that would cause such person, or any other person that is a US person, to own (or be treated as owning) more than 50% of the vote or value of our equity securities. Any holder of our equity securities that violates this restriction may be required, at the discretion of our board of directors, to sell its equity securities or take any other reasonable action that our board of directors deems necessary. However, this restriction does not apply to members of the Apollo Group.

We have only a limited ability to determine whether any of the Non-US Insurance Companies is treated as recognizing RPII in a taxable year, the amount of any such RPII or any US person's share of any such RPII, and to obtain the information necessary to accurately make such determinations or fully enforce the voting provisions and ownership restrictions described above. We will take reasonable steps to obtain such information, but there can be no assurances that such steps will be adequate or that we will be successful in this regard. Accordingly, no assurances can be provided that the adverse RPII consequences described above will not apply to all US persons that hold our equity securities directly or indirectly through certain entities.

US persons who dispose of our equity securities may be required to treat any gain as ordinary income for US federal income tax purposes and comply with other specified reporting requirements.

If a US person disposes of shares in a non-US corporation that is an insurance company that had RPII and the 25% threshold described above is met at any time when the US person owned any shares in the corporation during the five-year period ending on the date of disposition, any gain from the disposition will generally be treated as a dividend to the extent of the US person's share of the corporation's undistributed earnings and profits that were accumulated during the period that the US person owned the shares (possibly whether or not those earnings and profits are attributable to RPII). In addition, the shareholder will be required to comply with specified reporting requirements, regardless of the amount of shares owned. We believe that these rules should not apply to a disposition of our equity securities because AHL is not itself directly engaged in the insurance business. We cannot assure you, however, that the IRS will not successfully assert that these rules apply to a disposition of our equity securities.

US tax-exempt organizations that own our equity securities may recognize unrelated business taxable income.

A US tax-exempt organization that directly or indirectly owns our equity securities generally will recognize unrelated business taxable income and be subject to additional US tax filing obligations to the extent such tax-exempt organization is required to take into account any of our insurance income or RPII pursuant to the CFC and RPII rules described above. US tax-exempt organizations should consult their own tax advisors regarding the risk of recognizing unrelated business taxable income as a result of the ownership of our equity securities.

US persons who own our equity securities may be subject to adverse tax consequences if AHL is considered a passive foreign investment company for US federal income tax purposes.

If AHL is considered a passive foreign investment company for US federal income tax purposes (PFIC), a US person who directly or, in certain cases, indirectly owns our equity securities could be subject to adverse tax consequences, including a greater tax liability than might otherwise apply, an interest charge on certain taxes that are deemed deferred as a result of AHL's non-US status and additional US tax filing obligations, regardless of the number of shares owned. In general, AHL will be a PFIC during a taxable year if (1) 75% or more of its gross income constitutes passive income or (2) 50% or more of its assets produce, or are held for the production of, passive income. For these purposes, passive income includes interest, dividends and other investment income, with certain exceptions, and certain look-through rules apply with respect to interests in subsidiaries.

We currently do not expect that AHL will be a PFIC in the current taxable year or the foreseeable future. This expectation is based on the application of the look-through rules and our belief that a substantial majority of the income of our insurance subsidiaries should qualify as non-passive pursuant to either an exception for income derived in the "active conduct" of an insurance business by a "qualifying insurance corporation" (QIC) or an exception for certain domestic insurance companies, described below. On December 4, 2020, the IRS released final and proposed regulations providing guidance on various aspects of the PFIC rules, including these exceptions. The final regulations are currently effective, but the proposed regulations will not be effective unless and until they are adopted in final form.

Under the proposed regulations, a QIC is in the "active conduct" of an insurance business only if it satisfies either a "factual requirements test" or an "active conduct percentage test." The factual requirements test requires that the officers and employees of the QIC carry out substantial managerial and operational activities on a regular and continuous basis with respect to its core functions and that they perform virtually all of the active decision-making functions relevant to underwriting functions. The active conduct percentage test generally requires that (i) the total costs incurred by the QIC with respect to its officers and employees for services rendered with respect to its core functions (other than investment activities) equal or exceed 50 percent of total costs incurred by the QIC with respect to its officers and employees and any other person or entities for services rendered with respect to its core functions (other than investment activities) and (ii) to the extent the QIC outsources any part of its core functions to unrelated entities, officers and employees of the QIC with experience and relevant expertise must select and supervise the person that performs the outsourced functions, establish objectives for performance of the outsourced functions and prescribe rigorous guidelines relating to the outsourced functions which are routinely evaluated and updated. Under certain exceptions, however, a QIC that has no or only a nominal number of employees or that is a vehicle that has the effect of securitizing or collateralizing insurance risks underwritten by other insurance or reinsurance companies or is an insurance linked securities fund that invests in securitization vehicles is deemed not engaged in the active conduct of an insurance business. A QIC's officers and employees include those of certain affiliates for these purposes.

The final regulations also generally provide that the income of a domestic corporation to which the look-through rules apply is not treated as passive if the corporation is subject to tax as an insurance company under subchapter L of the Internal Revenue Code, and is subject to US federal income tax on its net income. The proposed regulations would limit the application of this rule in the case of certain over-capitalized corporations.

We currently believe that a substantial majority of the income and assets of our insurance subsidiaries should be treated as non-passive under the rules described above. However, the rules are subject to varying interpretations and are highly dependent on the facts and circumstances, which may change from year to year.

Further, the IRS has requested comments on several aspects of the proposed regulations. It is uncertain when the proposed regulations will be finalized, and whether the provisions of any final or temporary regulations will vary from the proposed regulations. As a result, we cannot assure you that AHL will not be treated as a PFIC in one or more taxable years. If AHL is treated as a PFIC, the adverse tax consequences described above generally would also apply with respect to a US person’s indirect ownership interest in any PFICs in which AHL directly or, in certain cases, indirectly owns an interest.

Changes in US tax law might adversely affect us or holders of our equity securities.

The tax treatment of non-US companies and their US and non-US insurance subsidiaries may be the subject of further tax legislation. No prediction can be made as to whether any particular proposed legislation will be enacted or, if enacted, what the specific provisions or the effective date of any such legislation would be, or whether it would have any effect on us. As such, we cannot assure you that future legislative, administrative or judicial developments will not result in an increase in the amount of US tax payable by us or by an investor in our equity securities or reduce the attractiveness of our products. If any such developments occur, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Changes in US tax law might adversely affect demand for our products.

Many of the products that we sell and reinsure benefit from one or more forms of tax-favored status under current US federal and state income tax regimes. For example, we sell and reinsure annuity contracts that allow the policyholders to defer the recognition of taxable income earned within the contract. Future changes in US federal or state tax law, could reduce or eliminate the attractiveness of such products, which could affect the sale of our products or increase the expected lapse rate with respect to products that have already been sold. Decreases in product sales or increases in lapse rates, in either case, brought about by changes in US tax law, may result in a decrease in net invested assets and therefore investment income and may have a material and adverse effect on our business, financial position, results of operations and cash flows.

There is US income tax risk associated with reinsurance between US insurance companies and their Bermuda affiliates.

If a reinsurance agreement is entered into among related parties, the IRS is permitted to reallocate or recharacterize income, deductions or certain other items, and to make any other adjustment, to reflect the proper amount, source or character of the taxable income of each of the parties. If the IRS were to successfully challenge our reinsurance arrangements, our financial condition, results of operations and cash flows could be adversely affected.

We are subject to the risk that Bermuda tax laws may change and that we may become subject to new Bermuda taxes following the expiration of a current exemption after 2035.

The Bermuda Minister of Finance, under the Exempted Undertakings Tax Protection Act 1966 of Bermuda, as amended, has given us assurance that if any legislation is enacted in Bermuda that would impose tax computed on profits or income, or computed on any capital asset, gain or appreciation, or any tax in the nature of estate duty or inheritance tax, then the imposition of any such tax will not be applicable to us or any of our operations, shares, debentures or other obligations until March 31, 2035, except insofar as such tax applies to persons ordinarily resident in Bermuda or to any taxes payable by us in respect of real property owned or leased by us in Bermuda. Given the limited duration of the Bermuda Minister of Finance’s assurance, we cannot assure you that we will not be subject to any Bermuda tax after March 31, 2035.

The impact of the Organisation for Economic Co-operation and Development’s recommendations on base erosion and profit shifting is uncertain and could impose adverse tax consequences on us.

In 2015, the Organisation for Economic Co-operation and Development (OECD) published its final recommendations on base erosion and profit shifting (BEPS). These BEPS recommendations propose the development of rules directed at counteracting the effects of tax havens and preferential tax regimes in countries around the world.

Several of the areas of tax law on which the BEPS project has focused have led or will lead to changes in the domestic law of individual OECD jurisdictions. These changes include (amongst others) restrictions on interest and other deductions for tax purposes, the introduction of broad anti-hybrid regimes and reform of controlled foreign company rules. Changes are also expected to arise in the application of certain double tax treaties as a result of the implementation and adoption of the OECD's Multilateral Instrument, which may restrict our ability to rely on the terms of relevant double tax treaties in certain circumstances. Further, recent BEPS developments include proposals for new profit allocation and nexus rules and for rules to ensure that the profits of multinational enterprises are subject to a minimum rate of tax, and the OECD/G20 Inclusive Framework (IF) has adopted a two-pillar approach as the basis for this ongoing project. In October 2020, the OECD released "Blueprints" for the so-called Pillar One and Pillar Two, which set out the status with respect to current proposals for consultation. The IF is seeking to resolve outstanding issues by mid-2021, following which implementation of the final recommendations of the project could lead to further amendment of domestic tax laws and bilateral tax treaties.

Changes of law in individual jurisdictions which may arise as a result of the BEPS project (including in connection with future final recommendations around Pillar One and Pillar Two) may ultimately increase the tax base of our subsidiaries in certain jurisdictions or our worldwide tax exposure. Those changes of law are also potentially relevant to our ability to efficiently fund and realize investments or repatriate income or capital gains from relevant jurisdictions, and could ultimately necessitate some restructuring of our subsidiaries or business operations. The changes of law resulting from the BEPS project also include revisions to the definition of a "permanent establishment" and the rules for attributing profit to a permanent establishment.

Other BEPS-related changes focus on the goal of ensuring that transfer pricing outcomes are in line with value creation. Changes to tax laws resulting from the BEPS project could increase their complexity and the burden and costs of compliance. Additionally, such changes could also result in significant modifications to existing transfer pricing rules and could potentially have an impact on our taxable profits in various jurisdictions.

Since 2017 (and in consequence of the BEPS project), some countries in which we do business, including Bermuda, have required certain multinational enterprises, including ours, to report detailed information regarding allocation of revenue, profit, and other information, on a country-by-country basis. The information we are required to report pursuant to this country-by-country reporting (as well as information we are required to report pursuant to certain other exchange of information regimes (for example, pursuant to the Common Reporting Standard)) could ultimately result in certain tax authorities having greater access to information enabling them to challenge our tax positions in a number of different areas, transfer pricing in particular.

Our operations may be affected by the introduction of EU mandatory disclosure rules under DAC 6.

The EU has introduced new mandatory disclosure rules for cross-border arrangements which satisfy certain hallmarks, as part of a new Directive widely referred to as "DAC 6". The scope of the arrangements and hallmarks which may trigger disclosure is very wide, and not limited to aggressive tax planning or indeed (for certain of the hallmarks) to arrangements which have any tax motive. Originally, first disclosures were not required until August 2020, but certain jurisdictions have since delayed the first reporting date by up to six months as a result of the COVID-19 pandemic. The rules apply retrospectively to any arrangements put in place or made available for implementation on or after June 25, 2018. The obligation to file disclosures under DAC 6 will fall on persons acting as intermediaries, which in many cases may require our advisors and other service providers to file disclosures relating to arrangements we are party to, in the first instance. Other intermediaries may have reporting obligations to the extent that they could be reasonably expected to know that they provided aid, assistance or advice with respect to an arrangement to which we are a party.

It is, however, likely that at least some relevant arrangements will need to be disclosed directly by us (whether because we are treated as the relevant intermediary for those purposes, or in certain circumstances because our advisors are exempt from disclosure under professional privilege rules). We intend to operate in compliance with DAC 6 mandatory disclosure rules. Achieving and maintaining compliance is likely to entail some cost to us, and any inadvertent failure to comply with our obligations may lead to fines and penalties, which would have an adverse effect on our results of operations.

On December 31, 2020 (as a consequence of the final terms of the UK's exit from the European Union), the UK put forward legislation to significantly narrow the scope of the hallmarks which may trigger disclosure under DAC 6 in the UK. As a result, only cross-border arrangements that meet hallmarks under Category D of DAC 6 (broadly, those that have the effect of circumventing reporting under the OECD's Common Reporting Standard rules and/or that are intended to hide the identity of the beneficial ownership of entities in the arrangements) will ultimately be reportable in the UK. This change to the application of DAC 6 in the UK is intended as a temporary step and during 2021 the UK intends to consult on, and introduce, independent domestic legislation to implement a mandatory reporting regime that is compliant with OECD Mandatory Disclosure requirements, but that is not expected to replicate the full effect of DAC 6.

Changes in UK tax law could increase the amount of UK tax we are required to pay.

Any changes or developments to UK tax law or the published practice of Her Majesty's Revenue and Customs (including its interpretation and/or application) could result in an increase in the amount of UK tax payable by one or more of our subsidiaries, including the UK Resident Companies. If this were to occur, the business, financial condition, results of the operations and cash flows of the UK Resident Companies could be adversely affected.

Without limitation, such changes or developments to UK tax law that may be relevant to the UK Resident Companies could include the application of: (i) the UK Treaty; (ii) Chapter 3A of Part 2 of the Corporation Tax Act 2009 (being the UK profits of foreign permanent establishments regime); (iii) Part 6A and Part 9A of the Taxation (International and Other Provisions) Act 2010 (being the UK anti-hybrids regime and the UK controlled foreign company regime respectively); and/or (iv) Part 3 of and Schedule 16 to the Finance Act 2015 (being the UK diverted profits tax regime).

Risks Relating to Investment in Our Class A Common Shares

Our bye-laws contain provisions that may cause a holder of Class A common shares to lose the right to vote the shares if the holder or certain connected persons own an equity interest in AGM.

Our bye-laws contain a voting restriction that can result in any "Restricted Common Shares" having no right to vote. A holder's Class A common shares are considered "Restricted Common Shares" if and when the holder or any person who is considered to indirectly or constructively own any of the holder's shares (other than certain members of the Apollo Group) owns (directly, indirectly or constructively) any stock of AGM. This voting restriction applies only if there is a person who (together with its affiliates) beneficially owns Class A common shares that would, absent the voting adjustments in our bye-laws, possess more than 9.9% of the total voting power of our Class A common shares and who has not received the consent of at least 70% (75% after March 31, 2021) of our board of directors to exceed such voting threshold. This voting restriction does not affect the transferability of Class A common shares and will not apply after any date identified as the "Restriction Termination Date" by at least 70% (75% after March 31, 2021) of our board of directors.

Our bye-laws contain provisions that could discourage takeovers and business combinations that our shareholders might consider in their best interests, including provisions that prevent a holder of Class A common shares from having a significant stake in Athene.

Our bye-laws include certain provisions that could have the effect of delaying, deferring, preventing or rendering more difficult a change of control that holders of our Class A common shares might consider in their best interests. For example, our bye-laws contain voting adjustments that may reduce the votes of a holder's Class A common shares to the extent necessary to prevent any person (together with its affiliates) from beneficially owning Class A common shares having more than 9.9% of the total voting power of our Class A common shares, unless such person has received the consent of at least 70% (75% after March 31, 2021) of our board of directors to exceed such threshold. In addition, if the votes of any Class A common shares are required to be reduced pursuant to these adjustments, the votes of all Class A common shares that are "Restricted Common Shares" generally are reduced to zero. The votes of all Class A common shares that did not suffer a reduction in votes are then increased, pro rata based on their then current voting power, in an aggregate amount equal to the aggregate reduction in votes under the voting adjustments described above, except that the increase in votes of any Class A common share is limited to the extent necessary to avoid triggering further voting reductions and to avoid creating a "RPII Control Group," as defined in our bye-laws. Such adjustments, if implicated, would result in some Class A common shares having more than one vote per share. Therefore, a shareholder's voting rights may increase above 5% of the aggregate voting power of our Class A common shares, even if the shareholder holds fewer than 5% of our Class A common shares, thereby possibly resulting in the shareholder becoming a reporting person subject to Schedule 13D or 13G filing requirements under the Exchange Act. These requirements could discourage a potential investment in our Class A common shares. In addition, our board of directors is classified into three classes of directors, with directors of each class serving staggered three-year terms. Any change in the number of directors is required by our bye-laws to be apportioned among the classes so as to maintain the number of directors in each class as nearly equal as possible, and any additional director of any class elected to fill a vacancy resulting from an increase in such class or from the removal of a director will hold such directorship for a term that coincides with the remaining term of that class. Moreover, our bye-laws require specific advance notice procedures and other protocols for holders of common shares to make shareholder proposals and nominate directors. Among other requirements, a shareholder must meet the minimum requirements for eligible shareholders to submit shareholder proposals under Rule 14a-8 of the Exchange Act, and submit specific information and make specific undertakings in relation to the shareholder proposal or director nomination.

Any or all of these provisions could prevent holders of our Class A common shares from receiving the benefit from any premium to the market price of our Class A common shares offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of any of these provisions could adversely affect the prevailing market price of our Class A common shares if they were viewed as discouraging takeover attempts in the future.

Holders of our shares may have difficulty effecting service of process on us or enforcing judgments against us in the United States.

AHL is incorporated pursuant to the laws of Bermuda and is domiciled in Bermuda. In addition, certain of our directors and officers reside outside the United States, and a substantial portion of our assets are located in jurisdictions outside the United States. As such, we have been advised that there is doubt as to whether:

- a holder of our shares would be able to enforce, in the courts of Bermuda, judgments of US courts against us or against persons who reside in Bermuda based upon the civil liability provisions of the US federal securities laws; or
- a holder of our shares would be able to bring an original action in the Bermuda courts to enforce liabilities against us or our directors and officers who reside outside the United States based solely upon US federal securities laws.

Further, we have been advised that there is no treaty in effect between the United States and Bermuda providing for the enforcement of judgments of US courts, and there are grounds upon which Bermuda courts may not enforce judgments of US courts. Because judgments of US courts are not automatically enforceable in Bermuda, it may be difficult for you to recover against us based upon such judgments. Additionally, we have been advised that the United States and Bermuda do not currently have a treaty providing for reciprocal recognition and enforcement of judgments in civil and commercial matters. A Bermuda court may, however, impose civil liability on us or our directors or officers in a suit brought in the Supreme Court of Bermuda provided that the facts alleged constitute or give rise to a cause of action under Bermuda law. Certain remedies available under the laws of US jurisdictions, including certain remedies under the US federal securities laws, would not be allowed in Bermuda courts to the extent that they are contrary to public policy.

Our choice of forum provisions in our bye-laws may limit your ability to bring suits against us or our directors and officers.

Our bye-laws currently provide that if any dispute arises concerning the Companies Act or out of or in connection with our bye-laws, including any question regarding the existence and scope of any bye-law and/or whether there has been a breach of the Companies Act or our bye-laws by an officer or director (whether or not such a claim is brought in the name of a shareholder or in the name of the Company), any such dispute shall be subject to the exclusive jurisdiction of the Supreme Court of Bermuda. This choice of forum provision may limit a shareholder’s ability to bring a claim in a judicial forum that the shareholder believes is favorable for disputes with us or our directors or officers, which may discourage lawsuits against us and our directors and officers. Alternatively, if a court were to find this provision of our bye-laws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business, financial condition, results of operations and cash flows.

US persons who own our shares may have more difficulty in protecting their interests than US persons who are shareholders of a US corporation.

The Companies Act, which applies to AHL, differs in certain material respects from laws generally applicable to US corporations and their shareholders. Set forth below is a summary of certain significant provisions of the Companies Act and our bye-laws which differ in certain respects from provisions of Delaware corporate law. Because the following statements are summaries, they do not discuss all aspects of Bermuda law that may be relevant to us and our shareholders.

Interested Directors

Bermuda law provides that we cannot void any transaction we enter into in which a director has an interest, nor can such director be liable to us for any profit realized pursuant to such transaction, provided the nature of the interest is disclosed at the first opportunity at a meeting of directors, or in writing, to the directors. Under Delaware law such transaction would not be voidable if:

- the material facts as to such interested director’s relationship or interests were disclosed or were known to the board of directors and the board of directors had in good faith authorized the transaction by the affirmative vote of a majority of the disinterested directors;
- such material facts were disclosed or were known to the shareholders entitled to vote on such transaction and the transaction was specifically approved in good faith by vote of the majority of shares entitled to vote thereon; or
- the transaction was fair to the corporation as of the time it was authorized, approved or ratified.

Under Delaware law, the interested director could be held liable for a transaction in which the director derived an improper personal benefit.

Shareholders’ Suits

The rights of shareholders under Bermuda law are not as extensive as the rights of shareholders in many US jurisdictions. Class actions and derivative actions are generally not available to shareholders under the laws of Bermuda. However, the Bermuda courts ordinarily would be expected to follow English case law precedent, which would permit a shareholder to commence an action in the name of the company to remedy a wrong done to the company where an act is alleged to be beyond the corporate power of the company, is illegal or would result in the violation of our memorandum of association or bye-laws. Furthermore, a Bermuda court would consider acts that are alleged to constitute a fraud against the minority shareholders or acts requiring the approval of a greater percentage of our shareholders than actually approved it. The winning party in such an action generally would be able to recover a portion of attorneys’ fees incurred in connection with such action. Class actions and derivative actions generally are available to shareholders under Delaware law for, among other things, breach of fiduciary duty, corporate waste and actions not taken in accordance with applicable law. In such actions, the court has discretion to permit the winning party to recover attorneys’ fees incurred in connection with such action.

Indemnification of Directors

We have entered into indemnification agreements with our directors and officers which provide that we will indemnify our directors and officers or any person appointed to any committee by the board of directors acting in their capacity as such for any loss arising or liability attaching to them by virtue of any rule of law in respect of any negligence, default, breach of duty or breach of trust of which such person may be guilty in relation to us other than in respect of his own fraud or dishonesty. We are also required to indemnify our directors and officers in any proceeding in which they are successful. The indemnification agreements are limited to those payments that are lawful under Bermuda law.

Furthermore, pursuant to our bye-laws, our shareholders have agreed to waive any claim or right of action such shareholder may have, whether individually or by or in right of AHL, against any director or officer of AHL on account of any action taken by such director or officer, or the failure of such director or officer to take any action in the performance of his or her duties with or for AHL or any subsidiary of AHL; provided that such waiver does not extend to any matter in respect of any fraud or dishonesty which may attach to such director or officer.

AHL is a holding company with limited operations of its own. As a consequence, AHL's ability to pay dividends on its common shares and to make timely payments on its debt obligations will depend on the ability of its subsidiaries to make distributions or other payments to it, which may be restricted by law.

AHL is a holding company with limited business operations of its own. AHL's primary subsidiaries are insurance and reinsurance companies that own substantially all of our assets and conduct substantially all of our operations. Accordingly, AHL's payment of dividends and ability to make timely payments on its debt obligations is dependent, to a significant extent, on the generation of cash flow by its subsidiaries and their ability to make such cash or other assets available to it, by dividend or otherwise. Dividends or distributions that may be paid by AHL's insurance subsidiaries are limited or restricted by applicable insurance or other laws that are based in part on the prior year's statutory income and surplus, or other sources. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Liquidity and Capital Resources–Holding Company Liquidity–Dividends from Subsidiaries.*

AHL's subsidiaries may not be able to, or may not be permitted to, make distributions to enable AHL to meet its obligations and pay dividends. These limitations on AHL's subsidiaries' abilities to pay dividends to AHL may negatively impact AHL's financial condition, results of operations and cash flows. If AHL is not able to receive sufficient distributions from its subsidiaries, AHL may be required to raise funds through the incurrence of indebtedness, issuance of equity or sale of assets. AHL's ability to access funds through such methods is subject to market conditions and there can be no assurance that AHL would be able to raise funds on favorable terms or at all.

Each subsidiary is a distinct legal entity and legal and contractual restrictions may also limit AHL's ability to obtain cash from its subsidiaries. In addition to the specific restrictions described above, AHL's subsidiaries, as members of its insurance holding company system, are subject to various statutory and regulatory restrictions on their ability to pay dividends to AHL, as further described in *Item 1. Business–Regulation–Regulation of an Insurance Group–Insurance Holding Company Regulation*.

Dividends by AHL are also subject to restrictions included within the Credit Facility and may be subject to restrictions included in any indebtedness or credit agreement that AHL enters into in the future. AHL does not currently anticipate paying any regular cash dividends on its common shares. Any decision to declare and pay dividends in the future will be made at the discretion of AHL's board of directors and will depend on, among other things, AHL's results of operations, financial condition, cash requirements, excess capital position, alternative uses of capital, contractual restrictions and other factors that AHL's board of directors may deem relevant. Therefore, any return on investment in AHL's common stock may be solely dependent upon the appreciation of the price of AHL's common stock on the open market, which may not occur.

Future sales of common shares by existing shareholders could cause our share price to decline.

Sales of substantial amounts of our Class A common shares in the public market, or the perception that these sales could occur, could cause the market price of our Class A common shares to decline. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

We have filed registration statements on Form S-8 under the Securities Act to register the Class A common shares to be issued under our 2017 employee stock purchase plan (ESPP) and our equity compensation plans and, as a result, all Class A common shares acquired upon the purchase of shares under our ESPP and the vesting of share awards or the exercise of stock options granted under our equity compensation plans will also be freely tradeable under the Securities Act, subject to the terms of any lock-up agreements, unless purchased by our affiliates. As of December 31, 2020, 5.9 million common shares are reserved for future issuances under our ESPP and equity incentive plans, in the aggregate. In addition, we have filed a registration statement on Form S-3 under the Securities Act to register the Class A common shares to be issued upon the exercise of warrants, which were issued in exchange for a portion of our previously outstanding Class M common shares. Upon exercise, the Class A common shares will be freely tradeable under the Securities Act, subject to the terms of any lock-up agreements, unless held by our affiliates. As of December 31, 2020, 8.4 million common shares are registered for resale in connection with the exercise of warrants. The issuance of any of the foregoing shares or their subsequent sale may cause our share price to decline.

Pursuant to the shareholders agreement among us and certain members of the Apollo Group that was entered into in connection with the share issuance transaction with Apollo, AGM and certain of its affiliates agreed not to directly or indirectly transfer any Class A common share prior to February 28, 2023, subject to certain exceptions (Apollo Lock-up). As of December 31, 2020, there were more than 50 million shares subject to the Apollo Lock-up. When the Apollo Lock-up ends, the market price of our common shares could decline if the holders of those shares sell them or are perceived by the market as intending to sell them. Furthermore, Apollo has the right to require, subject to the expiration or waiver of the Apollo Lock-up, us to register Class A common shares for resale in certain circumstances pursuant to the registration rights agreements we have entered into with Apollo.

In the future, we may issue additional common shares or other equity or debt securities convertible into or exercisable or exchangeable for Class A common shares in connection with a financing, strategic investment, litigation settlement or employee arrangement or otherwise. Any of these issuances could result in substantial dilution to our existing shareholders and could cause the trading price of our Class A common shares to decline.

Item 1A. Risk Factors

General Risk Factors

We may be the target or subject of, and may be required to defend against or respond to, litigation, regulatory investigations or enforcement actions.

We operate in an industry in which various practices are subject to potential litigation, including class actions, and regulatory scrutiny. We, like other financial services companies, are involved in litigation and arbitration in the ordinary course of business and may be the subject of regulatory proceedings (including investigations and enforcement actions). Plaintiffs may seek large or indeterminate amounts of damages in litigation and regulators may seek large fines in enforcement actions. Given the large or indeterminate amounts sometimes sought, and the inherent unpredictability of litigation and enforcement actions, it is possible that an unfavorable resolution of one or more matters could have a material and adverse effect on our business, financial condition, results of operations and cash flows. See *Item 3. Legal Proceedings* for certain matters to which we are a party. Even if we ultimately prevail in any litigation or receive positive results from investigations, we could incur material legal costs or our reputation could be materially adversely affected.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

We own our headquarters for US operations, which is located in West Des Moines, IA and we lease our head office for Bermuda operations, which is located in Hamilton, Bermuda. Our Retirement Services segment includes our Iowa and Bermuda offices. We believe that for the foreseeable future our West Des Moines, Bermuda and other properties will be sufficient for us to conduct our current operations.

Item 3. Legal Proceedings

We are subject to litigation arising in the ordinary course of our business, including litigation principally relating to our FIA business. We cannot assure you that our insurance coverage will be adequate to cover all liabilities arising out of such claims. The outcomes of legal proceedings and claims brought against us are subject to significant uncertainty. There is significant judgment required in assessing both the probability of an adverse outcome and the determination as to whether an exposure can be reasonably estimated. In management's opinion, the ultimate disposition of any current legal proceedings or claims brought against us will not have a material effect on our financial condition, results of operations or cash flows. Litigation is, however, inherently uncertain and an adverse outcome from such litigation could have a material effect on the operating results of a particular reporting period.

From time to time, in the ordinary course of business and like others in the insurance and financial services industries, we receive requests for information from government agencies in connection with such agencies' regulatory or investigatory authority. Such requests can include financial or market conduct examinations, subpoenas or demand letters for documents to assist such agencies in audits or investigations. We and each of our US insurance subsidiaries review such requests and notices and take appropriate action. We have been subject to certain requests for information and investigations in the past and could be subject to them in the future.

For a description of certain legal proceedings affecting us, see *Note 15 – Commitments and Contingencies – Litigation, Claims and Assessments* to the consolidated financial statements.

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

Market Information

Our Class A common shares trade on the NYSE under the symbol "ATH".

Shareholders

As of January 31, 2021, there were 191,613,948 Class A common shares outstanding and held of record by 196 shareholders.

Dividends

We do not currently pay dividends on our Class A common shares and we currently intend to retain all available funds and any future earnings for use in the operation of our business. We may, however, pay cash dividends on our Class A common shares in the future. Any future determination to pay dividends will be made at the discretion of our board of directors and will depend upon many factors, including our financial condition, earnings, legal and regulatory requirements, restrictions in our debt agreements and other factors our board of directors deems relevant. We have preferred stock on which we intend to pay dividends at the rate specified in the applicable certificate of designation, subject to declaration by our board of directors. See *Note 10 – Equity* to the consolidated financial statements for further information.

Securities Authorized for Issuance under Equity Compensation Plans

See *Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters–Share Incentive Plan Information* for information regarding our equity compensation plans.

Recent Sales of Unregistered Securities

Previously reported in the Current Report on Form 8-K filed with the SEC on March 2, 2020.

Issuer Purchases of Securities

Purchases of common stock made by or on behalf of us or our affiliates during the three months ended December 31, 2020 are set forth below:

Period	(a) Total number of shares purchased[1]	(b) Average price paid per share	(c) Total number of shares purchased as part of publicly announced programs [1,2]	(d) Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs
October 1 – October 31, 2020	88,904	$ 34.10	88,904	$ 221,408,041
November 1 – November 30, 2020	—	$ —	—	$ 221,408,041
December 1 – December 31, 2020	13,833	$ 42.38	—	$ 221,408,041

[1] *Differences in amounts between column (a) and (c) relate to shares withheld (under the terms of employee stock-based compensation plans) to offset tax withholding obligations that occur upon the delivery of outstanding shares underlying equity awards or upon the exercise of stock options.*

[2] *Prior to October 28, 2019, we had announced approvals by our board of directors for $967 million of aggregate repurchases under our share repurchase program. Amounts authorized for repurchase under those approvals had been fully used prior to September 30, 2020. On October 28, 2019, we announced that our board of directors had approved an additional $600 million authorization for the repurchase of our Class A common shares. The remaining authorization does not have a definitive expiration date, but may be terminated at any time at the sole discretion of our board of directors. See Note 10 – Equity to the consolidated financial statements for more information.*

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Item 6. Selected Financial Data

The following tables set forth our selected historical consolidated financial data, which should be read in conjunction with *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* and *Item 8. Financial Statements and Supplementary Data*. The information has been derived from our historical consolidated financial statements. Our historical results are not necessarily indicative of future results.

	Years ended December 31,				
(In millions, except percentages and per share data)	**2020**[1]	**2019**	**2018**[1,2]	**2017**	**2016**
Consolidated Statements of Income Data					
Total revenues	$ 14,764	$ 16,258	$ 6,637	$ 8,788	$ 4,105
Total benefits and expenses	12,558	13,956	5,462	7,324	3,393
Income before income taxes	2,206	2,302	1,175	1,464	712
Net income	1,921	2,185	1,053	1,358	773
Net income available to Athene Holding Ltd. common shareholders	1,446	2,136	1,053	1,358	773
Adjusted operating income available to common shareholders (a non-GAAP measure)	1,242	1,289	1,140	1,055	759
ROE	10.0 %	19.7 %	12.1 %	16.9 %	12.6 %
Adjusted operating ROE (a non-GAAP measure)	12.1 %	14.1 %	13.9 %	15.1 %	12.6 %
Earnings per share					
Basic – Class A common shares	$ 8.51	$ 11.44	$ 5.34	$ 6.95	$ 4.14
Diluted – Class A common shares[3]	$ 8.34	$ 11.41	$ 5.32	$ 6.91	$ 4.04
Adjusted operating earnings per common share (a non-GAAP measure)	$ 6.42	$ 6.97	$ 5.82	$ 5.39	$ 3.93
Weighted average common shares outstanding					
Basic[4]	184.9	186.6	197.1	195.3	186.8
Diluted – Class A common shares[3]	188.6	154.3	161.1	111.0	53.5
Adjusted operating common shares (a non-GAAP measure)[5]	193.5	184.8	195.9	195.9	193.4
Consolidated Balance Sheets Data					
Investments, including related parties	$ 182,421	$ 130,550	$ 108,341	$ 85,238	$ 73,334
Total assets	202,771	146,875	125,505	100,161	86,740
Interest sensitive contract liabilities	144,566	102,745	96,610	68,099	61,580
Future policy benefits	29,258	23,330	16,704	17,557	14,562
Long-term debt	1,976	992	991	—	—
Total liabilities	182,631	132,734	117,229	90,985	79,858
Total AHL shareholders' equity	18,657	13,391	8,276	9,176	6,881
Total adjusted common shareholders' equity (a non-GAAP measure)	11,232	9,445	8,823	7,566	6,452
Book value per common share	$ 85.51	$ 69.54	$ 42.45	$ 46.60	$ 35.78
Adjusted book value per common share (a non-GAAP measure)	$ 56.95	$ 54.02	$ 45.59	$ 38.43	$ 32.85
Common shares outstanding[6]	191.2	175.7	195.0	196.9	192.3
Adjusted operating common shares outstanding (a non-GAAP measure)[5]	197.2	174.9	193.5	196.9	196.5

[1] *During the years ended December 31, 2020 and 2018, we entered into various agreements to reinsure blocks of fixed and fixed index annuities. See Note 6 – Reinsurance to the consolidated financial statements for additional information.*

[2] *Reflects the deconsolidation of Athora effective January 1, 2018.*

[3] *Diluted earnings per share on Class A common shares, including diluted Class A weighted average common shares outstanding, includes the dilutive impacts, if any, of Class B common shares, Class M common shares and any other stock-based awards. See Note 11 – Earnings Per Share to the consolidated financial statements for additional information regarding earnings per common share.*

[4] *Basic weighted average common shares outstanding includes only Class A shares in 2020, and includes all classes eligible to participate in dividends in prior years. In 2020, our multi-class common share structure was eliminated and, as a result, Class B shares were converted to Class A shares, and Class M shares were converted to Class A shares and warrants. See Note 10 – Equity and Note 14 – Related Parties to the consolidated financial statements for additional information.*

[5] *Represents Class A common shares outstanding or weighted average common shares outstanding assuming conversion or settlement of all outstanding items that are able to be converted to or settled in Class A common shares, including the impacts of Class B common shares, Class M common shares and any other stock-based awards.*

[6] *Represents common shares vested and outstanding for all classes eligible to participate in dividends for each period presented. See Note 11 – Earnings Per Share to the consolidated financial statements for additional information regarding classes eligible to participate in dividends as of each period.*

Item 6. Selected Financial Data

Non-GAAP Measures—In addition to our results presented in accordance with GAAP, we present certain non-GAAP measures we commonly use. Management believes the use of these non-GAAP measures, together with the relevant GAAP measures, provides information that may enhance an investor's understanding of our results of operations and the underlying profitability drivers of our business. These measures should be considered supplementary to our results in accordance with GAAP and should not be viewed as a substitute for the GAAP measures. See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations–Key Operating and Non-GAAP Measures* for additional discussions regarding non-GAAP measures.

The following are reconciliations of certain GAAP measures appearing in the preceding table, including net income available to AHL common shareholders, basic weighted average common shares outstanding – Class A, and basic earnings per common share – Class A, to their corresponding non-GAAP measures, including adjusted operating income available to common shareholders, weighted average common shares outstanding – adjusted operating, and adjusted operating earnings per common share, respectively:

	Years ended December 31,				
(In millions)	2020	2019	2018	2017	2016
Net income available to AHL common shareholders	$ 1,446	$ 2,136	$ 1,053	$ 1,358	$ 773
Non-operating adjustments					
Investment gains (losses), net of offsets	508	994	(274)	199	47
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	(235)	(65)	242	230	67
Integration, restructuring and other non-operating expenses	(10)	(70)	(22)	(68)	(22)
Stock compensation expense	(11)	(12)	(11)	(33)	(82)
Income tax (expense) benefit – non-operating	(48)	—	(22)	(25)	4
Less: Total non-operating adjustments	204	847	(87)	303	14
Adjusted operating income available to common shareholders	$ 1,242	$ 1,289	$ 1,140	$ 1,055	$ 759

	Years ended December 31,				
(In millions)	2020	2019	2018	2017	2016
Basic weighted average common shares outstanding – Class A	184.9	153.9	160.5	107.7	52.1
Conversion of Class B common shares to Class A common shares	4.2	25.4	29.3	81.6	134.5
Conversion of Class M common shares to Class A common shares	0.7	5.1	5.6	6.1	6.6
Effect of other stock compensation plans	3.7	0.4	0.5	0.5	0.2
Weighted average common shares outstanding – adjusted operating	193.5	184.8	195.9	195.9	193.4

	Years ended December 31,				
	2020	2019	2018	2017	2016
Basic earnings per share – Class A common shares	$ 8.51	$ 11.44	$ 5.34	$ 6.95	$ 4.14
Non-operating adjustments					
Investment gains (losses), net of offsets	2.62	5.39	(1.40)	1.02	0.24
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	(1.22)	(0.36)	1.24	1.17	0.35
Integration, restructuring and other non-operating expenses	(0.05)	(0.37)	(0.12)	(0.35)	(0.12)
Stock compensation expense	(0.06)	(0.07)	(0.05)	(0.17)	(0.42)
Income tax (expense) benefit – non-operating	(0.25)	—	(0.11)	(0.13)	0.02
Less: Total non-operating adjustments	1.04	4.59	(0.44)	1.54	0.07
Effect of items convertible to or settled in Class A common shares	1.05	(0.12)	(0.04)	0.02	0.14
Adjusted operating earnings per common share	$ 6.42	$ 6.97	$ 5.82	$ 5.39	$ 3.93

The following is a reconciliation of total AHL shareholders' equity to total adjusted AHL common shareholders' equity, which is used in calculating adjusted operating ROE and adjusted book value per common share:

	December 31,				
(In millions)	2020	2019	2018	2017	2016
Total AHL shareholders' equity	$ 18,657	$ 13,391	$ 8,276	$ 9,176	$ 6,881
Less: Preferred stock	2,312	1,172	—	—	—
Total AHL common shareholders' equity	16,345	12,219	8,276	9,176	6,881
Less: AOCI	3,971	2,281	(472)	1,449	366
Less: Accumulated change in fair value of reinsurance assets	1,142	493	(75)	161	63
Total adjusted AHL common shareholders' equity	$ 11,232	$ 9,445	$ 8,823	$ 7,566	$ 6,452

Item 6. Selected Financial Data

The following is a reconciliation of average AHL shareholders' equity to average adjusted AHL common shareholders' equity, which is used in calculating adjusted operating ROE:

	December 31,				
(In millions)	2020	2019	2018	2017	2016
Average AHL shareholders' equity	$ 14,528	$ 10,834	$ 8,726	$ 8,029	$ 6,124
Less: Average preferred stock	1,633	586	—	—	—
Less: Average AOCI	2,030	905	489	908	63
Less: Average accumulated change in fair value of reinsurance assets	575	209	43	112	41
Average adjusted AHL common shareholders' equity	$ 10,290	$ 9,134	$ 8,194	$ 7,009	$ 6,020

The following is a reconciliation of Class A common shares outstanding to its corresponding non-GAAP measure, adjusted operating common shares outstanding:

	December 31,				
(In millions)	2020	2019	2018	2017	2016
Class A common shares outstanding	191.2	142.8	162.2	142.2	77.0
Conversion of Class B common shares to Class A common shares	—	25.4	25.4	47.4	111.8
Conversion of Class M common shares to Class A common shares	—	5.5	4.9	6.4	6.8
Effect of other stock compensation plans	6.0	1.2	1.0	0.9	0.8
Adjusted operating common shares outstanding	197.2	174.9	193.5	196.9	196.4

The following is a reconciliation of book value per common share to its corresponding non-GAAP measure, adjusted book value per common share:

	December 31,				
	2020	2019	2018	2017	2016
Book value per common share	$ 85.51	$ 69.54	$ 42.45	$ 46.60	$ 35.78
AOCI	(20.77)	(12.98)	2.42	(7.36)	(1.90)
Accumulated change in fair value of reinsurance assets	(5.98)	(2.80)	0.39	(0.82)	(0.33)
Effect of items convertible to or settled in Class A common shares	(1.81)	0.26	0.33	0.01	(0.70)
Adjusted book value per common share	$ 56.95	$ 54.02	$ 45.59	$ 38.43	$ 32.85

Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

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Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with *Forward-Looking Statements, Item 1A. Risk Factors, Item 6. Selected Financial Data,* and *Item 8. Financial Statements and Supplementary Data* included within this report.

Overview

We are a leading retirement services company that issues, reinsures and acquires retirement savings products designed for the increasing number of individuals and institutions seeking to fund retirement needs. We generate attractive financial results for our policyholders and shareholders by combining our two core competencies of (1) sourcing long-term, generally illiquid liabilities and (2) investing in a high-quality investment portfolio, which takes advantage of the illiquid nature of our liabilities. Our steady and significant base of earnings generates capital that we opportunistically invest across our business to source attractively priced liabilities and capitalize on opportunities.

We have established a significant base of earnings and, as of December 31, 2020, have an expected annual net investment spread for our Retirement Services segment, which measures our investment performance less the total cost of our liabilities, of 1–2% over the 9.0 year weighted-average life of our reserve liabilities. The weighted-average life includes deferred annuities, PRT group annuities, funding agreements, payout annuities and other products.

We operate our core business strategies out of one reportable segment, Retirement Services. In addition to Retirement Services, we report certain other operations in Corporate and Other. Retirement Services is comprised of our US and Bermuda operations which issue and reinsure retirement savings products and institutional products. Corporate and Other includes certain other operations related to our corporate activities.

Our total assets have grown to $202.8 billion for the year ended December 31, 2020. Our book value per common share for the year ended December 31, 2020 was $85.51 and our adjusted book value per common share was $56.95. Our consolidated ROE for the year ended December 31, 2020 was 10.0% and our consolidated adjusted operating ROE was 12.1%. For the year ended December 31, 2020, in our Retirement Services segment, we generated a net investment spread of 1.31% and adjusted operating ROE of 16.9%. Our Retirement Services segment generated an investment margin on deferred annuities of 2.09%. As of December 31, 2020, our deferred annuities had a weighted-average life of 8.6 years and made up a significant portion of our reserve liabilities.

The following table presents the inflows generated from our organic and inorganic channels:

	Years ended December 31,		
(In millions)	2020	2019	2018
Retail	$ 7,801	$ 6,782	$ 7,542
Flow reinsurance	6,002	3,950	2,423
Funding agreements[1]	8,277	1,301	650
Pension risk transfer	5,467	6,042	2,581
Gross organic inflows	27,547	18,075	13,196
Organic inflows attributable to ACRA noncontrolling interest	(1,180)	(544)	—
Organic outflows[2]	(5,236)	(2,984)	(2,413)
Net organic flows	$ 21,131	$ 14,547	$ 10,783
Net organic growth rate[3]	27.1 %	24.9 %	25.3 %
Average organic net invested assets[4]	$ 78,095	$ 58,413	$ 42,598
Gross inorganic inflows	$ 28,792	$ —	$ 26,982
Inorganic inflows attributable to ACRA noncontrolling interest	(18,268)	—	—
Net inorganic inflows	$ 10,524	$ —	$ 26,982

[1] *Funding agreements are comprised of funding agreements issued under our FABN and FABR programs, funding agreements issued to the FHLB and long-term repurchase agreements.* [2] *Organic outflows consist of full and partial policyholder withdrawals, death benefits, pension risk transfer benefit payments and funding agreement maturities net of the ACRA noncontrolling interest and exclude the outflows related to inorganic acquisitions and block reinsurance transactions.* [3] *Net organic growth rate is calculated as net organic flows divided by average organic net invested assets.* [4]*Average organic net invested assets exclude the invested assets related to inorganic acquisitions and block reinsurance transactions as well as the investments associated with the ACRA noncontrolling interest.*

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Our organic channels, including retail, flow reinsurance and institutional products, provided gross inflows of $27.5 billion, $18.1 billion and $13.2 billion for the years ended December 31, 2020, 2019 and 2018, respectively, which were underwritten to attractive, at-or-above target returns despite the historically low interest rate environment. Organic inflows increased $9.5 billion, or 52%, reflecting the strength of our multi-channel distribution platform despite a challenging macroeconomic backdrop amidst the ongoing COVID-19 crisis. Withdrawals on our deferred annuities, maturities of our funding agreements, payments on payout annuities, and pension risk benefit payments (collectively, liability outflows), in the aggregate, were $11.9 billion, $11.0 billion and $8.9 billion for the years ended December 31, 2020, 2019 and 2018, respectively. Net organic growth rates of 27.1%, 24.9% and 25.3% for the years ended December 31, 2020, 2019 and 2018, respectively, have increased reflecting very strong organic growth in our net invested assets. We believe that our credit profile, our current product offerings, and product design capabilities as well as our growing reputation as both a seasoned funding agreement issuer and a reliable PRT counterparty will continue to enable us to grow our existing organic channels and allow us to source additional volumes of profitably underwritten liabilities in various market environments. We plan to continue to grow organically by expanding each of our retail, flow reinsurance and institutional distribution channels. We believe that we have the right people, infrastructure, scale and capital discipline to position us for continued growth.

Within our retail channel, we had fixed annuity sales of $7.8 billion, $6.8 billion and $7.5 billion for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in our retail channel was primarily driven by a very strong performance in the bank and broker-dealer channels, including an increase in both FIA and MYGA sales, and strong sales execution despite the challenging sales environment. We were able to increase our retail sales despite a significant decline in industry-wide sales volumes as a result of the economic impacts of the spread of COVID-19, as well as the mitigation measures undertaken to combat the spread, which has complicated the sales process. Despite the significant headwinds, we have maintained our disciplined approach to pricing, including with respect to targeted underwritten returns. We aim to grow our retail channel by deepening our relationships with our approximately 54 IMOs; approximately 59,000 independent agents; and our growing network of 17 banks and 102 regional broker-dealers. Our strong financial position and capital efficient products allow us to be dependable partners with IMOs, banks and broker-dealers, as well as consistently write new business. We expect our retail channel to continue to benefit from our credit profile and recent product launches. We believe this should support growth in sales at our desired cost of funds through increased volumes via current IMOs, while also allowing us to continue to expand our bank and broker-dealer channels. Additionally, we are focusing on hiring and training a specialized sales force and creating products to capture new potential distribution opportunities.

In our flow reinsurance channel, we target reinsurance business consistent with our preferred liability characteristics and, as such, flow reinsurance provides another opportunistic channel for us to source liabilities with attractive crediting rates. We generated inflows through our flow reinsurance channel of $6.0 billion, $4.0 billion and $2.4 billion for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in our flow reinsurance channel from prior year was driven by strong volumes with existing partnerships who sought to utilize our competitive advantages. In July, we established a new flow reinsurance partnership with a large Japanese financial institution, marking our entry into the large Japanese annuity market. We expect that our credit profile and our reputation as a solutions provider will help us continue to source additional reinsurance partners, which will further diversify our flow reinsurance channel.

Within our institutional channel, we generated inflows of $13.7 billion, $7.3 billion and $3.2 billion for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in our institutional channel was driven by record funding agreement inflows, partially offset by lower PRT inflows. We issued funding agreements in the aggregate principal amount of $8.3 billion, $1.3 billion and $650 million for the years ended December 31, 2020, 2019 and 2018, respectively, including our entry into the non-US dollar denominated FABN market. Funding agreements are comprised of funding agreements issued under our FABN and FABR programs, funding agreements issued to the FHLB and repurchase agreements with maturities exceeding one year at issuance, with inflows in the aggregate principal amount of $5.8 billion, $1.0 billion, $875 million and $598 million, respectively, for the year ended December 31, 2020. For the year ended December 31, 2020, we closed eight PRT transactions and issued or reinsured group annuity contracts in the aggregate principal amount of $5.5 billion, compared to $6.0 billion for the year ended December 31, 2019. Since entering the PRT channel in 2017 through December 31, 2020, we have closed 24 deals resulting in the issuance or reinsurance of group annuities of $16.3 billion with more than 250,000 plan participants. We expect to grow our institutional channel by continuing to engage in PRT transactions and opportunistic issuances of funding agreements.

Our inorganic channel has contributed significantly to our growth through both acquisitions and block reinsurance transactions. On June 18, 2020, we entered into an agreement with Jackson, effective June 1, 2020, pursuant to which we agreed to reinsure a block of fixed and fixed indexed annuities on a funds withheld coinsurance basis providing $28.8 billion of gross inflows. Utilizing the strategic benefits of ACRA, approximately 63% of the total capital deployment for the transaction will be funded by third-party investors and approximately 37% will be funded by ALRe. Additionally, as part of the transaction, ACRA made an equity investment in an indirect parent of Jackson, which closed on July 17, 2020. In 2018, we closed two reinsurance transactions with Voya and The Lincoln National Life Company (Lincoln), which provided inflows of $19.1 billion and $7.9 billion, respectively. We expect that our inorganic channel will continue to be an important source of profitable growth in the future. We believe our internal transactions team, with support from Apollo, has an industry-leading ability to source, underwrite and expeditiously close transactions. With support from Apollo, we are a solutions provider with a proven track record of closing transactions, which we believe makes us the ideal partner to insurance companies seeking to restructure their business.

Executing our growth strategy requires that we have sufficient capital available to deploy. We believe that we have significant capital available to us to support our growth aspirations. As of December 31, 2020, we estimate that we have approximately $7.7 billion in capital available to deploy, consisting of approximately $3.5 billion in excess capital, $2.5 billion in untapped debt capacity (assuming a peer average adjusted debt to capitalization ratio of 25%) and $1.7 billion in available uncalled capital at ACRA, subject, in the case of debt capacity, to favorable market conditions and general availability.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

In order to support our growth strategies and capital deployment opportunities, we established ACRA as a long-duration, on-demand capital vehicle. Effective April 1, 2020, ALRe purchased additional shares in ACRA, increasing our ownership from 33% to 36.55% of the economic interests, with the remaining 63.45% of the economic interests being owned by ADIP, a series of funds managed by an affiliate of Apollo. ACRA is expected to participate in qualifying transactions and certain other transactions by drawing a portion of the required capital for such transactions from third-party investors equal to ADIP's proportionate economic interest in ACRA. This shareholder-friendly, strategic capital solution is expected to allow us the flexibility to simultaneously deploy capital across multiple accretive avenues, while maintaining a strong financial position.

Strategic Transaction with Apollo

On February 28, 2020, we closed a transaction with Apollo in which Apollo acquired an incremental stake in us for AOG units valued at $1.1 billion, upon close, and $350 million of cash. Additionally, we converted our Class B common shares to Class A common shares and our Class M common shares to Class A common shares and warrants, eliminating our multi-class share structure. Changes in the value of the AOG units are reflected within the change in fair value of Apollo investment, net of tax line item and may present future volatility in our results of operations due to changes in the valuation of the AOG units. See *Note 14 – Related Parties* to the consolidated financial statements for further discussion.

Industry Trends and Competition

Market Conditions

The broad-based demand for risk assets observed in the second and third quarters continued into the fourth quarter of 2020 across most asset classes. With rates still at historically low levels, and existing and planned stimulus from central banks ongoing, investors continued to search for yield-producing assets. Equity markets achieved new highs, although the outperformance was not uniform across sectors. Certain companies in the technology sector continue to broadly outperform, masking some pockets of underperformance in other sectors. Credit spreads on yield assets experienced tightening across the credit spectrum. Investment grade credit tightened almost 50 basis points during the quarter and continued to tighten in January. High yield indices traded with an average yield of around 4.75%, an all-time low, with spreads moving 150 basis points tighter during the fourth quarter. Similar credit spread tightening was also observed in the structured product category. Oil prices recovered from the lows experienced in March and April to close the year just under $50 per barrel, a favorable development for markets, and a potential indicator of an improving outlook for global growth.

Despite the favorable market trends observed, COVID-19 continues to disrupt significant segments of the markets and the economy, including travel and leisure, transportation, entertainment, dining, brick and mortar retail, automotive and lodging, all of which face tremendous uncertainty in the near-term. Given the severity of the spread of COVID-19 in the US, especially in certain populous regions such as Los Angeles County, and the further spread into other regions such as the South and Midwest, which had previously experienced lower infection rates, growth outlooks may remain somewhat tempered, even as signs of recovery emerge in some economic indicators. Employment, retail sales and consumer confidence remain well below pre-COVID levels in most instances.

Interest Rate Environment

As in the third quarter, ongoing central bank intervention prevented global interest rates from reverting to more normalized levels. Meanwhile, the associated need for yield kept spreads well contained. In the US, while interest rates increased from the all-time lows of early August, the 10-year treasury yield remained well below the 1% level through year-end, and similar directional patterns were experienced in Europe and Asia. Communications from global central banks suggest that market support will continue, although substantial additional purchasing remains in order to complete previously announced programs, both in the US and elsewhere. The election of Joseph Biden as US President and the Democratic party holding majorities in both chambers of congress added to expectations of even greater stimulus, which helped to marginally increase rates in the US in January 2021. Along with the rise in interest rates, the yield curve steepened based on expectations of emerging inflation, but given recent inflation data, it appears too soon to determine whether these expectations will materialize.

The environment for yield focused buyers remains very challenging. Quality issuers and structures will remain well-bid, keeping spreads on these investments relatively low. Although some sectors such as conduit CMBS are experiencing new issue spreads at the lowest levels observed in over a decade, overall spreads still have room to tighten before they reach the lows of the last three years, and so will likely continue to attract buyers. The new issue market remains robust, including early indications for 2021, and deals across sectors remain heavily over-subscribed. Deployment challenges will persist. With the distribution of the COVID-19 vaccine underway, it is perhaps less likely as we enter 2021 to expect a second wave of COVID-19 induced rotation away from risk assets, although such a wave may be met by expansive buying.

Our investment portfolio consists predominantly of fixed maturity investments. See *–Consolidated Investment Portfolio*. If prevailing interest rates were to rise, we believe the yield on our new investment purchases may also rise and our investment income from floating rate investments would increase, while the value of our existing investments may decline. If prevailing interest rates were to decline, it is likely that the yield on our new investment purchases may decline and our investment income from floating rate investments would decrease, while the value of our existing investments may increase. Recent trends of decreasing interest rates, as expected, have led to a decrease in our investment income from floating rate investments, an overall decrease in asset yields and an increase in the value of our existing investments.

We address interest rate risk through managing the duration of the liabilities we source with assets we acquire through ALM modeling. As part of our investment strategy, we purchase floating rate investments, which we expect would perform well in a rising interest rate environment and which we expect would underperform in a declining rate environment, as has occurred during 2020. Our investment portfolio includes $27.5 billion of floating rate investments, or 18% of our net invested assets as of December 31, 2020.

If prevailing interest rates were to rise, we believe our products would be more attractive to consumers and our sales would likely increase. If prevailing interest rates were to decline, it is likely that our products would be less attractive to consumers and our sales would likely decrease. In periods of prolonged low interest rates, the net investment spread may be negatively impacted by reduced investment income to the extent that we are unable to adequately reduce policyholder crediting rates due to policyholder guarantees in the form of minimum crediting rates or otherwise due to market conditions. As of December 31, 2020, most of our products were fixed annuities with 22% of our FIAs at the minimum guarantees and 37% of our fixed rate annuities at the minimum crediting rates. As of December 31, 2020, minimum guarantees on all of our deferred annuities, including those with crediting rates already at their minimum guarantees, were, on average, greater than 100 basis points below the crediting rates on such deferred annuities, allowing us room to reduce rates before reaching the minimum guarantees. Our remaining liabilities are associated with immediate annuities, pension risk transfer obligations, funding agreements and life contracts for which we have little to no discretionary ability to change the rates of interest payable to the respective policyholder. A significant majority of our deferred annuity products have crediting rates that we may reset annually upon renewal following the expiration of the current guaranteed period. While we have the contractual ability to lower these crediting rates to the guaranteed minimum levels, our willingness to do so may be limited by competitive pressures.

See *Item 7A. Quantitative and Qualitative Disclosures About Market Risks*, which includes a discussion regarding interest rate and other significant risks and our strategies for managing these risks.

COVID-19

The spread of COVID-19 has resulted in significant volatility in the financial markets. The extent to which COVID-19 and the resulting impact on economic conditions and the financial markets may impact our business will depend on future developments and represents a material uncertainty to our business.

Risks and Mitigation Measures

The spread of COVID-19 presents three principal risks to our business: 1) business continuity risk; 2) market risk; and 3) liquidity risk, including that resulting from policyholder behavior.

Business Continuity Risk. The spread of COVID-19 threatens the health and safety of our most valuable asset, our people. To mitigate the risk that the virus infects members of our workforce, to ensure the continuity of our operations throughout the duration of this pandemic and to ensure uninterrupted servicing of the policyholders who have entrusted us for their retirement needs, during March 2020 we implemented our business continuity plan. Pursuant to that plan, we implemented remote work protocols pursuant to which the significant majority of our employees worked remotely, with only certain operationally essential employees working at our facilities, to the extent lawfully permitted. For the operationally essential employees who continued working at our facilities, we implemented new safety protocols that incorporated recommendations, guidelines and regulations from the Center for Disease Control and other national, state and local health authorities, including mandated temperature screenings upon entering the building; the appropriate practice of social distancing, which includes but is not limited to a reduction in the number of people allowed in conference rooms and limiting elevator car capacity; the requirement to wear face coverings; and limitations on movement in the building, among other requirements designed to reduce the risk of transmission between employees (collectively, Safety Protocols). In addition, we implemented enhanced cleaning protocols, which include increased staff to clean common areas; availability of cleaning supplies, face coverings and hand sanitizer throughout our facilities that are operational; and actively encouraging our employees to adopt enhanced hygiene practices.

On June 1, 2020, we commenced our repopulation plan and by October 31, 2020, substantially all of our workforce had returned to the office. Prior to the commencement of our repopulation plan, all employees were required to complete a comprehensive training covering our repopulation plan and our Safety Protocols. Due to worsening conditions in our local communities, on November 10, 2020, we implemented a workplace rotation plan to reduce our office operating capacity in our West Des Moines office to 50% and on December 10, 2020, we reinstituted remote work arrangements at our Bermuda headquarters. On January 11, 2021, the first wave of employees returned to our Bermuda location and on January 19, 2021, our West Des Moines location returned to standard operating capacity. As of February 15, 2021, our Bermuda location was operating at 50% capacity. We have implemented case investigation and contact tracing procedures to appropriately identify and quarantine those individuals who have been or may have been exposed to the virus. As of February 15, 2021, we had 10 employees who had been certified as contact tracers through Johns Hopkins University. We have been successful in implementing our business continuity and repopulation plans and to date have experienced no material impairment to our business operations. We continue to closely monitor our situation and the recommendations and guidelines issued by national, state and local health authorities.

Market Risk. The effects of the spread of COVID-19 on economic conditions and the financial markets may trigger or increase the market risks to which we are subject, namely interest rate risk, credit risk and public equity risk. The spread of COVID-19 and the Federal Reserve's responsive measures resulted in abrupt and significant decreases in interest rates and abrupt and significant increases in credit spreads. Changes in interest rates and credit spreads may result in a decrease in the value of our invested assets. To the extent that we needed to sell assets at these decreased values in order to satisfy our obligations, we would realize losses. However, approximately 75% of our deferred annuities have surrender charges, which we believe greatly reduce the likelihood and magnitude of unexpected withdrawals. Further, our PRT and funding agreement obligations are predominantly non-surrenderable. In addition, we mitigate interest rate risk by managing the effective duration of our assets and liabilities. In doing so, we closely monitor and manage our net duration mismatch as well as our cash inflows and outflows. Decreases in interest rates impact the interest income that we receive on our floating rate assets. For the year ended December 31, 2020, we recognized $273 million less in floating rate income than we recognized for the year ended December 31, 2019, primarily as a result of the declines in interest rates occurring during 2020.

Certain companies that issued the securities that we hold in our investment portfolio are more likely to experience financial hardship as a result of the economic effects of COVID-19. We mitigate such risk by actively managing our investment portfolio and attempting to exit or reduce exposures we deem to carry disproportionate risk when compared to their return profile.

We are exposed to public equity risk through the index crediting on our FIA products, our AOG unit holdings and our common stock holdings in OneMain Holdings, Inc. (OneMain). We effectively eliminate the public equity risk arising from the index crediting on our FIA products by hedging the relevant index performance over the crediting period. Though this results in an effective hedge for economic purposes, because the instruments used to hedge the index crediting period are for a shorter term than the FIA contract, the hedge is not deemed effective for accounting purposes and results in the recognition of gains and losses from period to period. The public equity volatility arising from our holdings of AOG Units and OneMain stock is unhedged. For the year ended December 31, 2020, we recognized an income statement impact of $23 million resulting from an increase in the market value of our AOG and OneMain holdings, partially offset by losses on our FIA products (net of offsets).

Liquidity Risk. In the current market environment, liquidity risk can arise in several areas of our business, including but not limited to asset-liability mismatch and policyholder behavior risk. As noted above, most of our deferred annuities have surrender charges, which reduce the likelihood and magnitude of expected withdrawals, and our PRT and funding agreement obligations are predominantly non-surrenderable.

To be prepared to capitalize on growth opportunities that may arise in the current market environment as well as to manage any near-term liquidity risk, we have strategically increased our available liquidity. As of December 31, 2020, we had approximately $11.1 billion of available liquidity comprised of $7.7 billion of cash and approximately $3.4 billion of undrawn capacity under various committed financing facilities. We have taken measures to increase our financial flexibility, including negotiating new committed lending facilities. We have also entered into several new securities repurchase arrangements with different financial institutions to provide access to additional short-term liquidity, to the extent available. As economic conditions have continued to stabilize, we have been investing our excess liquidity in yield producing assets.

With a record number of individuals finding themselves abruptly out of work and searching for sources of liquidity, we face policyholder behavior risk in the form of increased withdrawal levels and lapse rates. We have been closely monitoring policyholder behavior. As of January 31, 2021, we had noticed no material adverse change in policyholder behavior. We mitigate policyholder behavior risk by monitoring and projecting cash inflows and outflows and by maintaining greater levels of available liquidity.

Emerging Trends

As a result of the spread of COVID-19, the resulting impact on economic conditions and the financial markets and the mitigation efforts we have undertaken in response, we expect to see several trends impacting our future operating results.

First, we have held a greater proportion of our invested assets in cash and other liquid assets which has lowered our net investment earned rates and net investment spread. While we have continued to invest our excess cash in yield producing assets, we expect that our holdings of cash and other liquid assets may remain elevated in the near-term. We expect that as we deploy these holdings and redeploy the Jackson investment portfolio, we will experience increases in net investment earned rates and net investment spread.

Second, we expect that the current market environment will cause certain issuers of securities held in our investment portfolio to experience financial hardship, which could result in the recognition of increased credit losses. For the year ended December 31, 2020, we increased our reserve for credit losses, net of noncontrolling interests, by $68 million, post-adoption of the new accounting standard regarding accounting for current expected credit losses. We cannot predict the duration or severity of the current economic downturn. However, our ultimate loss experience resulting therefrom could be material and could cause our financial position, results of operations, cash flows and liquidity to differ materially from that presented herein.

Third, we have experienced increased volatility in the valuation of our alternative investments. In light of the current market environment, we may continue to experience such volatility in future periods. Given that approximately 50% of our alternative investments are accounted for on a one to three month lag, our financial results as they relate to the performance of our alternative investments may not be reflective of the economic conditions of a particular reporting period.

Fourth, the substantial decrease in interest rates for the year ended December 31, 2020 will have a negative impact on adjusted operating income if the current rates persist for a prolonged period. Currently, we estimate that a 25 basis point decrease in interest rates that persists for a 12-month period will result in an approximate $35 – $45 million decrease in adjusted operating income.

The spread of COVID-19, the resulting impact on economic conditions and the financial markets and the mitigating efforts we have and will undertake may have consequences to our business that are unforeseen at this time. The emerging trends identified above do not purport to be complete and actual experience may differ materially from our current expectations.

Discontinuation of LIBOR

The FCA had previously announced that it intended to stop persuading or compelling banks to submit LIBOR rates after 2021. On December 4, 2020, the IBA published its consultation on its intention to cease publication of overnight, 1-, 3-, 6- and 12-month USD LIBOR settings immediately following the LIBOR publication on June 30, 2023. The consultation closed on January 25, 2021 and the IBA is expected to share results of the consultation with the FCA and to publish a feedback statement summarizing responses from the consultation in short order. We believe that substantially all of our exposure to LIBOR involves the LIBOR settings subject to continued publication through June 30, 2023. The FCA has indicated that it is supportive of the IBA's USD LIBOR consultation. The discontinuation of LIBOR could have a significant impact on the financial markets and represents a material uncertainty to our business. To manage the uncertainty surrounding the discontinuation of LIBOR we have established a LIBOR transition team and a transition plan. We have created an Executive Steering Committee composed of senior executives to coordinate and oversee the execution of our plan.

The effect of the discontinuation of LIBOR on legacy or new contracts to which we have exposure or the activities in our businesses will vary depending on (1) the character of existing fallback provisions in individual contracts and (2) whether, how, and when industry participants develop and widely adopt new reference rates and fallbacks for both legacy and new contracts. Accordingly, it is difficult to predict the full impact of the transition away from LIBOR on our contracts whose value is tied to LIBOR. The value or profitability of these contracts may be adversely affected.

As of December 31, 2020, we had contracts tied to LIBOR in the notional amounts set forth in the table below:

(In millions)	Total Exposure	Extending Beyond 2021	Extending Beyond June 30, 2023
Investments	$ 27,209	$ 24,127	$ 21,515
Product Liabilities	14,538	6,845	196
Derivatives Hedging Product Liabilities	18,144	8,555	1,133
Other Derivatives	370	370	286
Other Contracts	2,963	2,663	2,113
Total notional of contracts tied to LIBOR	$ 63,224	$ 42,560	$ 25,243

Investments

As of December 31, 2020, our investments tied to LIBOR were in the following asset classes:

(In millions)	Total Exposure	Extending Beyond 2021	Extending Beyond June 30, 2023
Multi-lateral Arrangements			
Corporates	$ 840	$ 520	$ 304
RMBS	3,907	3,787	3,418
CMBS	414	93	48
CLO	13,688	13,472	13,221
ABS	2,444	2,386	2,381
Bank Loans	448	421	333
Total Multi-lateral Arrangements	21,741	20,679	19,705
Bi-lateral Arrangements			
CML	5,317	3,297	1,659
RML	151	151	151
Total Bi-lateral Arrangements	5,468	3,448	1,810
Total investments tied to LIBOR	$ 27,209	$ 24,127	$ 21,515

Of the total notional value of investment-related contracts tied to LIBOR, extending beyond 2021 and June 30, 2023, $20.7 billion or 85.7% and $19.7 billion or 91.6%, respectively, relate to multi-lateral arrangements. These arrangements are typically characterized by a large, diverse set of unrelated holders, the majority or all of whom must consent to amendments to the terms of the underlying investment instrument. Generally, when the amendments concern a material term such as the determination of interest, consent must be unanimous. Given the collective action issues inherent in such structures, such consent is typically impracticable and beyond our control. The existence and character of fallback provisions affected by the discontinuation of LIBOR vary widely from instrument to instrument. Many of our legacy contracts may not contemplate the discontinuation of LIBOR and upon LIBOR's discontinuation may result in the conversion of the instrument from a floating- to a fixed-rate instrument or may involve a significant degree of uncertainty as to the method of determining interest. To the extent that such legacy arrangements do not contemplate the permanent discontinuation of LIBOR, we would most likely look to some broad-based solution, such as the Alternative Reference Rates Committee's proposed New York law amendment, to rectify such deficiency. In the absence of such a solution, we would likely be required to undertake a re-evaluation of affected investments, which might result in the disposition of individual positions. To the extent that individual positions are retained, we may incur adverse financial consequences, including any mark-to-market impacts resulting from those investments that convert from a floating to a fixed rate. To the extent that the fallback rates ultimately used to determine interest payable on structured securities do not align with the fallback rates used to determine interest payable on the underlying assets, economic losses could be sustained on the overall structure.

The remaining notional value of investment-related contracts tied to LIBOR extending beyond 2021 and June 30, 2023 of $3.4 billion or 14.3% and $1.8 billion or 8.4%, respectively, relates to bi-lateral arrangements that are capable of being amended through negotiation with the relevant counterparty.

As our investment manager, Apollo maintains the documentation associated with the assets in our investment portfolio. We are therefore dependent upon Apollo for the successful completion of our LIBOR transition efforts relating to our investment portfolio. See *Part I–Item 1A. Risk Factors–Risks Relating to Our Business Operations–Uncertainty relating to the LIBOR Calculation process and the phasing out of LIBOR after a future date may adversely affect the value of our investment portfolio, our ability to achieve our hedging objectives and our ability to issue funding agreements bearing a floating rate of interest*. Apollo's failure to fulfill its responsibilities could have an adverse impact on our results of operations and ability to timely report accurate financial information.

Product Liabilities and Associated Hedging Instruments

As of December 31, 2020, we had product liabilities with a notional value of approximately $14.5 billion for which LIBOR is a component in the determination of interest credited, of which we expect $6.8 billion to have a current crediting term that extends beyond 2021 and $196 million to have a current crediting term that extends beyond June 30, 2023. For purposes of evaluating our exposure to LIBOR, we only consider our exposure to the current crediting term, which is typically one to two years. Upon renewal of the crediting term, we have the ability to migrate policyholders into new strategies not involving LIBOR. Generally, there are two categories of indices that use LIBOR in the determination of interest credited, "excess return" indices (return of index in excess of LIBOR) and indices that use LIBOR as a means to control volatility. The indices to which these products are tied are primarily proprietary indices for which key inputs are determined by the index sponsor. The index sponsor generally has the right to unilaterally change the reference rate upon the discontinuation of LIBOR. As a result, we do not anticipate any administrative concerns in connection with the transition from LIBOR to a replacement rate with respect to these products.

As of December 31, 2020, we held derivatives with a notional value of approximately $18.1 billion to hedge our exposure to these product liabilities, of which we expect $8.6 billion to extend beyond 2021 and $1.1 billion to extend beyond June 30, 2023. Included within this category are $4.2 billion of Eurodollar futures, of which we expect $2.3 billion and $942 million to extend beyond 2021 and June 30, 2023, respectively. Exchange traded products, such as Eurodollar futures, will follow the CME Group Inc.'s approach regarding the discontinuation of LIBOR. The remaining derivatives in this category are primarily purchased to hedge the current crediting period. We will be required to purchase new derivatives in future periods to hedge future crediting periods associated with the related existing product liabilities, which will expose us to potential basis mismatch to the extent that the reference rate for the product liability is not the same as the reference rate for the derivative instrument. These derivatives are entered into pursuant to an ISDA Master Agreement and will transition to SOFR in accordance with the process described below under the caption *Other Derivatives*.

Other Derivatives

Our other derivative contracts tied to LIBOR are generally entered into pursuant to an ISDA Master Agreement. ISDA published the ISDA 2020 IBOR Fallbacks Protocol (Protocol) and released Supplement 70 to the 2006 ISDA Definitions (Supplement) on October 23, 2020. The Protocol and Supplement include appropriate fallbacks that contemplate the permanent discontinuation of LIBOR. In January 2021, we joined industry peers by adhering to the Protocol and terms of the Supplement, each of which became effective on January 25, 2021. With respect to future transactions, we will also amend certain legacy ISDAs to confirm incorporation of the 2006 ISDA Definitions. To the extent that the fallbacks incorporated into our other derivative contracts result in the use of a replacement rate that differs from that employed in the contract being hedged, we may experience basis mismatch. The Protocol contains templates for possible bilateral amendments to legacy contracts for situations in which the fallbacks contemplated by the Protocol give rise to potential basis risk. We intend to evaluate whether and the extent to which we are subject to such basis risk, as well as the possibility of using the available templates to mitigate such risk.

In addition to the exposure set forth in the table above, since December 31, 2020, we have added an additional $2.2 billion of derivatives tied to LIBOR, all of which are expected to extend beyond June 30, 2023. Given our adherence to the Protocol and terms of the Supplement, all of these derivatives incorporate provisions that contemplate the permanent discontinuation of LIBOR.

Other Contracts and Other Sources of Exposure

The "Other Contracts" category is comprised of our credit agreement, floating rate funding agreements and fixed-to-float Series A preference shares, all of which contemplate the permanent discontinuation of LIBOR, are tied to LIBOR in a manner that is not expected to have a significant impact upon LIBOR's discontinuation or have fallback provisions in place that provide for the determination of interest after the discontinuation of LIBOR. In addition to the other contracts for which we have quantified our exposure, we are party to contracts that are tied to LIBOR based upon the occurrence of some remote contingency, such as the accrual of penalty interest, or for which LIBOR is otherwise not a material term of the contract. These contracts do not lend themselves to quantification and are lower in priority in our LIBOR remediation efforts. Finally, LIBOR is used as a component in our internal derivative valuation models. We have begun to transition the benchmark yield curve in such models from LIBOR to the Secured Overnight Financing Rate and we expect to complete the transition prior to the discontinuation of LIBOR. Such transition may affect the valuation of our derivative instruments.

We can provide no assurance that we will be successful at fully implementing our plan prior to the discontinuation of LIBOR. Completion of certain components of our plan are contingent upon market developments and are therefore not fully within our control. To the extent management effort and attention is focused on other matters, such as responding to the risks posed by COVID-19, the timely completion of our plan could become more difficult. Failure to fully implement our plan prior to the discontinuation of LIBOR may have a material adverse effect on our business, financial position, results of operations and cash flows and on our ability to timely report accurate financial information.

Demographics

Over the next four decades, the retirement-age population is expected to experience unprecedented growth. Technological advances and improvements in healthcare are projected to continue to contribute to increasing average life expectancy, and aging individuals must be prepared to fund retirement periods that will last longer than ever before. Further, many working households in the United States do not have adequate retirement savings. As a tool for addressing the unmet need for retirement planning, we believe that many Americans have begun to look to tax-efficient savings products with low-risk or guaranteed return features and potential equity market upside. Our tax-efficient savings products are well positioned to meet this increasing customer demand.

Competition

We operate in highly competitive markets. We face a variety of large and small industry participants, including diversified financial institutions and insurance and reinsurance companies. These companies compete in one form or another for the growing pool of retirement assets driven by a number of external factors such as the continued aging of the population and the reduction in safety nets provided by governments and private employers. In the markets in which we operate, scale and the ability to provide value-added services and build long-term relationships are important factors to compete effectively. We believe that our leading presence in the retirement market, diverse range of capabilities and broad distribution network uniquely position us to effectively serve consumers' increasing demand for retirement solutions, particularly in the FIA market.

According to LIMRA, total fixed annuity market sales in the United States were $89.4 billion for the nine months ended September 30, 2020, an 18.0% decrease from the same time period in 2019 as interest rates pulled down crediting rates in all fixed product lines. In the total fixed annuity market, for the nine months ended September 30, 2020 (the most recent period for which specific market share data is available), we were the 5th largest company based on sales of $5.4 billion, translating to a 6.0% market share. For the nine months ended September 30, 2019, our market share was 5.2% with sales of $5.6 billion.

According to LIMRA, total fixed annuity sales in the United States were $139.8 billion for the year ended December 31, 2019, a 4.7% increase from the year ended December 31, 2018. In the total fixed annuity market, for the year ended December 31, 2019, we were the 5th largest company based on sales of $6.8 billion, translating to a 4.8% market share. For the year ended December 31, 2018, our market share was 5.6% with sales of $7.5 billion.

FIAs have been one of the fastest growing annuity products, having grown from $27.3 billion in sales for the year ended December 31, 2005 to $73.5 billion in sales for the year ended December 31, 2019. According to LIMRA data, for the nine months ended September 30, 2020 (the most recent period for which specific market share data is available), we were the largest provider of FIAs based on sales of $4.0 billion, and our market share for the same period was 9.6%. For the nine months ended September 30, 2019, we were the 2nd largest provider of FIAs based on sales of $5.0 billion, translating to a 8.9% market share.

According to LIMRA, for the year ended December 31, 2019, we were the 2nd largest provider of FIAs based on sales of $6.1 billion, and our market share for the same period was 8.3%. For the year ended December 31, 2018, we were the 2nd largest provider of FIAs based on sales of $6.6 billion, translating to a 9.4% market share.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Key Operating and Non-GAAP Measures

In addition to our results presented in accordance with GAAP, we present certain financial information that includes non-GAAP measures. Management believes the use of these non-GAAP measures, together with the relevant GAAP measures, provides information that may enhance an investor's understanding of our results of operations and the underlying profitability drivers of our business. The majority of these non-GAAP measures are intended to remove from the results of operations the impact of market volatility (other than with respect to alternative investments) as well as integration, restructuring and certain other expenses which are not part of our underlying profitability drivers, as such items fluctuate from period to period in a manner inconsistent with these drivers. These measures should be considered supplementary to our results in accordance with GAAP and should not be viewed as a substitute for the corresponding GAAP measures. See *Non-GAAP Measure Reconciliations* and *Item 6. Selected Financial Data - Non-GAAP Measures* for the appropriate reconciliations to the corresponding GAAP measures.

Adjusted Operating Income (Loss) Available to Common Shareholders

Adjusted operating income (loss) available to common shareholders is a non-GAAP measure used to evaluate our financial performance excluding market volatility and expenses related to integration, restructuring, stock compensation and other expenses. Our adjusted operating income (loss) available to common shareholders equals net income (loss) available to AHL common shareholders adjusted to eliminate the impact of the following (collectively, the non-operating adjustments):

- **Investment Gains (Losses), Net of Offsets—**Consists of the realized gains and losses on the sale of AFS securities, the change in fair value of reinsurance assets, unrealized gains and losses, changes in the credit loss allowance, and other investment gains and losses. Unrealized, allowances and other investment gains and losses are comprised of the fair value adjustments of trading securities (other than CLOs) and investments held under the fair value option, derivative gains and losses not hedging FIA index credits, and the change in credit loss allowances recognized in operations net of the change in AmerUs Closed Block fair value reserve related to the corresponding change in fair value of investments and the change in unit-linked reserves related to the corresponding trading securities. Investment gains and losses are net of offsets related to DAC, DSI, and VOBA amortization and changes to guaranteed lifetime withdrawal benefit (GLWB) and guaranteed minimum death benefit (GMDB) reserves (together, GLWB and GMDB reserves represent rider reserves) as well as the MVAs associated with surrenders or terminations of contracts.

- **Change in Fair Values of Derivatives and Embedded Derivatives – FIAs, Net of Offsets—**Consists of impacts related to the fair value accounting for derivatives hedging the FIA index credits and the related embedded derivative liability fluctuations from period to period. The index reserve is measured at fair value for the current period and all periods beyond the current policyholder index term. However, the FIA hedging derivatives are purchased to hedge only the current index period. Upon policyholder renewal at the end of the period, new FIA hedging derivatives are purchased to align with the new term. The difference in duration between the FIA hedging derivatives and the index credit reserves creates a timing difference in earnings. This timing difference of the FIA hedging derivatives and index credit reserves is included as a non-operating adjustment, net of offsets related to DAC, DSI, and VOBA amortization and changes to rider reserves.

  We primarily hedge with options that align with the index terms of our FIA products (typically 1–2 years). On an economic basis, we believe this is suitable because policyholder accounts are credited with index performance at the end of each index term. However, because the term of an embedded derivative in an FIA contract is longer-dated, there is a duration mismatch which may lead to mismatches for accounting purposes.

- **Integration, Restructuring, and Other Non-operating Expenses—**Consists of restructuring and integration expenses related to acquisitions and block reinsurance costs as well as certain other expenses, which are not predictable or related to our underlying profitability drivers.

- **Stock Compensation Expense—**Consists of stock compensation expenses associated with our share incentive plans, excluding our long-term incentive plan, which are not related to our underlying profitability drivers and fluctuate from time to time due to the structure of our plans.

- **Bargain Purchase Gain—**Consists of adjustments to net income (loss) available to AHL common shareholders as they are not related to our underlying profitability drivers.

- **Income Tax (Expense) Benefit – Non-operating—**Consists of the income tax effect of non-operating adjustments and is computed by applying the appropriate jurisdiction's tax rate to the non-operating adjustments that are subject to income tax.

We consider these non-operating adjustments to be meaningful adjustments to net income (loss) available to AHL common shareholders for the reasons discussed in greater detail above. Accordingly, we believe using a measure which excludes the impact of these items is useful in analyzing our business performance and the trends in our results of operations. Together with net income (loss) available to AHL common shareholders, we believe adjusted operating income (loss) available to common shareholders provides a meaningful financial metric that helps investors understand our underlying results and profitability. Adjusted operating income (loss) available to common shareholders should not be used as a substitute for net income (loss) available to AHL common shareholders.

Adjusted Operating ROE

Adjusted operating ROE is a non-GAAP measure used to evaluate our financial performance excluding the impacts of AOCI and the cumulative change in fair value of funds withheld and modco reinsurance assets, net of DAC, DSI, rider reserve and tax offsets. Adjusted AHL common shareholders' equity is calculated as the ending AHL shareholders' equity excluding AOCI, the cumulative change in fair value of funds withheld and modco reinsurance assets and preferred stock. Adjusted operating ROE is calculated as the adjusted operating income (loss) available to common shareholders, divided by average adjusted AHL common shareholders' equity. These adjustments fluctuate period to period in a manner inconsistent with our underlying profitability drivers as the majority of such fluctuation is related to the market volatility of the unrealized gains and losses associated with our AFS securities. Except with respect to reinvestment activity relating to acquired blocks of businesses, we typically buy and hold AFS investments to maturity throughout the duration of market fluctuations, therefore, the period-over-period impacts in unrealized gains and losses are not necessarily indicative of current operating fundamentals or future performance. Accordingly, we believe using measures which exclude AOCI and the cumulative change in fair value of funds withheld and modco reinsurance assets are useful in analyzing trends in our operating results. To enhance the ability to analyze these measures across periods, interim periods are annualized. Adjusted operating ROE should not be used as a substitute for ROE. However, we believe the adjustments to net income (loss) available to AHL common shareholders and AHL common shareholders' equity are significant to gaining an understanding of our overall financial performance.

Adjusted Operating Earnings (Loss) Per Common Share, Weighted Average Common Shares Outstanding – Adjusted Operating and Adjusted Book Value Per Common Share

Adjusted operating earnings (loss) per common share, weighted average common shares outstanding – adjusted operating and adjusted book value per common share are non-GAAP measures used to evaluate our financial performance and financial condition. The non-GAAP measures adjust the number of shares included in the corresponding GAAP measures to reflect the conversion or settlement of all shares and other stock-based awards outstanding. We believe these measures represent an economic view of our share counts and provide a simplified and consistent view of our outstanding shares. Adjusted operating earnings (loss) per common share is calculated as the adjusted operating income (loss) available to common shareholders, over the weighted average common shares outstanding – adjusted operating. Adjusted book value per common share is calculated as the adjusted AHL common shareholders' equity divided by the adjusted operating common shares outstanding. Effective February 28, 2020, all Class B common shares were converted into Class A common shares and all Class M common shares were converted into warrants and Class A common shares. Our Class B common shares were economically equivalent to Class A common shares and were convertible to Class A common shares on a one-for-one basis at any time. Our Class M common shares were in the legal form of shares but economically functioned as options as they were convertible into Class A common shares after vesting and payment of the conversion price. In calculating Class A diluted earnings per share on a GAAP basis, we are required to apply sequencing rules to determine the dilutive impacts, if any, of our Class B common shares, Class M common shares and any other stock-based awards. To the extent our Class B common shares, Class M common shares and/or any other stock-based awards were not dilutive, after considering the dilutive effects of the more dilutive securities in the sequence, they were excluded. Weighted average common shares outstanding – adjusted operating and adjusted operating common shares outstanding assume conversion or settlement of all outstanding items that are able to be converted to or settled in Class A common shares, including the impacts of Class B common shares on a one-for-one basis, the impacts of all Class M common shares net of the conversion price and any other stock-based awards, but excluding any awards for which the exercise or conversion price exceeds the market value of our Class A common shares on the applicable measurement date. For certain historical periods, Class M shares were not included due to issuance restrictions which were contingent upon our IPO. Adjusted operating earnings (loss) per common share, weighted average common shares outstanding – adjusted operating and adjusted book value per common share should not be used as a substitute for basic earnings (loss) per share – Class A common shares, basic weighted average common shares outstanding – Class A or book value per common share. However, we believe the adjustments to the shares and equity are significant to gaining an understanding of our overall results of operations and financial condition.

Adjusted Debt to Capital Ratio

Adjusted debt to capital ratio is a non-GAAP measure used to evaluate our capital structure excluding the impacts of AOCI and the cumulative change in fair value of funds withheld and modco reinsurance assets, net of DAC, DSI, rider reserve and tax offsets. Adjusted debt to capital ratio is calculated as total debt divided by adjusted AHL shareholders’ equity. Adjusted debt to capital ratio should not be used as a substitute for the debt to capital ratio. However, we believe the adjustments to shareholders’ equity are significant to gaining an understanding of our capitalization, debt utilization and debt capacity.

Retirement Services Net Investment Spread, Investment Margin on Deferred Annuities and Operating Expenses

Net investment spread is a key measure of the profitability of our Retirement Services segment. Net investment spread measures our investment performance less the total cost of our liabilities. Net investment earned rate is a key measure of our investment performance, while cost of funds is a key measure of the cost of our policyholder benefits and liabilities. Investment margin on our deferred annuities measures our investment performance less the cost of crediting for our deferred annuities, which make up a significant portion of our net reserve liabilities.

Net investment earned rate is a non-GAAP measure we use to evaluate the performance of our net invested assets that does not correspond to GAAP net investment income. Net investment earned rate is computed as the income from our net invested assets divided by the average net invested assets, excluding the impacts of our investment in Apollo, for the relevant period. To enhance the ability to analyze these measures across periods, interim periods are annualized. The adjustments to net investment income to arrive at our net investment earned rate add (a) alternative investment gains and losses, (b) gains and losses related to trading securities for CLOs, (c) net VIE impacts (revenues, expenses and noncontrolling interest), (d) forward points gains and losses on foreign exchange derivative hedges and (e) the change in fair value of reinsurance assets, and removes the proportionate share of the ACRA net investment income associated with the ACRA noncontrolling interest as well as the gain or loss on our investment in Apollo. We include the income and assets supporting our change in fair value of reinsurance assets by evaluating the underlying investments of the funds withheld at interest receivables and we include the net investment income from those underlying investments which does not correspond to the GAAP presentation of change in fair value of reinsurance assets. We exclude the income and assets supporting business that we have exited through ceded reinsurance including funds withheld agreements. We believe the adjustments for reinsurance provide a net investment earned rate on the assets for which we have economic exposure.

Cost of funds includes liability costs related to cost of crediting on both deferred annuities and institutional products as well as other liability costs, but does not include the proportionate share of the ACRA cost of funds associated with the noncontrolling interest. Cost of funds is computed as the total liability costs divided by the average net invested assets, excluding our investment in Apollo, for the relevant period. To enhance the ability to analyze these measures across periods, interim periods are annualized.

Cost of crediting includes the costs for both deferred annuities and institutional products. Cost of crediting on deferred annuities is the interest credited to the policyholders on our fixed strategies as well as the option costs on the indexed annuity strategies. With respect to FIAs, the cost of providing index credits includes the expenses incurred to fund the annual index credits, and where applicable, minimum guaranteed interest credited. Cost of crediting on institutional products is comprised of (i) PRT costs, including interest credited, benefit payments and other reserve changes, net of premiums received when issued, and (ii) funding agreement costs, including the interest payments and other reserve changes. Cost of crediting is computed as the cost of crediting for deferred annuities and institutional products divided by the average net invested assets, excluding the investment in Apollo, for the relevant periods. Cost of crediting on deferred annuities is computed as the net interest credited on fixed strategies and option costs on indexed annuity strategies divided by the average net account value of our deferred annuities. Cost of crediting on institutional products is computed as the PRT and funding agreement costs divided by the average net institutional reserve liabilities. Our average net invested assets, excluding our investment in Apollo, net account values and net institutional reserve liabilities are averaged over the number of quarters in the relevant period to obtain our associated cost of crediting for such period. To enhance the ability to analyze these measures across periods, interim periods are annualized.

Other liability costs include DAC, DSI and VOBA amortization, change in rider reserves, the cost of liabilities on products other than deferred annuities and institutional products, excise taxes, premiums, product charges and other revenues. We believe a measure like other liability costs is useful in analyzing the trends of our core business operations and profitability. While we believe other liability costs is a meaningful financial metric and enhances our understanding of the underlying profitability drivers of our business, it should not be used as a substitute for total benefits and expenses presented under GAAP.

Net investment earned rate, cost of funds, net investment spread and investment margin on deferred annuities are non-GAAP measures we use to evaluate the profitability of our business. We believe these metrics are useful in analyzing the trends of our business operations, profitability and pricing discipline. While we believe each of these metrics are meaningful financial metrics and enhance our understanding of the underlying profitability drivers of our business, they should not be used as a substitute for net investment income, interest sensitive contract benefits or total benefits and expenses presented under GAAP.

Operating expenses excludes integration, restructuring and other non-operating expenses, stock compensation expense, interest expense and policy acquisition expenses. We believe a measure like operating expenses is useful in analyzing the trends of our core business operations and profitability. While we believe operating expenses is a meaningful financial metric and enhances our understanding of the underlying profitability drivers of our business, it should not be used as a substitute for policy and other operating expenses presented under GAAP.

Net Invested Assets

In managing our business, we analyze net invested assets, which does not correspond to total investments, including investments in related parties, as disclosed in our consolidated financial statements and notes thereto. Net invested assets represents the investments that directly back our net reserve liabilities as well as surplus assets. Net invested assets, excluding our investment in Apollo, is used in the computation of net investment earned rate, which allows us to analyze the profitability of our investment portfolio. Net invested assets includes (a) total investments on the consolidated balance sheets with AFS securities at cost or amortized cost, excluding derivatives, (b) cash and cash equivalents and restricted cash, (c) investments in related parties, (d) accrued investment income, (e) VIE assets, liabilities and noncontrolling interest adjustments, (f) net investment payables and receivables, (g) policy loans ceded (which offset the direct policy loans in total investments) and (h) an allowance for credit losses. Net invested assets also excludes assets associated with funds withheld liabilities related to business exited through reinsurance agreements and derivative collateral (offsetting the related cash positions). We include the underlying investments supporting our assumed funds withheld and modco agreements in our net invested assets calculation in order to match the assets with the income received. We believe the adjustments for reinsurance provide a view of the assets for which we have economic exposure. Net invested assets includes our proportionate share of ACRA investments, based on our economic ownership, but does not include the proportionate share of investments associated with the noncontrolling interest. Net invested assets also includes our investment in Apollo. Our net invested assets, excluding our investment in Apollo, are averaged over the number of quarters in the relevant period to compute our net investment earned rate for such period. While we believe net invested assets is a meaningful financial metric and enhances our understanding of the underlying drivers of our investment portfolio, it should not be used as a substitute for total investments, including related parties, presented under GAAP.

Net Reserve Liabilities

In managing our business, we also analyze net reserve liabilities, which does not correspond to total liabilities as disclosed in our consolidated financial statements and notes thereto. Net reserve liabilities represent our policyholder liability obligations net of reinsurance and is used to analyze the costs of our liabilities. Net reserve liabilities include (a) the interest sensitive contract liabilities, (b) future policy benefits, (c) dividends payable to policyholders, and (d) other policy claims and benefits, offset by reinsurance recoverable, excluding policy loans ceded. Net reserve liabilities include our proportionate share of ACRA reserve liabilities, based on our economic ownership, but does not include the proportionate share of reserve liabilities associated with the noncontrolling interest. Net reserve liabilities is net of the ceded liabilities to third-party reinsurers as the costs of the liabilities are passed to such reinsurers and, therefore, we have no net economic exposure to such liabilities, assuming our reinsurance counterparties perform under our agreements. The majority of our ceded reinsurance is a result of reinsuring large blocks of life business following acquisitions. For such transactions, GAAP requires the ceded liabilities and related reinsurance recoverables to continue to be recorded in our consolidated financial statements despite the transfer of economic risk to the counterparty in connection with the reinsurance transaction. While we believe net reserve liabilities is a meaningful financial metric and enhances our understanding of the underlying profitability drivers of our business, it should not be used as a substitute for total liabilities presented under GAAP.

Sales

Sales statistics do not correspond to revenues under GAAP but are used as relevant measures to understand our business performance as it relates to inflows generated during a specific period of time. Our sales statistics include inflows for fixed rate annuities and FIAs and align with the LIMRA definition of all money paid into an individual annuity, including money paid into new contracts with initial purchase occurring in the specified period and existing contracts with initial purchase occurring prior to the specified period (excluding internal transfers). While we believe sales is a meaningful metric and enhances our understanding of our business performance, it should not be used as a substitute for premiums presented under GAAP.

Net Organic Growth Rate

Net organic growth rate is calculated as the net organic flows divided by average organic net invested assets. Net organic flows are comprised of organic inflows less organic outflows. Organic inflows are the deposits generated from our organic channels, which include retail, flow reinsurance and institutional. Organic outflows are total liability outflows, including full and partial withdrawals on our deferred annuities, death benefits, pension risk transfer benefit payments, payments on payout annuities and maturities of our funding agreements, less liability outflows relating to inorganic acquisitions and block reinsurance transactions and net of outflows attributable to ACRA noncontrolling interest. Average organic net invested assets represent the assets backing our organic channels and is computed as average net invested assets less the assets related to inorganic acquisitions and block reinsurance transactions. To enhance the ability to analyze these measures across periods, interim periods are annualized. We believe net organic growth rate provides a meaningful financial metric that enables investors to assess our growth from the channels that provide recurring inflows. Management uses net organic growth rate to monitor our business performance and the underlying profitability drivers of our business.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Consolidated Results of Operations

The following summarizes the consolidated results of operations:

	Years ended December 31,		
(In millions, except percentages)	2020	2019	2018
Revenues	$ 14,764	$ 16,258	$ 6,637
Benefits and expenses	12,558	13,956	5,462
Income before income taxes	2,206	2,302	1,175
Income tax expense	285	117	122
Net income	1,921	2,185	1,053
Less: Net income attributable to noncontrolling interests	380	13	—
Net income attributable to Athene Holding Ltd.	1,541	2,172	1,053
Less: Preferred stock dividends	95	36	—
Net income available to AHL common shareholders	$ 1,446	$ 2,136	$ 1,053
Earnings per common share - basic Class A	$ 8.51	$ 11.44	$ 5.34
Earnings per common share – diluted Class A[1]	$ 8.34	$ 11.41	$ 5.32
ROE	10.0 %	19.7 %	12.1 %

[1] Diluted earnings per common share on a GAAP basis for Class A common shares, including diluted Class A weighted average common shares outstanding, includes the dilutive impacts, if any, of Class B common shares, Class M common shares and any other stock-based awards.

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

In this section, references to 2020 refer to the year ended December 31, 2020 and references to 2019 refer to the year ended December 31, 2019.

Net Income Available to AHL Common Shareholders

Net income available to AHL common shareholders decreased by $690 million, or 32%, to $1.4 billion in 2020 from $2.1 billion in 2019. ROE decreased to 10.0% in 2020 from 19.7% in 2019. The decrease in net income available to AHL common shareholders was driven by a decrease in revenues of $1.5 billion, an increase in noncontrolling interests of $367 million, an increase in income tax expense of $168 million and an increase in preferred stock dividends of $59 million, partially offset by a decrease in benefits and expenses of $1.4 billion.

Revenues

Revenues decreased by $1.5 billion to $14.8 billion in 2020 from $16.3 billion in 2019. The decrease was driven by a decrease in investment related gains and losses and a decrease in premiums, partially offset by an increase net investment income.

Investment related gains and losses decreased by $1.4 billion to a $3.3 billion gain in 2020 from a $4.7 billion gain in 2019, primarily due to the change in fair value of FIA hedging derivatives, a decrease in equity securities and the change in fair value of trading securities, partially offset by the change in fair value of reinsurance assets. The change in fair value of FIA hedging derivatives decreased $1.4 billion driven by the less favorable performance of the indices upon which our call options are based. The majority of our call options are based on the S&P 500 index which increased 16.3% in 2020, compared to an increase of 28.9% in 2019. Equity securities decreased $243 million primarily due to the impairment of an equity security reflecting adverse changes to market and economic indicators specific to the investment. The unfavorable change in fair value of trading securities of $118 million was comprised primarily by a decrease in AmerUs Closed Block assets and CLO equity securities mainly due to less favorable credit spread tightening, partially offset by the decrease in US Treasury rates. The change in fair value of reinsurance assets increased by $405 million primarily driven by significant growth in our reinsurance asset portfolio as a result of the Jackson reinsurance transaction, partially offset by the unfavorable change in the fair value of the underlying assets related to less favorable credit spread tightening, partially offset by a decrease in US Treasury rates.

Premiums decreased by $419 million to $6.0 billion in 2020 from $6.4 billion in 2019, driven by lower PRT premiums compared to prior year, partially offset by an increase in flow reinsurance payout annuities with life contingencies.

Net investment income increased by $289 million to $4.9 billion in 2020 from $4.6 billion in 2019, primarily driven by favorable alternative investment portfolio performance, a gain on our investment in Apollo of $225 million due to the increase in valuation price and growth in our investment portfolio attributed to strong net flows in 2020, partially offset by lower floating rate investment income of $273 million due to the lower short-term interest rates and higher investment management expenses.

Benefits and Expenses

Benefits and expenses decreased by $1.4 billion to $12.6 billion in 2020 from $14.0 billion in 2019. The decrease was driven by a decrease in interest sensitive contract benefits, a decrease in DAC, DSI and VOBA amortization and a decrease in future policy and other policy benefits, partially offset by an increase in policy and other operating expenses.

Interest sensitive contract benefits decreased by $666 million to $3.9 billion in 2020 from $4.6 billion in 2019, driven by a decrease in FIA fair value embedded derivatives of $1.0 billion and a favorable change in unlocking of assumptions, partially offset by growth in the block of business including the Jackson reinsurance transaction. The change in the FIA fair value embedded derivatives was due to the performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, which increased 16.3% in 2020, compared to an increase of 28.9% in 2019. Additionally, FIA fair value embedded derivatives unlocking in 2020 was $110 million favorable primarily due to lowering future option budgets, while 2019 was $76 million unfavorable mainly attributed to changes in lapse assumptions.

DAC, DSI and VOBA amortization decreased by $445 million to $587 million in 2020 from $1.0 billion in 2019, primarily due to the unfavorable change in investment related gains and losses as a result of an unfavorable change in fair value of reinsurance assets and a $90 million favorable change in unlocking of assumptions, partially offset by growth in the block of business. Unlocking in 2020 was $60 million unfavorable, primarily related to changes in the long-term net investment earned rate and and mortality experience, partially offset by lapse assumptions, while 2019 unlocking was $150 million unfavorable related to changes in the long-term net investment earned rate and lapse assumptions.

Future policy and other policy benefits decreased by $400 million to $7.2 billion in 2020 from $7.6 billion in 2019, primarily attributable to lower PRT obligations, a decrease in the change in AmerUs Closed Block fair value liability and a decrease in the change in rider reserves. The change in the AmerUs Closed Block fair value liability of $49 million was primarily driven by the lower unrealized gains on the underlying investments as credit spreads tightened less than in the prior year, partially offset by the decrease in US Treasury rates. The change in rider reserve of $43 million was primarily due to the unfavorable change in fair value of reinsurance assets, partially offset by growth in the block of business and a $34 million unfavorable change in unlocking of assumptions. Unlocking in 2020 was favorable $26 million related to favorable income rider experience and mortality experience, partially offset by changes in lapse assumptions and long-term net investment earned rate assumptions. The 2019 unlocking impacts were favorable by $60 million related to changes in lapse assumptions, partially offset by changes in the long-term net investment earned rate assumption.

Policy and other operating expenses increased by $111 million to $855 million in 2020 from $744 million in 2019, primarily due to the significant growth in the business and higher interest expense related to recent debt issuances and repurchase agreements.

Taxes

Income tax expense increased by $168 million to $285 million in 2020 from $117 million in 2019. The income tax expense for 2020 was primarily driven by higher income subject to income tax primarily driven by the change in fair value of reinsurance assets and unrealized gains on our investment in Apollo.

Our effective tax rates were 13% in 2020 and 5% in 2019. Our effective tax rates may vary period to period depending primarily upon the relationship of income and loss subject to tax compared to consolidated income and loss before income taxes.

Noncontrolling Interest

Noncontrolling interest increased by $367 million to $380 million in 2020 from $13 million in 2019, driven by net income related to noncontrolling interests in ACRA following the sale of a 67% interest in ACRA to ADIP on October 1, 2019. Effective April 1, 2020, ALRe purchased additional shares in ACRA increasing our ownership in ACRA from 33% to 36.55%. There was no significant noncontrolling interest prior to the ACRA sale to ADIP, and as such, 2020 experienced a full year of noncontrolling interest impacts compared to one quarter of impacts in 2019. Additionally, ACRA grew significantly throughout 2020 due to the Jackson reinsurance transaction.

Preferred Stock Dividends

Preferred stock dividends increased by $59 million to $95 million in 2020 from $36 million in 2019, driven primarily by dividends we paid on preferred stock we issued in 2020.

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Consolidated Results of Operations* in our annual report on Form 10-K for the year ended December 31, 2019 as filed with the SEC on February 20, 2020 (2019 Annual Report) for the results of operations discussion for the year ended December 31, 2019 compared to the year ended December 31, 2018.

Results of Operations by Segment

The following summarizes our adjusted operating income available to common shareholders by segment:

	Years ended December 31,		
(In millions, except percentages)	2020	2019	2018
Net income available to AHL common shareholders	$ 1,446	$ 2,136	$ 1,053
Non-operating adjustments			
Realized gains on sale of AFS securities	27	125	13
Unrealized, allowances and other investment losses	(152)	(4)	(18)
Change in fair value of reinsurance assets	792	1,411	(402)
Offsets to investment gains (losses)	(159)	(538)	133
Investment gains (losses), net of offsets	508	994	(274)
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	(235)	(65)	242
Integration, restructuring and other non-operating expenses	(10)	(70)	(22)
Stock compensation expense	(11)	(12)	(11)
Income tax expense – non-operating	(48)	—	(22)
Less: Total non-operating adjustments	204	847	(87)
Adjusted operating income available to common shareholders	$ 1,242	$ 1,289	$ 1,140
Adjusted operating income (loss) available to common shareholders by segment			
Retirement Services	$ 1,266	$ 1,322	$ 1,201
Corporate and Other	(24)	(33)	(61)
Adjusted operating income available to common shareholders	$ 1,242	$ 1,289	$ 1,140
Adjusted operating earnings per common share[1]	$ 6.42	$ 6.97	$ 5.82
Adjusted operating ROE	12.1 %	14.1 %	13.9 %
Retirement Services adjusted operating ROE	16.9 %	17.3 %	18.4 %

[1] Represents Class A common shares outstanding or weighted average common shares outstanding assuming conversion or settlement of all outstanding items that are able to be converted to or settled in Class A common shares, including the impacts of Class B common shares, Class M common shares and any other stock-based awards, but excluding any awards for which the exercise or conversion price exceeds the market value of our Class A common shares on the applicable measurement date.

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders decreased by $47 million, or 4%. Adjusted operating ROE was 12.1%, down from 14.1% in 2019. The decrease in adjusted operating income available to common shareholders was driven by a decrease in our Retirement Services segment of $56 million, partially offset by an increase in Corporate and Other of $9 million.

Our consolidated net investment earned rate was 4.01% in 2020, a decrease from 4.48% in 2019, due to lower performance of our fixed and other and alternative investment portfolios. Fixed and other net investment earned rate was 3.82% in 2020, a decrease from 4.23% in 2019, primarily driven by lower floating rate investment income, higher levels of cash than in the prior year and lower returns on the assets received in connection with the Jackson reinsurance transaction. Alternative net investment earned rate was 8.01% in 2020, a decrease from 9.84% in 2019, primarily driven by unfavorable performance in the first quarter of 2020 reflecting the COVID-19 impacts on the economy related to credit funds and natural resources, a decline in value of equity positions and lower MidCap returns, partially offset by very favorable AmeriHome performance and Athora returns.

Non-operating Adjustments

Non-operating adjustments decreased by $643 million to $204 million in 2020 from $847 million in 2019. The decrease in non-operating adjustments was primarily driven by the unfavorable change in fair value of reinsurance assets, the unfavorable net change in FIA derivatives and lower realized gains on the sale of AFS securities. The change in fair value of reinsurance assets was unfavorable by $619 million due to less favorable credit spread tightening, partially offset by a decrease in US Treasury rates. Net FIA derivatives were unfavorable by $170 million primarily due to less favorable performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, partially offset by the favorable change in unlocking of $97 million. The FIA embedded derivative unlocking, net of DAC, DSI, VOBA, rider reserve and noncontrolling interest offsets, was favorable by $32 million primarily driven by lowering future option budgets, compared to an unfavorable unlocking of $65 million in 2019, which was mainly attributed to changes in lapse assumptions. Realized gains on the sale of AFS securities decreased $98 million due to realized gains recognized in 2019 reflecting more favorable economic conditions.

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – Results of Operations by Segment* in our 2019 Annual Report for the results of operations by segment discussion for the year ended December 31, 2019 compared to the year ended December 31, 2018.

Retirement Services

Retirement Services is comprised of our United States and Bermuda operations which issue and reinsure retirement savings products and institutional products. Retirement Services has retail operations, which provide annuity retirement solutions to our policyholders. Retirement Services also has reinsurance operations, which reinsure FIAs, MYGAs, traditional one year guarantee fixed deferred annuities, immediate annuities and institutional products from our reinsurance partners. In addition, our institutional operations, including funding agreements and PRT obligations, are included in our Retirement Services segment.

Year Ended December 31, 2020 Compared to the Year Ended December 31, 2019

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders decreased by $56 million, or 4%. Adjusted operating ROE was 16.9%, down from 17.3% in the prior period. The decrease in adjusted operating income available to common shareholders was primarily driven by higher cost of funds and higher operating tax expense, partially offset by higher net investment earnings. Net investment earnings increased $225 million, primarily driven by $16.6 billion of growth in our average net invested assets from prior year attributed to a strong growth in inflows and the Jackson reinsurance transaction, partially offset by lower floating rate investment income and higher levels of cash than in the prior year. Cost of funds was higher by $224 million primarily due to higher cost of crediting of $238 million primarily due to significant growth in the block of business, partially offset by lower other liability costs. Other liability costs decreased $14 million primarily due to favorable rider reserves and DAC amortization related to a favorable change in unlocking of $54 million, partially offset by growth in the block of business and unfavorable change in actuarial experience and market impacts. Unlocking, net of noncontrolling interest, was favorable by $6 million primarily driven by favorable income rider experience and mortality updates, largely offset by long-term net investment earned rate and lapse assumptions, compared to an unfavorable unlocking of $48 million in 2019, which was mainly attributable to changes in the long-term net investment earned rate and lapse assumptions.

Net Investment Spread

	Years ended December 31,		
	2020	2019	2018
Net investment earned rate	4.04 %	4.43 %	4.60 %
Cost of funds	2.73 %	2.93 %	2.90 %
Net investment spread	1.31 %	1.50 %	1.70 %

Net investment spread, which measures the spread on our investment performance less the total cost of our liabilities, decreased 19 basis points to 1.31% in 2020 from 1.50% in 2019. Net investment earned rate decreased primarily due to the decline in fixed and other net investment earned rate and the decrease in alternative net investment earned rate. The fixed and other net investment earned rate decreased to 3.82% in 2020, from 4.23% in 2019 primarily attributed to lower floating rate investment income, higher levels of cash than in the prior year and lower returns on the assets from the Jackson reinsurance transaction. The alternative net investment earned rate decreased to 9.25% in 2020, from 9.32% in 2019, primarily driven by the COVID-19 impacts on the economy, lower credit fund income and a lower MidCap return mainly due to a decrease in valuation reflecting an increase in loan loss assumptions and lower origination volumes reflecting the current interest rate environment, partially offset by very favorable AmeriHome performance mainly due to an increase in valuation reflecting higher origination volumes and increased gains on sale margins.

Cost of funds decreased by 20 basis points to 2.73% in 2020, from 2.93% in 2019, primarily driven by lower other liability costs and cost of crediting. Other liability costs decreased 14 basis points primarily driven by lower other liability costs on the Jackson block and favorable rider reserves and DAC amortization related to a favorable change in unlocking, partially offset by unfavorable change in actuarial experience and market impacts. Cost of crediting decreased 6 basis points primarily driven by a decrease in floating rate funding agreements, lower rates on recently issued funding agreements and PRT transactions as well as lower deferred annuity rates related to favorable rate actions and lower option costs.

Investment Margin on Deferred Annuities

	Years ended December 31,		
	2020	2019	2018
Net investment earned rate	4.04 %	4.43 %	4.60 %
Cost of crediting on deferred annuities	1.95 %	1.97 %	1.95 %
Investment margin on deferred annuities	2.09 %	2.46 %	2.65 %

Investment margin on deferred annuities, which measures our investment performance less the cost of crediting for our deferred annuities, decreased by 37 basis points to 2.09% in 2020, from 2.46% in 2019, driven by a decrease in the net investment earned rate, partially offset by a decrease in the cost of crediting on deferred annuities from the prior year related to favorable rate actions and lower option costs, as we continue to focus on pricing discipline, managing interest rates credited to policyholders and managing the cost of options to fund the annual index credits on our FIA products.

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – Retirement Services* in our 2019 Annual Report for the results of operations discussion for the Retirement Services segment for the year ended December 31, 2019 compared to the year ended December 31, 2018.

Corporate and Other

Corporate and Other includes certain other operations related to our corporate activities such as corporate allocated expenses, merger and acquisition costs, debt costs, preferred stock dividends, certain integration and restructuring costs, certain stock-based compensation and intersegment eliminations. In addition, we also hold capital in excess of the level of capital we hold in Retirement Services to support our operating strategy.

Adjusted Operating Loss Available to Common Shareholders

Adjusted operating loss available to common shareholders decreased by $9 million to $24 million in 2020, from $33 million in 2019. The decrease in adjusted operating loss available to common shareholders was primarily driven by a $165 million gain on our investment in Apollo, net of tax, partially offset by unfavorable alternative investment performance as a result of a decline in value of equity positions, higher preferred stock dividends and higher interest expense.

Year Ended December 31, 2019 Compared to the Year Ended December 31, 2018

See *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations – Corporate and Other* in our 2019 Annual Report for the results of operations discussion for Corporate and Other for the year ended December 31, 2019 compared to the year ended December 31, 2018.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Consolidated Investment Portfolio

We had consolidated investments, including related parties, of $182.4 billion and $130.6 billion as of December 31, 2020 and 2019, respectively. Our investment strategy seeks to achieve sustainable risk-adjusted returns through the disciplined management of our investment portfolio against our long-duration liabilities, coupled with the diversification of risk. The investment strategies utilized by our investment manager focuses primarily on a buy and hold asset allocation strategy that may be adjusted periodically in response to changing market conditions and the nature of our liability profile. Substantially all of our investment portfolio is managed by Apollo, which provides a full suite of services, including direct investment management, asset allocation, mergers and acquisition asset diligence, and certain operational support services, including investment compliance, tax, legal and risk management support. Our relationship with Apollo allows us to take advantage of our generally illiquid liability profile by identifying investment opportunities with an emphasis on earning incremental yield by taking liquidity and complexity risk rather than assuming solely credit risk. Apollo's investment team and credit portfolio managers utilize their deep experience to assist us in sourcing and underwriting complex asset classes. Apollo has selected a diverse array of corporate bonds and more structured, but highly rated asset classes. We also maintain holdings in floating rate and less rate-sensitive instruments, including CLOs, non-agency RMBS and various types of structured products. In addition to our fixed income portfolio, we opportunistically allocate approximately 5% of our portfolio to alternative investments where we primarily focus on fixed income-like, cash flow-based investments.

Net investment income on the consolidated statements of income included management fees under our investment management arrangements with Apollo, inclusive of base and sub-allocation fees, of $490 million, $426 million and $349 million, respectively, during the years ended December 31, 2020, 2019 and 2018. The total amounts we have incurred, directly and indirectly, from Apollo and its affiliates were as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
Investment management agreements[1,2]	$ 627	$ 511	$ 397
Fund investments[3]	86	98	75
Other[4]	54	27	24
Gross fees	767	636	496
ACRA noncontrolling interest[5]	51	6	—
Net fees	$ 716	$ 630	$ 496

[1] *Excludes $3 million, $4 million and $2 million of sub-advisory fees paid to ISG for the benefit of third-party sub-advisors for the years ended December 31, 2020, 2019 and 2018, respectively.*

[2] *Includes $159 million, $89 million and $52 million of fees charged by Apollo to third-party cedants for the years ended December 31, 2020, 2019 and 2018, respectively, with respect to assets supporting obligations reinsured to us. Third-party cedants bear legal responsibility for payment of the investment management fees charged; however, we are the beneficiaries of the services performed and the fees ultimately reduce the settlement payments received from such third-party cedants.*

[3] *Includes total management fees, carried interest (including unrealized but accrued carried interest fees) and other fees, including with respect to those investments we hold as investment funds or other alternative investments.*

[4] *Other primarily relates to fees resulting from shared services, advisory and other agreements with Apollo or its affiliates.*

[5] *Represents those fees incurred directly and indirectly attributable to ACRA, based upon the economic ownership of the noncontrolling interest in ACRA.*

Our net invested assets, which are those that directly back our net reserve liabilities as well as surplus assets, were $150.2 billion and $117.5 billion as of December 31, 2020 and 2019, respectively. Apollo's knowledge of our funding structure and regulatory requirements allows it to design customized strategies and investments for our portfolio. Apollo manages our asset portfolio within the limits and constraints set forth in our Investment and Credit Risk Policy. Under this policy, we set limits on investments in our portfolio by asset class, such as corporate bonds, emerging markets securities, municipal bonds, non-agency RMBS, CMBS, CLOs, commercial mortgage whole loans and mezzanine loans and investment funds. We also set credit risk limits for exposure to a single issuer that vary based on the issuer's ratings. In addition, our investment portfolio is constrained by its scenario-based capital ratio limit and its stressed liquidity limit.

The following table presents the carrying values of our total investments and investments in related parties:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
AFS securities, at fair value	$ 82,853	45.4 %	$ 71,374	54.7 %
Trading securities, at fair value	2,093	1.2 %	2,070	1.6 %
Equity securities	532	0.3 %	247	0.2 %
Mortgage loans, net of allowances	15,264	8.4 %	14,306	11.0 %
Investment funds	803	0.4 %	750	0.6 %
Policy loans	369	0.2 %	417	0.3 %
Funds withheld at interest	48,612	26.7 %	15,181	11.6 %
Derivative assets	3,523	1.9 %	2,888	2.2 %
Short-term investments	222	0.1 %	596	0.5 %
Other investments	572	0.3 %	158	0.1 %
Total investments	154,843	84.9 %	107,987	82.8 %
Investments in related parties				
AFS securities, at fair value	6,520	3.6 %	3,804	2.9 %
Trading securities, at fair value	1,529	0.8 %	785	0.6 %
Equity securities, at fair value	72	— %	64	— %
Mortgage loans, net of allowances	674	0.4 %	653	0.5 %
Investment funds	5,284	2.9 %	3,550	2.7 %
Funds withheld at interest	13,030	7.1 %	13,220	10.1 %
Other investments, net of allowances	469	0.3 %	487	0.4 %
Total related party investments	27,578	15.1 %	22,563	17.2 %
Total investments including related party	$ 182,421	100.0 %	$ 130,550	100.0 %

The increase in our total investments, including related party, as of December 31, 2020 of $51.9 billion compared to December 31, 2019 was primarily driven by an increase in funds withheld at interest assets as a result of the Jackson reinsurance transaction that occurred in June, growth from gross organic inflows of $27.5 billion in excess of gross liability outflows of $13.7 billion, an increase in unrealized gains on AFS securities of $3.3 billion attributed to a decrease in US Treasury rates, an increase in investment funds driven by our investment in Apollo of $1.3 billion and the deployment of proceeds from the issuances of preferred stock and debt. These were partially offset by sales of short-term investments in excess of purchases as well as the establishment of the allowance for credit losses.

Our investment portfolio consists largely of high quality fixed maturity securities, loans and short-term investments, as well as additional opportunistic holdings in investment funds and other instruments, including equity holdings. Fixed maturity securities and loans include publicly issued corporate bonds, government and other sovereign bonds, privately placed corporate bonds and loans, mortgage loans, CMBS, RMBS, CLOs, and ABS.

While the substantial majority of our investment portfolio has been allocated to corporate bonds and structured credit products, a key component of our investment strategy is the opportunistic acquisition of investment funds with attractive risk and return profiles. Our investment fund portfolio consists of funds that employ various strategies including real estate and other real asset funds, credit funds and private equity funds. We have a strong preference for assets that have some or all of the following characteristics, among others: (1) investments that constitute a direct investment or an investment in a fund with a high degree of co-investment; (2) investments with credit- or debt-like characteristics (for example, a stipulated maturity and par value), or alternatively, investments with reduced volatility when compared to pure equity; or (3) investments that we believe have less downside risk.

We hold derivatives for economic hedging purposes to reduce our exposure to the cash flow variability of assets and liabilities, equity market risk, interest rate risk, credit risk and foreign exchange risk. Our primary use of derivative instruments relates to providing the income needed to fund the annual indexed credits on our FIA products. We primarily use fixed indexed options to economically hedge FIA products that guarantee the return of principal to the policyholder and credit interest based on a percentage of the gain in a specific market index.

With respect to derivative positions, we transact with highly rated counterparties, and expect the counterparties to fulfill their obligations under the contracts. We generally use industry standard agreements and annexes with bilateral collateral provisions to further reduce counterparty credit exposure.

Related Party Investments

We hold investments in related party assets primarily comprised of AFS securities, trading securities, investment funds and funds withheld at interest reinsurance receivables which are primarily a result of investments over which Apollo can exercise influence. As of December 31, 2020, these investments totaled $27.6 billion, or 13.5% of our total assets. Related party AFS and trading securities primarily consist of structured securities for which Apollo is the manager of the underlying securitization vehicle and securities issued by Apollo direct origination platforms including PK AirFinance, MidCap and AmeriHome. In each case, the underlying collateral, borrower or other credit party is generally unaffiliated with us. Related party investment funds include strategic investments in direct origination platforms and insurance companies, investments in Apollo managed funds, as well as our investment in Apollo. The funds withheld at interest related party amounts are primarily comprised of the Venerable reinsurance portfolios, which are considered related party even though a significant majority of the underlying assets within the investment portfolios do not have a related party affiliation.

A summary of our related party investments reflecting the nature of the affiliation is as follows:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Carrying Value	Percent of Total Assets	Carrying Value	Percent of Total Assets
Venerable funds withheld reinsurance portfolio	$ 13,030	6.4 %	$ 13,220	9.0 %
Securitizations of unaffiliated assets where Apollo is manager	8,156	4.0 %	5,945	4.0 %
Investments in Apollo funds	2,071	1.0 %	1,675	1.1 %
Strategic investments in Apollo direct origination platforms	1,664	0.8 %	1,054	0.7 %
Strategic investment in Apollo	1,324	0.7 %	—	— %
Strategic investments in insurance companies	1,314	0.6 %	650	0.4 %
Other	19	— %	19	— %
Total related party investments	$ 27,578	13.5 %	$ 22,563	15.2 %

As of December 31, 2020, the majority of the related party investments, or 10.4% of our total assets, are related to the Venerable reinsurance portfolio and securities for which Apollo is the manager of the securitization vehicle, but the underlying collateral, borrower or other credit party is unaffiliated with us. Approximately 3.1% of total assets are comprised of strategic investments in affiliated companies or Apollo funds. The related party net invested assets, which looks through to the underlying assets of the funds withheld and modco reinsurance portfolios' investments, were $18.7 billion, or 12.5% of our total net invested assets as of December 31, 2020. Approximately 7.6% of net invested assets were comprised of securitizations where Apollo was the manager of the securitization vehicle but the underlying collateral, borrower or other credit party is unaffiliated with us, while 4.9% was comprised of strategic investments in affiliated companies or Apollo funds.

AFS Securities

We invest in AFS securities with the intent to hold investments to maturity. In selecting investments, we attempt to source investments that match our future cash flow needs. However, we may sell any of our investments in advance of maturity in order to timely satisfy our liabilities as they become due or in order to respond to a change in the credit profile or other characteristics of the particular investment.

AFS securities are carried at fair value, less allowances for expected credit losses, on our consolidated balance sheets. Changes in fair value of our AFS securities, net of related DAC, DSI and VOBA amortization and the change in rider reserves, are charged or credited to other comprehensive income, net of tax. All changes in the allowance for expected credit losses, whether due to passage of time, change in expected cash flows or change in fair value are recorded through credit loss expense within investment related gains (losses) on the consolidated statements of income.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The distribution of our AFS securities, including related parties, by type is as follows:

	December 31, 2020					
(In millions, except percentages)	Amortized Cost	Allowance for Credit Losses	Unrealized Gains	Unrealized Losses	Fair Value	Percent of Total
AFS securities						
US government and agencies	$ 349	$ —	$ 3	$ (1)	$ 351	0.4 %
US state, municipal and political subdivisions	864	—	169	—	1,033	1.2 %
Foreign governments	330	—	38	—	368	0.4 %
Corporate	51,934	(6)	6,368	(116)	58,180	65.1 %
CLO	9,631	(1)	145	(206)	9,569	10.7 %
ABS	4,259	(6)	140	(123)	4,270	4.8 %
CMBS	2,165	(10)	85	(71)	2,169	2.4 %
RMBS	6,568	(80)	447	(22)	6,913	7.7 %
Total AFS securities	76,100	(103)	7,395	(539)	82,853	92.7 %
AFS securities – related party						
Corporate	213	—	2	—	215	0.2 %
CLO	1,511	(1)	23	(13)	1,520	1.7 %
ABS	4,720	—	95	(30)	4,785	5.4 %
Total AFS securities – related party	6,444	(1)	120	(43)	6,520	7.3 %
Total AFS securities including related party	$ 82,544	$ (104)	$ 7,515	$ (582)	$ 89,373	100.0 %

	December 31, 2019				
(In millions, except percentages)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Percent of Total
AFS securities					
US government and agencies	$ 35	$ 1	$ —	$ 36	— %
US state, municipal and political subdivisions	1,322	220	(1)	1,541	2.1 %
Foreign governments	298	29	—	327	0.4 %
Corporate	44,106	3,332	(210)	47,228	62.8 %
CLO	7,524	21	(196)	7,349	9.8 %
ABS	5,018	124	(24)	5,118	6.8 %
CMBS	2,304	104	(8)	2,400	3.2 %
RMBS	6,872	513	(10)	7,375	9.8 %
Total AFS securities	67,479	4,344	(449)	71,374	94.9 %
AFS securities – related party					
Corporate	18	1	—	19	— %
CLO	951	3	(18)	936	1.3 %
ABS	2,814	37	(2)	2,849	3.8 %
Total AFS securities – related party	3,783	41	(20)	3,804	5.1 %
Total AFS securities including related party	$ 71,262	$ 4,385	$ (469)	$ 75,178	100.0 %

We maintain a diversified AFS portfolio of corporate fixed maturity securities across industries and issuers, and a diversified portfolio of structured securities. The composition of our AFS securities, including related parties, is as follows:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
Corporate				
Industrial other[1]	$ 20,637	23.1 %	$ 14,956	19.9 %
Financial	17,759	19.9 %	15,286	20.3 %
Utilities	13,471	15.1 %	11,217	14.9 %
Communication	3,155	3.5 %	2,739	3.7 %
Transportation	3,373	3.8 %	3,049	4.1 %
Total corporate	58,395	65.4 %	47,247	62.9 %
Other government-related securities				
US state, municipal and political subdivisions	1,033	1.2 %	1,541	2.1 %
Foreign governments	368	0.4 %	327	0.4 %
US government and agencies	351	0.4 %	36	— %
Total non-structured securities	60,147	67.4 %	49,151	65.4 %
Structured securities				
CLO	11,089	12.4 %	8,285	11.0 %
ABS	9,055	10.1 %	7,967	10.6 %
CMBS	2,169	2.4 %	2,400	3.2 %
RMBS				
Agency	29	0.0 %	3	— %
Non-agency	6,884	7.7 %	7,372	9.8 %
Total structured securities	29,226	32.6 %	26,027	34.6 %
Total AFS securities including related party	$ 89,373	100.0 %	$ 75,178	100.0 %

[1] *Includes securities within various industry segments including capital goods, basic industry, consumer cyclical, consumer non-cyclical, industrial and technology.*

The fair value of our AFS securities, including related parties, was $89.4 billion and $75.2 billion as of December 31, 2020 and 2019, respectively. The increase was mainly driven by strong growth from organic inflows in excess of liability outflows, with the resulting funds used to purchase a variety of investments as well as an increase in unrealized gains on AFS securities of $3.3 billion attributed to a decrease in US Treasury rates and the deployment of proceeds from the issuances of preferred stock and debt. These were partially offset by a restructuring of a coinsurance agreement to a funds withheld agreement with an existing reinsurance partner and the establishment of the allowance for credit losses.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The Securities Valuation Office (SVO) of the NAIC is responsible for the credit quality assessment and valuation of securities owned by state regulated insurance companies. Insurance companies report ownership of securities to the SVO when such securities are eligible for filing on the relevant schedule of the NAIC Financial Statement. The SVO conducts credit analysis on these securities for the purpose of assigning an NAIC designation and/or unit price. Generally, the process for assigning an NAIC designation varies based upon whether a security is considered "filing exempt" (General Designation Process). Subject to certain exceptions, a security is typically considered "filing exempt" if it has been rated by a Nationally Recognized Statistical Rating Organization (NRSRO). For securities that are not "filing exempt," insurance companies assign temporary designations based upon a subjective evaluation of credit quality. The insurance company generally must then submit the securities to the SVO within 120 days of acquisition to receive an NAIC designation. For securities considered "filing exempt," the SVO utilizes the NRSRO rating and assigns an NAIC designation based upon the following system:

NAIC designation[1]	NRSRO equivalent rating
1	AAA/AA/A
2	BBB
3	BB
4	B
5	CCC
6	CC and lower

[1] *As of December 31, 2020, the NAIC had introduced 20 NAIC designation modifiers that will be applied to each NAIC designation to determine a security's NAIC designation category (i.e., NAIC 1.A through 1.G, NAIC 2.A through 2.C, NAIC 3.A through 3.C, NAIC 4.A through 4.C, NAIC 5.A through 5.C and NAIC 6). The NAIC intends to eventually assign unique risk-based capital charges to each NAIC designation category; however, as of December 31, 2020, risk-based capital charges remained unchanged regardless of NAIC designation category assigned (i.e., all securities assigned to an NAIC 1 designation category will receive the same risk-based capital charge as of December 31, 2020).*

An important exception to the General Designation Process occurs in the case of non-agency RMBS and CMBS, which are also referred to as modeled loan backed and structured securities (modeled LBaSS). The NRSRO ratings methodology for modeled LBaSS is focused on the likelihood of recovery of all contractual payments, including principal at par, regardless of an investor's carrying value. In effect, the NRSRO rating methodology for modeled LBaSS assumes that the holder is the original purchaser at par. In contrast, the SVO's methodology for modeled LBaSS is focused on determining the risk associated with the recovery of the amortized cost of each security. Because the NAIC's methodology explicitly considers amortized cost and the likelihood of recovery of such amount, we view the NAIC's methodology as the most appropriate means of evaluating the credit quality of our non-agency RMBS and CMBS holdings since a large portion of such holdings were purchased and are carried at significant discounts to par.

The SVO has developed a designation process and provides instruction on modeled LBaSS. In order to establish ratings at the individual security level, the SVO obtains loan-level analysis of each RMBS and CMBS using a selected vendor's proprietary financial model. The SVO ensures that the vendor has extensive internal quality-control processes in place and the SVO conducts its own quality-control checks of the selected vendor's valuation process. The SVO has retained the services of Blackrock, Inc. (Blackrock) to model non-agency RMBS and CMBS owned by US insurers for all years presented herein. Blackrock provides five prices (breakpoints) that are applied to the statutory carrying value of each US insurer's non-agency RMBS and CMBS holdings to determine the appropriate NAIC designation for each such holding.

The NAIC designation determines the associated level of risk-based capital that an insurer is required to hold for all securities owned by the insurer. In general, under the modeled LBaSS process, the larger the discount to par value at the time of determination, the higher the NAIC designation the LBaSS will have.

A summary of our AFS securities, including related parties, by NAIC designation is as follows:

	December 31, 2020			December 31, 2019		
(In millions, except percentages)	Amortized Cost	Fair Value	Percent of Total	Amortized Cost	Fair Value	Percent of Total
NAIC designation						
1	$ 38,171	$ 41,532	46.5 %	$ 36,392	$ 38,667	51.4 %
2	38,231	41,704	46.7 %	30,752	32,336	43.0 %
Total investment grade	76,402	83,236	93.2 %	67,144	71,003	94.4 %
3	4,777	4,853	5.4 %	3,237	3,300	4.4 %
4	1,191	1,145	1.3 %	740	740	1.0 %
5	149	114	0.1 %	102	94	0.1 %
6	25	25	— %	39	41	0.1 %
Total below investment grade	6,142	6,137	6.8 %	4,118	4,175	5.6 %
Total AFS securities including related party	$ 82,544	$ 89,373	100.0 %	$ 71,262	$ 75,178	100.0 %

A significant majority of our AFS portfolio, 93.2% and 94.4% as of December 31, 2020 and 2019, respectively, was invested in assets considered investment grade with a NAIC designation of 1 or 2.

A summary of our AFS securities, including related parties, by NRSRO ratings is set forth below:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
NRSRO rating agency designation				
AAA/AA/A	$ 33,553	37.5 %	$ 28,299	37.7 %
BBB	34,404	38.5 %	29,032	38.6 %
Non-rated[1]	12,732	14.3 %	10,014	13.3 %
Total investment grade	80,689	90.3 %	67,345	89.6 %
BB	4,020	4.5 %	3,403	4.5 %
B	1,030	1.2 %	813	1.1 %
CCC	1,557	1.7 %	1,981	2.6 %
CC and lower	973	1.1 %	1,076	1.4 %
Non-rated[1]	1,104	1.2 %	560	0.8 %
Total below investment grade	8,684	9.7 %	7,833	10.4 %
Total AFS securities including related party	$ 89,373	100.0 %	$ 75,178	100.0 %

[1] *Securities denoted as non-rated by the NRSRO were classified as investment or non-investment grade according to the security's respective NAIC designation. With respect to modeled LBaSS, the NAIC designation methodology differs in significant respects from the NRSRO rating methodology.*

Consistent with the NAIC Process and Procedures Manual, an NRSRO rating was assigned based on the following criteria: (a) the equivalent S&P rating when the security is rated by one NRSRO; (b) the equivalent S&P rating of the lowest NRSRO when the security is rated by two NRSROs; and (c) the equivalent S&P rating of the second lowest NRSRO when the security is rated by three or more NRSROs. If the lowest two NRSRO ratings are equal, then such rating will be the assigned rating. NRSRO ratings available for the periods presented were S&P, Fitch, Moody's Investor Service, DBRS, and Kroll Bond Rating Agency, Inc.

The portion of our AFS portfolio that was considered below investment grade based on NRSRO ratings was 9.7% and 10.4% as of December 31, 2020 and 2019, respectively. The primary driver of the difference in the percentage of securities considered below investment grade by NRSROs as compared to the securities considered below investment grade by the NAIC is the difference in methodologies between the NRSRO and NAIC for RMBS due to investments acquired and/or carried at a discount to par value, as discussed above.

As of December 31, 2020 and 2019, non-rated securities were comprised 54% and 61%, respectively, of corporate private placement securities for which we have not sought individual ratings from an NRSRO, and 18% and 24%, respectively, of RMBS, many of which were acquired at a significant discount to par. We rely on internal analysis and designations assigned by the NAIC to evaluate the credit risk of our portfolio. As of December 31, 2020 and 2019, 92% and 95%, respectively, of the non-rated securities were designated NAIC 1 or 2.

Asset-backed Securities – We invest in ABS which are securitized by pools of assets such as consumer loans, automobile loans, student loans, insurance-linked securities, operating cash flows of corporations and cash flows from various types of business equipment. Our ABS holdings were $9.1 billion and $8.0 billion as of December 31, 2020 and 2019, respectively. The increase in our ABS portfolio is primarily driven by our investment in an ABI-affiliated can and bottling business and the deployment of strong inflows. As of December 31, 2020 and 2019, our ABS portfolio included $8.1 billion (89% of the total) and $7.4 billion (92% of the total), respectively, of securities that are considered investment grade based on NAIC designations, while $8.0 billion (88% of the total) and $7.4 billion (92% of the total), respectively, of securities were considered investment grade based on NRSRO ratings.

Collateralized Loan Obligations – We also invest in CLOs which pay principal and interest from cash flows received from underlying corporate loans. These holdings were $11.1 billion and $8.3 billion as of December 31, 2020 and 2019, respectively.

A summary of our AFS CLO portfolio, including related parties, by NAIC designations and NRSRO quality ratings is as follows:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
NAIC designation				
1	$ 6,786	61.2 %	$ 4,626	55.9 %
2	3,934	35.5 %	3,499	42.2 %
Total investment grade	10,720	96.7 %	8,125	98.1 %
3	356	3.2 %	133	1.6 %
4	9	0.1 %	20	0.2 %
5	4	— %	7	0.1 %
6	—	— %	—	— %
Total below investment grade	369	3.3 %	160	1.9 %
Total AFS CLO including related party	$ 11,089	100.0 %	$ 8,285	100.0 %
NRSRO rating agency designation				
AAA/AA/A	$ 6,781	61.2 %	$ 4,626	55.9 %
BBB	3,930	35.4 %	3,499	42.2 %
Non-rated[1]	9	0.1 %	—	— %
Total investment grade	10,720	96.7 %	8,125	98.1 %
BB	356	3.2 %	133	1.6 %
B	9	0.1 %	20	0.2 %
CCC	4	— %	7	0.1 %
CC and lower	—	— %	—	— %
Total below investment grade	369	3.3 %	160	1.9 %
Total AFS CLO including related party	$ 11,089	100.0 %	$ 8,285	100.0 %

As of December 31, 2020 and 2019, a substantial majority of our AFS CLO portfolio, 96.7% and 98.1%, respectively, was invested in assets considered to be investment grade based upon application of the NAIC's methodology and based on NRSRO ratings. The increase in our CLO portfolio is mainly driven by the deployment of strong inflows in the current year, including into Euro denominated CLOs.

Commercial Mortgage-backed Securities – A portion of our AFS portfolio is invested in CMBS. CMBS are constructed from pools of commercial mortgages. These holdings were $2.2 billion and $2.4 billion as of December 31, 2020 and 2019, respectively. As of December 31, 2020 and 2019, our CMBS portfolio included $1.6 billion (72% of the total) and $2.1 billion (89% of the total), respectively, of securities that are considered investment grade based on NAIC designations, while $1.6 billion (75% of the total) and $1.7 billion (72% of the total), respectively, of securities were considered investment grade based on NRSRO ratings.

Residential Mortgage-backed Securities – A portion of our AFS portfolio is invested in RMBS, which are securities constructed from pools of residential mortgages. These holdings were $6.9 billion and $7.4 billion as of December 31, 2020 and 2019, respectively.

A summary of our AFS RMBS portfolio by NAIC designations and NRSRO quality ratings is as follows:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
NAIC designation				
1	$ 6,196	89.6 %	$ 6,701	90.9 %
2	232	3.4 %	330	4.5 %
Total investment grade	6,428	93.0 %	7,031	95.4 %
3	323	4.7 %	289	3.9 %
4	120	1.7 %	52	0.7 %
5	37	0.5 %	3	— %
6	5	0.1 %	—	— %
Total below investment grade	485	7.0 %	344	4.6 %
Total AFS RMBS	$ 6,913	100.0 %	$ 7,375	100.0 %
NRSRO rating agency designation				
AAA/AA/A	$ 872	12.6 %	$ 715	9.7 %
BBB	635	9.2 %	606	8.2 %
Non-rated[1]	2,187	31.6 %	2,428	32.9 %
Total investment grade	3,694	53.4 %	3,749	50.8 %
BB	233	3.4 %	281	3.8 %
B	261	3.8 %	232	3.2 %
CCC	1,509	21.8 %	1,890	25.6 %
CC and lower	971	14.1 %	1,074	14.6 %
Non-rated[1]	245	3.5 %	149	2.0 %
Total below investment grade	3,219	46.6 %	3,626	49.2 %
Total AFS RMBS	$ 6,913	100.0 %	$ 7,375	100.0 %

[1] *Securities denoted as non-rated by the NRSRO were classified as investment or non-investment grade according to the security's respective NAIC designations. The NAIC designation methodology differs in significant respects from the NRSRO rating methodology.*

A significant majority of our RMBS portfolio, 93.0% and 95.4% as of December 31, 2020 and 2019, respectively, was invested in assets considered to be investment grade based upon an application of the NAIC designations. The NAIC's methodology with respect to RMBS gives explicit effect to the amortized cost at which an insurance company carries each such investment. Because we invested in RMBS after the stresses related to US housing had caused significant downward pressure on prices of RMBS, we carry most of our investments in RMBS at significant discounts to par value, which results in an investment grade NAIC designation. In contrast, our understanding is that in setting ratings, NRSROs focus on the likelihood of recovering all contractual payments, including principal at par value. As a result of a fundamental difference in approach, as of December 31, 2020 and 2019, NRSRO characterized 53.4% and 50.8%, respectively, of our RMBS portfolio as investment grade.

Unrealized Losses

Our investments in AFS securities, including related parties, are reported at fair value with changes in fair value recorded in other comprehensive income. Certain of our AFS securities, including related parties, have experienced declines in fair value that we consider temporary in nature. These investments are held to support our product liabilities, and we currently have the intent and ability to hold these securities until sale or maturity and believe the securities will recover the amortized cost basis prior to sale or maturity. As of December 31, 2020, our AFS securities, including related party, had a fair value of $89.4 billion, which was 8.3% above amortized cost of $82.5 billion. As of December 31, 2019, our AFS securities, including related party, had a fair value of $75.2 billion, which was 5.5% above amortized cost of $71.3 billion.

The following table reflects the unrealized losses on the AFS portfolio, including related parties, for which an allowance for credit losses has not been recorded, by NAIC designations:

	December 31, 2020					
(In millions, except percentages)	Amortized Cost of AFS Securities with Unrealized Loss	Gross Unrealized Losses	Fair Value of AFS Securities with Unrealized Loss	Fair Value to Amortized Cost Ratio	Fair Value of Total AFS Securities	Gross Unrealized Losses to Total AFS Fair Value
NAIC designation						
1	$ 5,010	$ (129)	$ 4,881	97.4 %	$ 41,532	(0.3) %
2	4,732	(168)	4,564	96.4 %	41,704	(0.4) %
Total investment grade	9,742	(297)	9,445	97.0 %	83,236	(0.4) %
3	1,646	(119)	1,527	92.8 %	4,853	(2.5) %
4	563	(61)	502	89.2 %	1,145	(5.3) %
5	54	(11)	43	79.6 %	114	(9.6) %
6	1	—	1	100.0 %	25	— %
Total below investment grade	2,264	(191)	2,073	91.6 %	6,137	(3.1) %
Total	$ 12,006	$ (488)	$ 11,518	95.9 %	$ 89,373	(0.5) %

The following table reflects the unrealized losses on the AFS portfolio, including related parties, by NAIC designations:

	December 31, 2019					
(In millions, except percentages)	Amortized Cost of AFS Securities with Unrealized Loss	Gross Unrealized Losses	Fair Value of AFS Securities with Unrealized Loss	Fair Value to Amortized Cost Ratio	Fair Value of Total AFS Securities	Gross Unrealized Losses to Total AFS Fair Value
NAIC designation						
1	$ 5,672	$ (160)	$ 5,512	97.2 %	$ 38,667	(0.4) %
2	5,252	(223)	5,029	95.8 %	32,336	(0.7) %
Total investment grade	10,924	(383)	10,541	96.5 %	71,003	(0.5) %
3	945	(41)	904	95.7 %	3,300	(1.2) %
4	338	(34)	304	89.9 %	740	(4.6) %
5	79	(11)	68	86.1 %	94	(11.7) %
6	1	—	1	100.0 %	41	— %
Total below investment grade	1,363	(86)	1,277	93.7 %	4,175	(2.1) %
Total	$ 12,287	$ (469)	$ 11,818	96.2 %	$ 75,178	(0.6) %

The gross unrealized losses on AFS securities, including related parties, were $488 million and $469 million as of December 31, 2020 and 2019, respectively.

As of December 31, 2020 and 2019, we held $6.9 billion and $5.6 billion, respectively, in energy sector fixed maturity securities, or 8% and 7%, respectively, of the total fixed maturity securities, including related parties. The gross unrealized capital losses on these securities were $28 million and $65 million, or 6% and 14% of the total unrealized losses, respectively.

Provision for Credit Losses

For our credit loss accounting policies and the assumptions used in the allowances, see *Note 1 – Business, Basis of Presentation and Significant Accounting Policies* and *Note 2 – Investments* to the consolidated financial statements, as well as *Critical Accounting Estimates and Judgments.*

As of December 31, 2020, we held an allowance for credit loss on AFS securities of $104 million. During the year ended December 31, 2020, we recorded a change in the allowance for credit losses on AFS securities of $87 million, of which $32 million had an income statement impact. These changes were primarily driven by an increase in RMBS and corporate allowances. The intent-to-sell impairments for the year ended December 31, 2020 were $17 million primarily attributable to corporate securities. During the year ended December 31, 2019, we recorded $38 million of OTTI impairments.

International Exposure

A portion of our AFS securities are invested in securities with international exposure. As of December 31, 2020 and 2019, 34% and 32%, respectively, of the carrying value of our AFS securities, including related parties, was comprised of securities of issuers based outside of the United States and debt securities of foreign governments. These securities are either denominated in US dollars or do not expose us to significant foreign currency risk as a result of foreign currency swap arrangements.

The following table presents our international exposure in our AFS portfolio, including related parties, by country or region:

	December 31, 2020			December 31, 2019		
(In millions, except percentages)	Amortized Cost	Fair Value	Percent of Total	Amortized Cost	Fair Value	Percent of Total
Country of risk						
Ireland	$ 2,407	$ 2,597	8.6 %	$ 1,109	$ 1,137	4.7 %
Italy	6	8	— %	6	7	— %
Spain	51	59	0.2 %	66	71	0.2 %
Total Ireland, Italy, Greece, Spain and Portugal[1]	2,464	2,664	8.8 %	1,181	1,215	4.9 %
Other Europe	7,991	8,925	29.6 %	7,333	7,711	32.1 %
Total Europe	10,455	11,589	38.4 %	8,514	8,926	37.0 %
Non-US North America	13,188	13,335	44.3 %	11,650	11,670	48.5 %
Australia & New Zealand	1,925	2,143	7.1 %	1,853	1,966	8.2 %
Central & South America	620	666	2.2 %	473	501	2.1 %
Africa & Middle East	1,599	1,680	5.6 %	350	379	1.6 %
Asia/Pacific	661	712	2.4 %	580	616	2.6 %
Supranational	1	1	— %	—	—	— %
Total	$ 28,449	$ 30,126	100.0 %	$ 23,420	$ 24,058	100.0 %

[1] *As of each of the respective periods, we had no holdings in Greece or Portugal.*

Approximately 94.8% and 95.8% of these securities are investment grade by NAIC designation as of December 31, 2020 and 2019, respectively. As of December 31, 2020, 10% of our AFS securities, including related parties, were invested in CLOs of Cayman Islands issuers (included in Non-US North America) for which underlying investments are largely loans to US issuers and 24% were invested in securities of other non-US issuers.

Portugal, Ireland, Italy, Greece and Spain continue to represent credit risk as economic conditions in these countries continue to be volatile, especially within the financial and banking sectors. We had $2.7 billion and $1.2 billion of exposure in these countries as of December 31, 2020 and 2019, respectively. This increase was primarily driven by $1.2 billion of Euro denominated CLOs, for which the SPV is domiciled in Ireland, but the underlying leveraged loans involve borrowers from the broader European region.

As of December 31, 2020, we held United Kingdom and Channel Islands AFS securities of $3.8 billion, or 4.2% of our AFS securities, including related parties. As of December 31, 2020, these securities were in a net unrealized gain position of $375 million. Our investment managers analyze each holding for credit risk by economic and other factors of each country and industry.

Trading Securities

Trading securities, including related parties, were $3.6 billion and $2.9 billion as of December 31, 2020 and 2019, respectively. The increase in trading securities was primarily driven by the dissolution of CoInvest VII during the year, which resulted in MidCap being held directly as a trading security. Trading securities are primarily comprised of AmerUs Closed Block securities for which we have elected the fair value option valuation, CLO and ABS equity tranche securities, MidCap profit participating notes, structured securities with embedded derivatives and investments which support various reinsurance arrangements.

Mortgage Loans

The following is a summary of our mortgage loan portfolio by collateral type:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Net Carrying Value	Percent of Total	Net Carrying Value	Percent of Total
Property type				
Office building	$ 3,589	22.5 %	$ 2,899	19.3 %
Retail	2,083	13.1 %	2,182	14.6 %
Apartment	2,441	15.3 %	2,142	14.3 %
Hotels	1,294	8.1 %	1,104	7.4 %
Industrial	1,362	8.5 %	1,448	9.7 %
Other commercial[1]	679	4.3 %	730	4.9 %
Total net commercial mortgage loans	11,448	71.8 %	10,505	70.2 %
Residential loans	4,490	28.2 %	4,454	29.8 %
Total mortgage loans, net of allowances	$ 15,938	100.0 %	$ 14,959	100.0 %

[1] *Other commercial loans include investments in nursing homes, other healthcare institutions, parking garages, storage facilities and other commercial properties.*

We invest a portion of our investment portfolio in mortgage loans, which are generally comprised of high quality commercial first lien and mezzanine real estate loans. Our mortgage loan holdings were $15.9 billion and $15.0 billion as of December 31, 2020 and 2019, respectively. This included $1.9 billion of mezzanine mortgage loans as of each of December 31, 2020 and 2019. We have acquired mortgage loans through acquisitions and reinsurance arrangements, as well as through an active program to invest in new mortgage loans. We invest in CMLs on income producing properties including hotels, apartments, retail and office buildings, and other commercial and industrial properties. Our RML portfolio primarily consists of first lien RMLs collateralized by properties located in the US. Loan-to-value ratios at the time of loan approval are generally 75% or less.

Our mortgage loans are primarily stated at unpaid principal balance, adjusted for any unamortized premium or discount, and net of credit loss allowances. Interest income is accrued on the principal amount of the loan based on the loan’s contractual interest rate. Amortization of premiums and discounts is recorded using the effective interest method. Interest income, amortization of premiums and discounts, and prepayment fees are reported in net investment income.

It is our policy to cease to accrue interest on loans that are over 90 days delinquent. For loans less than 90 days delinquent, interest is accrued unless it is determined that the accrued interest is not collectible. If a loan becomes over 90 days delinquent, it is our general policy to initiate foreclosure proceedings unless a workout arrangement to bring the loan current is in place. As of December 31, 2020 and 2019, we had $128 million and $67 million, respectively, of mortgage loans that were 90 days past due, of which $38 million and $33 million, respectively, were in the process of foreclosure. We will continue to evaluate these policies with regard to the economic downturn brought about by the spread of COVID-19. Our ability to initiate foreclosure proceedings may be limited by legislation passed and executive orders issued in response to the spread of COVID-19.

See *Note 2 – Investments* to the consolidated financial statements for information regarding credit loss allowance for collection loss, loan-to-value, and debt service coverage.

As of December 31, 2020, we had a valuation allowance of $246 million comprised of $167 million of CML and $79 million of RML allowances. During the year ended December 31, 2020, we recorded a change in provision for credit losses on CMLs of $(10) million and RMLs of $29 million in the income statement. As of December 31, 2019, we had a valuation allowance of $11 million.

Investment Funds

Our investment funds investment strategy primarily focuses on funds with core holdings of credit assets, real assets, real estate, preferred equity and income producing assets. Our investment funds generally meet the definition of a VIE, and in certain cases these investment funds are consolidated in our financial statements because we meet the criteria of the primary beneficiary.

The following table illustrates our investment funds, including related party:

(In millions, except percentages)	December 31, 2020 Carrying Value	December 31, 2020 Percent of Total	December 31, 2019 Carrying Value	December 31, 2019 Percent of Total
Investment funds				
Real estate	$ 348	5.7 %	$ 277	6.4 %
Credit funds	107	1.8 %	153	3.6 %
Private equity	267	4.4 %	236	5.5 %
Real assets	81	1.3 %	83	2.0 %
Natural resources	—	— %	1	— %
Total investment funds	803	13.2 %	750	17.5 %
Investment funds – related parties				
Differentiated investments				
MidCap	—	— %	547	12.7 %
AmeriHome	444	7.3 %	487	11.3 %
Catalina	334	5.5 %	271	6.3 %
Athora	709	11.6 %	132	3.1 %
Venerable	123	2.0 %	99	2.3 %
Other	279	4.6 %	222	5.2 %
Total differentiated investments	1,889	31.0 %	1,758	40.9 %
Real estate	828	13.5 %	853	19.8 %
Credit funds	375	6.2 %	370	8.6 %
Private equity	473	7.8 %	105	2.4 %
Real assets	172	2.8 %	182	4.2 %
Natural resources	113	1.9 %	163	3.8 %
Public equities	110	1.8 %	119	2.8 %
Investment in Apollo	1,324	21.8 %	—	— %
Total investment funds – related parties	5,284	86.8 %	3,550	82.5 %
Total investment funds, including related parties	$ 6,087	100.0 %	$ 4,300	100.0 %

Overall, the total investment funds, including related party, were $6.1 billion and $4.3 billion as of December 31, 2020 and 2019, respectively. See *Note 2 – Investments* to the consolidated financial statements for further discussion regarding how we account for our investment funds. Our investment fund portfolio is subject to a number of market related risks including interest rate risk and equity market risk. Interest rate risk represents the potential for changes in the investment fund's net asset values resulting from changes in the general level of interest rates. Equity market risk represents potential for changes in the investment fund's net asset values resulting from changes in equity markets or from other external factors which influence equity markets. These risks expose us to potential volatility in our earnings period-over-period. We actively monitor our exposure to these risks. The increase in investment funds, including related party, was primarily driven by our investment in Apollo of $1.3 billion as of December 31, 2020 as well as an increase in our investment in Athora, partially offset by the dissolution of CoInvest VII, which resulted in MidCap profit participating notes being held directly as a trading security.

Funds Withheld at Interest

Funds withheld at interest represents a receivable for amounts contractually withheld by ceding companies in accordance with modco and funds withheld reinsurance agreements in which we act as the reinsurer. Generally, assets equal to statutory reserves are withheld and legally owned by the ceding company. We hold funds withheld at interest receivables, including those held with VIAC, Lincoln and Jackson. As of December 31, 2020, the majority of the ceding companies holding the assets pursuant to such reinsurance agreements had a financial strength rating of A or better (based on an A.M. Best scale).

The funds withheld at interest is comprised of the host contract and an embedded derivative. We are subject to the investment performance on the withheld assets with the total return directly impacting the host contract and the embedded derivative. Interest accrues at a risk-free rate on the host receivable and is recorded as net investment income in the consolidated statements of income. The embedded derivative in our reinsurance agreements is similar to a total return swap on the income generated by the underlying assets held by the ceding companies. The change in the embedded derivative is recorded in investment related gains (losses). Although we do not legally own the underlying investments in the funds withheld at interest, in each instance the ceding company has hired Apollo to manage the withheld assets in accordance with our investment guidelines.

The following summarizes the underlying investment composition of the funds withheld at interest, including related parties:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Fixed maturity securities				
US government and agencies	$ —	— %	$ 15	0.1 %
US state, municipal and political subdivisions	513	0.8 %	482	1.7 %
Foreign governments	301	0.5 %	143	0.5 %
Corporate	34,057	55.2 %	14,590	51.4 %
CLO	5,912	9.6 %	2,586	9.1 %
ABS	5,212	8.5 %	2,510	8.8 %
CMBS	2,374	3.8 %	756	2.7 %
RMBS	2,270	3.7 %	1,482	5.2 %
Equity securities	119	0.2 %	74	0.3 %
Mortgage loans	8,201	13.3 %	4,357	15.3 %
Investment funds	1,155	1.9 %	807	2.8 %
Derivative assets	200	0.3 %	224	0.8 %
Short-term investments	608	1.0 %	157	0.6 %
Other investments	15	— %	—	— %
Cash and cash equivalents	906	1.5 %	239	0.8 %
Other assets and liabilities	(201)	(0.3)%	(21)	(0.1)%
Total funds withheld at interest including related party	$ 61,642	100.0 %	$ 28,401	100.0 %

As of December 31, 2020 and 2019, we held $61.6 billion and $28.4 billion, respectively, of funds withheld at interest receivables, including related party. Approximately 94.1% and 94.4% of the fixed maturity securities within the funds withheld at interest are investment grade by NAIC designation as of December 31, 2020 and 2019, respectively. The increase in funds withheld at interest, including related party, was primarily driven by a $28.8 billion increase in assets as a result of the Jackson reinsurance transaction, the restructuring of a coinsurance agreement to a funds withheld agreement with an existing reinsurance partner and an increase in unrealized gains attributed to a decrease in US Treasury rates.

Derivative Instruments

We hold derivative instruments for economic hedging purposes to reduce our exposure to cash flow variability of assets and liabilities, equity market risk, interest rate risk, credit risk and foreign exchange risk. The types of derivatives we may use include interest rate swaps, foreign currency swaps and forward contracts, total return swaps, credit default swaps, variance swaps, futures and equity options.

A discussion regarding our derivative instruments and how such instruments are used to manage risk is included in *Note 3 – Derivative Instruments* to the consolidated financial statements.

As part of our risk management strategies, management continually evaluates our derivative instrument holdings and the effectiveness of such holdings in addressing risks identified in our operations.

Net Invested Assets

The following summarizes our net invested assets:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Net Invested Asset Value[1]	Percent of Total	Net Invested Asset Value[1]	Percent of Total
Corporate	$ 71,040	47.3 %	$ 55,077	46.9 %
CLO	14,609	9.7 %	10,223	8.7 %
Credit	85,649	57.0 %	65,300	55.6 %
RMBS	8,337	5.6 %	8,394	7.1 %
CML	16,778	11.2 %	14,038	12.0 %
RML	4,774	3.2 %	4,490	3.8 %
CMBS	3,227	2.1 %	2,930	2.5 %
Real estate	33,116	22.1 %	29,852	25.4 %
ABS	13,137	8.7 %	10,317	8.8 %
Alternative investments	6,793	4.5 %	5,586	4.8 %
State, municipal, political subdivisions and foreign government	2,136	1.4 %	2,260	1.9 %
Equity securities	478	0.3 %	365	0.3 %
Short-term investments	479	0.3 %	624	0.5 %
US government and agencies	206	0.2 %	49	— %
Other investments	23,229	15.4 %	19,201	16.3 %
Cash and equivalents	5,417	3.6 %	1,958	1.7 %
Policy loans and other	1,455	1.0 %	1,175	1.0 %
Net invested assets excluding investment in Apollo	148,866	99.1 %	117,486	100.0 %
Investment in Apollo	1,324	0.9 %	—	— %
Net invested assets	$ 150,190	100.0 %	$ 117,486	100.0 %

[1] *See Key Operating and Non-GAAP Measures for the definition of net invested assets.*

Our net invested assets were $150.2 billion and $117.5 billion as of December 31, 2020 and 2019, respectively. As of December 31, 2020, our net invested assets were mainly comprised of 47.3% of corporate securities, 26.1% of structured securities, 14.4% of mortgage loans and 4.5% of alternative investments. Corporate securities included $18.2 billion of private placements, which represented 12.1% of our net invested assets. The increase in net invested assets as of December 31, 2020 from 2019 was primarily driven by growth from net organic inflows over liability outflows, a $10.1 billion increase in assets (net of the ACRA noncontrolling interest) as a result of the Jackson reinsurance transaction, our investment in Apollo of $1.3 billion, the deployment of proceeds from the issuances of preferred stock and debt and reinvestment of earnings.

In managing our business, we utilize net invested assets as presented in the above table. Net invested assets do not correspond to total investments, including related parties, on our consolidated balance sheets, as discussed previously in *Key Operating and Non-GAAP Measures*. Net invested assets represent the investments that directly back our net reserve liabilities and surplus assets. We believe this view of our portfolio provides a view of the assets for which we have economic exposure. We adjust the presentation for funds withheld and modco transactions to include or exclude the underlying investments based upon the contractual transfer of economic exposure to such underlying investments. We also adjust for VIEs to show the net investment in the funds, which are included in the alternative investments line above as well as adjust for the allowance for credit losses. Net invested assets includes our proportionate share of ACRA investments, based on our economic ownership, but excludes the proportionate share of investments associated with the noncontrolling interest.

Net invested assets is utilized by management to evaluate our investment portfolio. Net invested assets, excluding our strategic investment in Apollo, is used in the computation of net investment earned rate, which allows us to analyze the profitability of our investment portfolio. Net invested assets is also used in our risk management processes for asset purchases, product design and underwriting, stress scenarios, liquidity, and ALM.

Net Alternative Investments

The following summarizes our alternative investments:

	December 31, 2020		December 31, 2019	
(In millions, except percentages)	Net Invested Asset Value	Percent of Total	Net Invested Asset Value	Percent of Total
Retirement Services				
Differentiated investments				
AmeriHome	$ 546	8.0 %	$ 595	10.7 %
MidCap	611	9.0 %	547	9.8 %
Catalina	334	4.9 %	271	4.9 %
Venerable	123	1.8 %	99	1.8 %
Other	339	5.0 %	208	3.7 %
Total differentiated investments	1,953	28.7 %	1,720	30.9 %
Real estate	1,537	22.6 %	1,430	25.6 %
Credit	941	13.9 %	968	17.3 %
Private equity	831	12.2 %	378	6.8 %
Real assets	296	4.4 %	349	6.2 %
Natural resources	60	0.9 %	51	0.9 %
Other	—	— %	58	1.0 %
Total Retirement Services alternative investments	5,618	82.7 %	4,954	88.7 %
Corporate and Other				
Athora	661	9.7 %	140	2.5 %
Credit	93	1.4 %	128	2.3 %
Natural resources	238	3.5 %	245	4.4 %
Equities[1]	183	2.7 %	119	2.1 %
Total Corporate and Other alternative investments	1,175	17.3 %	632	11.3 %
Net alternative investments	$ 6,793	100.0 %	$ 5,586	100.0 %

[1] *As of December 31, 2020, equities includes our private equity investment in Jackson and a public equity position in OneMain Holdings, Inc. (ticker: OMF). As of December 31, 2019, equities includes a public equity position in OMF.*

Net alternative investments were $6.8 billion and $5.6 billion as of December 31, 2020 and 2019, respectively, representing 4.5% and 4.8% of our net invested assets portfolio as of December 31, 2020 and 2019, respectively.

Net alternative investments do not correspond to the total investment funds, including related parties, on our consolidated balance sheets. As discussed above in the net invested assets section, we adjust the GAAP presentation for funds withheld, modco and VIEs. The investment in Apollo is excluded from our alternative investments, while we include CLO and ABS equity tranche securities in alternative investments due to their underlying characteristics and equity-like features.

Through our relationship with Apollo, we have indirectly invested in companies that meet the key characteristics we look for in net alternative investments. Of our three largest alternative investments, two are in asset originators, MidCap and AmeriHome, both of which, from time to time, provide us with access to assets for our investment portfolio, with the third being a strategic investment in Athora.

MidCap

MidCap is a commercial finance company that provides various financial products to middle-market businesses in multiple industries, primarily located in the US. MidCap primarily originates and invests in commercial and industrial loans, including senior secured corporate loans, working capital loans collateralized mainly by accounts receivable and inventory, senior secured loans collateralized by portfolios of commercial and consumer loans and related products and secured loans to highly capitalized pharmaceutical and medical device companies, and commercial real estate loans, including multifamily independent-living properties, assisted living, skilled nursing and medical office properties, warehouse, office building, hotel and other commercial use properties and multifamily properties. MidCap originates and acquires loans using borrowings under financing arrangements that it has in place with numerous financial institutions. MidCap's earnings are primarily driven by the difference between the interest earned on its loan portfolio and the interest accrued under its outstanding borrowings. As a result, MidCap is primarily exposed to the credit risk of its loan counterparties and prepayment risk. Additionally, financial results are influenced by related levels of middle-market business investment and interest rates.

Our alternative investment in MidCap had a carrying value of $611 million and $547 million as of December 31, 2020 and 2019, respectively. As of December 31, 2020 and 2019, this alternative investment was comprised of our investment in MidCap of $534 million and $547 million, respectively, and redeemable preferred stock of $77 million and $0 million, respectively. The dissolution of CoInvest VII during the year resulted in the former position in MidCap held by CoInvest VII being held directly as profit participating notes, which are included in related party trading securities on the consolidated balance sheets rather than an investment fund. MidCap returned a net investment earned rate of 1.90%, 11.56% and 14.48% for the years ended December 31, 2020, 2019 and 2018, respectively. Alternative investment income from MidCap was $13 million, $65 million and $81 million for the years ended December 31, 2020, 2019 and 2018, respectively. The decrease in alternative investment income for the year ended December 31, 2020 compared to 2019 was primarily due to a decrease in valuation in the first quarter of 2020 reflecting an increase in loan loss assumptions and lower origination volumes due to the economic environment. The redeemable preferred stock returned a net investment earned rate of 39.09%, 0.00% and 0.00% for the years ended December 31, 2020, 2019 and 2018, respectively. Alternative investment income from the redeemable preferred stock was $18 million, $0 million and $0 million for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in alternative investment income from the redeemable preferred stock for the year ended December 31, 2020 compared to 2019 was primarily driven by an initial investment in the second quarter of 2020 as well as favorable profit interests.

AmeriHome

Our equity investment in AmeriHome is held indirectly through A-A Mortgage, of which AmeriHome is currently the fund's only investment. AmeriHome is a mortgage origination platform and an aggregator of mortgage servicing rights. AmeriHome acquires mortgage loans from retail originators and re-sells the loans to the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association and other investors. AmeriHome retains the mortgage servicing rights on the loans that it sells and employs a subservicer to perform servicing operations, including payment collection. AmeriHome's earnings are primarily driven by two sources: gains or losses on the sale of mortgage loans and the difference between the fee that it charges for mortgage servicing and the fee charged by the subservicer. As a result, AmeriHome's financial results are influenced by interest rates and related housing demand. AmeriHome is primarily exposed to credit risk related to the accuracy of the representations and warranties in the loans that AmeriHome acquires and prepayment risk, which prematurely terminates fees related to mortgage servicing.

Our alternative investment in A-A Mortgage had a carrying value of $546 million and $595 million as of December 31, 2020 and 2019, respectively. Our investment in A-A Mortgage represents our proportionate share of its net asset value, which largely reflects any contributions to and distributions from A-A Mortgage and the fair value of AmeriHome. In 2020, we received a dividend of approximately $350 million decreasing our carrying value and purchased $300 million of notes included in AFS securities. A-A Mortgage returned a net investment earned rate of 44.30%, 14.00% and 13.15% for the years ended December 31, 2020, 2019 and 2018, respectively. Alternative investment income from A-A Mortgage was $297 million, $81 million and $72 million for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in alternative investment income of $216 million for the year ended December 31, 2020 compared to 2019 was primarily due to an increase in valuation driven by strong earnings reflecting increased origination volumes and increased gains on sales to secondary markets. On February 16, 2021, Apollo, Athene and AmeriHome announced the sale of AmeriHome to a subsidiary of Western Alliance Bancorporation. We currently anticipate that this transaction will close during the second quarter of 2021, subject to customary closing conditions. We estimate approximately $175 million of alternative investment income from the premium of the platform sale, net of carry and transaction expenses.

Athora

Athora is a specialized insurance and reinsurance group fully focused on the European market. Athora's principal operational subsidiaries are Athora Netherlands N.V. in the Netherlands, Athora Belgium SA in Belgium, Athora Lebensversicherung AG in Germany, Athora Ireland plc in Ireland, and Athora Life Re Ltd in Bermuda. Athora deploys capital and resources to further its mission to build a stand-alone independent and integrated insurance and reinsurance business. Athora's growth is achieved primarily through acquisitions, portfolio transfers and reinsurance. Athora is building a European insurance brand and has successfully acquired, integrated, and transformed four insurance companies: Delta Lloyd Deutschland AG (2015), Aegon Ireland plc (2018), Generali Belgium SA (2019) and VIVAT NV (2020).

Our alternative investment in Athora had a carrying value of $661 million and $140 million as of December 31, 2020 and 2019, respectively. The increase in our carrying value of Athora was driven by capital contributions as a result of Athora's acquisition of VIVAT and an increase in Athora's valuation. Our investment in Athora represents our proportionate share of its net asset value, which largely reflects any contributions to and distributions from Athora and changes in its fair value. Athora returned a net investment earned rate of 15.94%, 7.51% and 1.67% for the years ended December 31, 2020, 2019 and 2018, respectively. Alternative investment income from Athora was $66 million, $10 million and $2 million for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in alternative investment income of $56 million for the year ended December 31, 2020 compared to 2019 was primarily due to an increase in valuation following Athora's acquisition of VIVAT.

Public Equities

We indirectly hold public equity positions through our equity investments in a few alternative investments. Although the net invested asset value of these securities is minor, such securities have resulted in volatility in our statements of income in recent periods. As of December 31, 2020 and 2019, we indirectly held public equity positions of $110 million and $119 million, respectively. As of December 31, 2020 and 2019, we held approximately 2.8 million shares of OneMain with a market value of $110 million and $119 million, respectively. The decrease in market value was driven by a less favorable increase in share price, partially offset by dividend received in 2020.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Non-GAAP Measure Reconciliations

The reconciliations to the nearest GAAP measure for adjusted operating income available to common shareholders is included in the *Consolidated Results of Operations* section. See *Item 6. Selected Financial Data – Non-GAAP Measures* for additional reconciliations.

The reconciliation of basic earnings per Class A common share to adjusted operating earnings per common share is as follows:

	Years ended December 31,		
	2020	2019	2018
Basic earnings per share – Class A common shares	$ 8.51	$ 11.44	$ 5.34
Non-operating adjustments			
Realized net gains on sale of AFS securities	0.14	0.68	0.06
Unrealized, allowances and other investment gains (losses)	(0.79)	(0.02)	(0.09)
Change in fair value of reinsurance assets	4.09	7.64	(2.05)
Offsets to investment gains (losses)	(0.82)	(2.91)	0.68
Investment gains (losses), net of offsets	2.62	5.39	(1.40)
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	(1.22)	(0.36)	1.24
Integration, restructuring and other non-operating expenses	(0.05)	(0.37)	(0.12)
Stock compensation expense	(0.06)	(0.07)	(0.05)
Income tax expense – non-operating	(0.25)	—	(0.11)
Less: Total non-operating adjustments	1.04	4.59	(0.44)
Effect of items convertible to or settled in Class A common shares	1.05	(0.12)	(0.04)
Adjusted operating earnings per common share	$ 6.42	$ 6.97	$ 5.82

The reconciliation of basic weighted average common shares outstanding - Class A to weighted average common shares outstanding - adjusted operating, which is included in adjusted operating earnings per common share, is as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
Basic weighted average common shares outstanding – Class A	184.9	153.9	160.5
Conversion of Class B common shares to Class A common shares	4.2	25.4	29.3
Conversion of Class M common shares to Class A common shares	0.7	5.1	5.6
Effect of other stock compensation plans	3.7	0.4	0.5
Weighted average common shares outstanding – adjusted operating	193.5	184.8	195.9

The reconciliation of total AHL shareholders' equity to total adjusted AHL common shareholders' equity, which is included in adjusted book value per common share, adjusted debt to capital ratio and adjusted operating ROE, is as follows:

	December 31,		
(In millions)	2020	2019	2018
Total AHL shareholders' equity	$ 18,657	$ 13,391	$ 8,276
Less: Preferred stock	2,312	1,172	—
Total AHL common shareholders' equity	16,345	12,219	8,276
Less: AOCI	3,971	2,281	(472)
Less: Accumulated change in fair value of reinsurance assets	1,142	493	(75)
Total adjusted AHL common shareholders' equity	$ 11,232	$ 9,445	$ 8,823
Segment adjusted AHL common shareholders' equity			
Retirement Services	$ 7,732	$ 7,443	$ 7,807
Corporate and Other	3,500	2,002	1,016
Total adjusted AHL common shareholders' equity	$ 11,232	$ 9,445	$ 8,823

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The reconciliation of average AHL shareholders' equity to average adjusted AHL common shareholders' equity, which is included in adjusted operating ROE is as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
Average AHL shareholders' equity	$ 14,528	$ 10,834	$ 8,726
Less: Average preferred stock	1,633	586	—
Less: Average AOCI	2,030	905	489
Less: Average accumulated change in fair value of reinsurance assets	575	209	43
Average adjusted AHL common shareholders' equity	$ 10,290	$ 9,134	$ 8,194
Segment average adjusted AHL common shareholders' equity			
Retirement Services	$ 7,491	$ 7,625	$ 6,522
Corporate and Other	2,799	1,509	1,672
Average adjusted AHL common shareholders' equity	$ 10,290	$ 9,134	$ 8,194

The reconciliation of Class A common shares outstanding to adjusted operating common shares outstanding, which is included in adjusted book value per common share, is as follows:

	December 31,	
(In millions)	2020	2019
Class A common shares outstanding	191.2	142.8
Conversion of Class B common shares to Class A common shares	—	25.4
Conversion of Class M common shares to Class A common shares	—	5.5
Effect of other stock compensation plans	6.0	1.2
Adjusted operating common shares outstanding	197.2	174.9

The reconciliation of book value per common share to adjusted book value per common share is as follows:

	December 31,	
(In millions)	2020	2019
Book value per common share	$ 85.51	$ 69.54
AOCI	(20.77)	(12.98)
Accumulated change in fair value of reinsurance assets	(5.98)	(2.80)
Effect of items convertible to or settled in Class A common shares	(1.81)	0.26
Adjusted book value per common share	$ 56.95	$ 54.02

The reconciliation of debt to capital ratio to adjusted debt to capital ratio is as follows:

	December 31,	
(In millions, except percentages)	2020	2019
Total debt	$ 1,976	$ 1,467
Total AHL shareholders' equity	18,657	13,391
Total capitalization	20,633	14,858
Less: AOCI	3,971	2,281
Less: Accumulated change in fair value of reinsurance assets	1,142	493
Total adjusted capitalization	$ 15,520	$ 12,084
Debt to capital ratio	9.6 %	9.9 %
AOCI	2.4 %	1.8 %
Accumulated change in fair value of reinsurance assets	0.7 %	0.4 %
Adjusted debt to capital ratio	12.7 %	12.1 %

The reconciliation of net investment income to net investment earnings and earned rate is as follows:

	Years ended December 31,					
	2020		2019		2018	
(In millions, except percentages)	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP net investment income	$ 4,885	3.68 %	$ 4,596	3.97 %	$ 4,060	4.30 %
Change in fair value of reinsurance assets	1,408	1.06 %	680	0.59 %	301	0.32 %
Alternative gains (losses)	(102)	(0.08)%	1	— %	(34)	(0.04)%
ACRA noncontrolling interest	(559)	(0.42)%	(61)	(0.05)%	—	— %
Apollo investment (gain)	(225)	(0.17)%	—	— %	—	— %
Held for trading amortization and other	(79)	(0.06)%	(37)	(0.03)%	(95)	(0.04)%
Total adjustments to arrive at net investment earnings/earned rate	443	0.33 %	583	0.51 %	172	0.24 %
Total net investment earnings/earned rate	$ 5,328	4.01 %	$ 5,179	4.48 %	$ 4,232	4.54 %
Retirement Services	$ 5,287	4.04 %	$ 5,062	4.43 %	$ 4,188	4.60 %
Corporate and Other	41	2.17 %	117	8.33 %	44	1.99 %
Total net investment earnings/earned rate	$ 5,328	4.01 %	$ 5,179	4.48 %	$ 4,232	4.54 %
Retirement Services average net invested assets	$ 130,887		$ 114,310		$ 90,995	
Corporate and Other average net invested assets ex. Apollo investment	1,863		1,409		2,182	
Consolidated average net invested assets ex. Apollo investment	$ 132,750		$ 115,719		$ 93,177	

The reconciliation of interest sensitive contract benefits to Retirement Services' cost of crediting, and the respective rates, is as follows:

	Years ended December 31,					
	2020		2019		2018	
(In millions, except percentages)	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP interest sensitive contract benefits	$ 3,891	2.97 %	$ 4,557	3.99 %	$ 290	0.32 %
Interest credited other than deferred annuities and institutional products	312	0.24 %	232	0.20 %	65	0.07 %
FIA option costs	1,101	0.84 %	1,109	0.97 %	886	0.97 %
Product charges (strategy fees)	(136)	(0.10)%	(119)	(0.10)%	(98)	(0.11)%
Reinsurance embedded derivative impacts	57	0.04 %	57	0.05 %	49	0.05 %
Change in fair value of embedded derivatives – FIAs	(2,404)	(1.84)%	(3,644)	(3.19)%	436	0.48 %
Negative VOBA amortization	21	0.02 %	36	0.03 %	31	0.04 %
ACRA noncontrolling interest	(433)	(0.33)%	(42)	(0.03)%	—	— %
Other changes in interest sensitive contract liabilities	8	0.01 %	(7)	(0.01)%	—	— %
Total adjustments to arrive at cost of crediting	(1,474)	(1.12)%	(2,378)	(2.08)%	1,369	1.50 %
Retirement Services cost of crediting	$ 2,417	1.85 %	$ 2,179	1.91 %	$ 1,659	1.82 %
Retirement Services cost of crediting on deferred annuities	$ 1,884	1.95 %	$ 1,774	1.97 %	$ 1,431	1.95 %
Retirement Services cost of crediting on institutional products	533	3.05 %	405	3.47 %	228	3.42 %
Retirement Services cost of crediting	$ 2,417	1.85 %	$ 2,179	1.91 %	$ 1,659	1.82 %
Retirement Services average net invested assets	$ 130,887		$ 114,310		$ 90,995	
Average account value on deferred annuities	96,848		89,878		73,567	
Average net institutional reserve liabilities	17,505		11,632		6,683	

The reconciliation of GAAP benefits and expenses to other liability costs is as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
GAAP benefits and expenses	$ 12,558	$ 13,956	$ 5,462
Premiums	(5,963)	(6,382)	(3,462)
Product charges	(571)	(524)	(449)
Other revenues	(36)	(37)	(26)
Cost of crediting	(1,259)	(1,013)	(724)
Change in fair value of embedded derivatives – FIA, net of offsets	(2,261)	(3,577)	327
DAC, DSI and VOBA amortization related to investment gains and losses	(95)	(477)	110
Rider reserves related to investment gains and losses	(10)	(58)	16
Policy and other operating expenses, excluding policy acquisition expenses	(533)	(488)	(395)
AmerUs closed block fair value liability	(104)	(152)	112
ACRA noncontrolling interest	(527)	(74)	—
Other changes in benefits and expenses	(41)	(2)	10
Total adjustments to arrive at other liability costs	(11,400)	(12,784)	(4,481)
Other liability costs	$ 1,158	$ 1,172	$ 981
Retirement Services	$ 1,158	$ 1,172	$ 981
Corporate and Other	—	—	—
Consolidated other liability costs	$ 1,158	$ 1,172	$ 981

The reconciliation of policy and other operating expenses to operating expenses is as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
GAAP policy and other operating expenses	$ 855	$ 744	$ 626
Interest expense	(114)	(67)	(57)
Policy acquisition expenses, net of deferrals	(322)	(256)	(233)
Integration, restructuring and other non-operating expenses	(10)	(70)	(22)
Stock compensation expenses	(11)	(12)	(11)
ACRA noncontrolling interest	(58)	(5)	—
Other changes in policy and other operating expenses	(2)	—	—
Total adjustments to arrive at operating expenses	(517)	(410)	(323)
Operating expenses	$ 338	$ 334	$ 303
Retirement Services	$ 275	$ 266	$ 242
Corporate and Other	63	68	61
Consolidated operating expenses	$ 338	$ 334	$ 303

The reconciliation of total investments, including related parties, to net invested assets is as follows:

	December 31,	
(In millions)	2020	2019
Total investments, including related parties	$ 182,421	$ 130,550
Derivative assets	(3,523)	(2,888)
Cash and cash equivalents (including restricted cash)	8,442	4,639
Accrued investment income	905	807
Payables for collateral on derivatives and other secured transactions	(3,203)	(2,743)
Reinsurance funds withheld and modified coinsurance	(2,459)	(1,440)
VIE and VOE assets, liabilities and noncontrolling interest	(136)	25
Unrealized (gains) losses	(7,275)	(4,095)
Ceded policy loans	(204)	(235)
Net investment receivables (payables)	99	(57)
Allowance for credit losses	357	—
Total adjustments to arrive at gross invested assets	(6,997)	(5,987)
Gross invested assets	175,424	124,563
ACRA noncontrolling interest	(25,234)	(7,077)
Net invested assets	$ 150,190	$ 117,486

The reconciliation of total investment funds, including related parties, to net alternative investments within net invested assets is as follows:

	December 31,	
(In millions)	2020	2019
Investment funds, including related parties	$ 6,087	$ 4,300
Equity securities	165	78
CLO and ABS equities included in trading securities	971	405
Investment in Apollo	(1,324)	—
Investment funds within funds withheld at interest	1,155	807
Royalties and other assets included in other investments	66	67
Unrealized (gains) losses and other adjustments	(44)	8
ACRA noncontrolling interest	(283)	(79)
Total adjustments to arrive at alternative investments	706	1,286
Net alternative investments	$ 6,793	$ 5,586

The reconciliation of total liabilities to net reserve liabilities is as follows:

	December 31,	
(In millions)	2020	2019
Total liabilities	$ 182,631	$ 132,734
Short-term debt	—	(475)
Long-term debt	(1,976)	(992)
Derivative liabilities	(298)	(97)
Payables for collateral on derivatives and securities to repurchase	(3,203)	(3,255)
Funds withheld liability	(452)	(408)
Other liabilities	(2,040)	(1,181)
Reinsurance ceded receivables	(4,848)	(4,863)
Policy loans ceded	(204)	(235)
ACRA noncontrolling interest	(24,618)	(6,574)
Other	(3)	(2)
Total adjustments to arrive at net reserve liabilities	(37,642)	(18,082)
Net reserve liabilities	$ 144,989	$ 114,652

Liquidity and Capital Resources

There are two forms of liquidity relevant to our business, funding liquidity and balance sheet liquidity. Funding liquidity relates to the ability to fund operations. Balance sheet liquidity relates to our ability to liquidate or rebalance our balance sheet without incurring significant costs from fees, bid-offer spreads, or market impact. We manage our liquidity position by matching projected cash demands with adequate sources of cash and other liquid assets. Our principal sources of liquidity, in the ordinary course of business, are operating cash flows and holdings of cash, cash equivalents and other readily marketable assets.

Our investment portfolio is structured to ensure a strong liquidity position over time in order to permit timely payment of policy and contract benefits without requiring asset sales at inopportune times or at depressed prices. In general, liquid assets include cash and cash equivalents, highly rated corporate bonds, unaffiliated preferred stock and unaffiliated public common stock, all of which generally have liquid markets with a large number of buyers. The carrying value of these assets, excluding assets within modified coinsurance and funds withheld portfolios, as of December 31, 2020 was $72.9 billion. Assets included in modified coinsurance and funds withheld portfolios are available to fund the benefits for the associated obligations but are restricted from other uses. The carrying value of the underlying assets in these modified coinsurance and funds withheld portfolios that we consider liquid as of December 31, 2020 was $38.0 billion. Although our investment portfolio does contain assets that are generally considered illiquid for liquidity monitoring purposes (primarily mortgage loans, policy loans, real estate, investment funds, and affiliated common stock), there is some ability to raise cash from these assets if needed. In periods of economic downturn, such as the one brought about by the spread of COVID-19, we may maintain higher cash balances than required to manage our liquidity risk and to take advantage of market dislocations as they arise. We have access to additional liquidity through our $1.25 billion credit agreement, which was undrawn as of December 31, 2020 and had a remaining term of approximately four years, subject to up to two one-year extensions. We also have access to a $1.0 billion committed repurchase facility. Our registration statement on Form S-3 ASR (Shelf Registration Statement) provides us access to the capital markets, subject to market conditions and other factors. We are also party to repurchase agreements with several different financial institutions, pursuant to which we may obtain short-term liquidity, to the extent available. In addition, through our membership in the FHLB, we are eligible to borrow under variable rate short-term federal funds arrangements to provide additional liquidity.

We proactively manage our liquidity position to meet cash needs while minimizing adverse impacts on investment returns. We analyze our cash-flow liquidity over the upcoming 12 months by modeling potential demands on liquidity under a variety of scenarios, taking into account the provisions of our policies and contracts in force, our cash flow position, and the volume of cash and readily marketable securities in our portfolio. We also monitor our liquidity profile under more severe scenarios.

We perform a number of stress tests and analyses to assess our ability to meet our cash flow requirements, as well as the ability of our reinsurance and insurance subsidiaries to meet their collateral obligations. Among these analyses, we manage to the following ALM limits:

- our projected net cumulative cash flows, including both new business and target levels of new investments under a "plan scenario" and a "moderately severe scenario" event, are non-negative over a rolling 12-month horizon;
- we hold enough cash, cash equivalents and other discounted liquid limit assets to cover 12 months of AHL's and AUSA's projected obligations, including debt servicing costs:
  - minimum of 50% of expenses and 100% of debt servicing to be held in cash and cash equivalents at AHL operating accounts
  - minimum of 50% of any required AHL – AUSA inter-company loan commitments to be held in cash and cash equivalents by AHL
  - dividends from ALRe sufficient to support the ongoing operations of AHL must be available under moderate and substantial stress scenarios
  - for purposes of administering this test, liquid limit assets are discounted by 25% and include public corporate bonds rated A- or above, liquid ABS (defined as prime auto, auto floorplan, Tier 1 subprime auto, auto lease, prime credit cards, equipment lease or utility stranded assets); RMBS with weighted average lives less than three years rated A- or above and CMBS with weighted average lives less than three years rated AAA- or above
- we seek to maintain sufficient capital and surplus at ALRe to meet the following collateral and capital maintenance calls under a substantial stress event, such as the failure of a major financial institution (Lehman event):
  - collateral calls from modco and third-party reinsurance contracts
  - AARe capital maintenance calls arising from AARe collateral calls from modco reinsurance contracts; and
  - US regulated entity capital maintenance calls from nonmodco activity.

Insurance Subsidiaries' Liquidity

Operations

The primary cash flow sources for our insurance subsidiaries include retirement services product inflows (premiums), investment income, principal repayments on our investments, net transfers from separate accounts and financial product inflows. Uses of cash include investment purchases, payments to policyholders for surrenders, withdrawals and payout benefits, interest and principal payments on funding agreements, payments to satisfy PRT obligations, policy acquisition costs and general operating costs.

Our policyholder obligations are generally long-term in nature. However, one liquidity risk is an extraordinary level of early policyholder withdrawals. We include provisions within our annuity policies, such as surrender charges and MVAs, which are intended to protect us from early withdrawals. As of December 31, 2020 and 2019, approximately 75% and 78%, respectively, of our deferred annuity liabilities were subject to penalty upon surrender. In addition, as of December 31, 2020 and 2019, approximately 56% and 64%, respectively, of policies contained MVAs that may also have the effect of limiting early withdrawals if interest rates increase, but may encourage early withdrawals by effectively subsidizing a portion of surrender charges when interest rates decrease. Given the sharp decline in interest rates that occurred during 2020, as of December 31, 2020, many of our MVAs reduce the surrender charge otherwise required to be paid upon early withdrawal. Our funding agreements, group annuities and payout annuities are generally non-surrenderable.

Membership in Federal Home Loan Bank

Through our membership in the FHLB, we are eligible to borrow under variable rate short-term federal funds arrangements to provide additional liquidity. The borrowings must be secured by eligible collateral such as mortgage loans, eligible CMBS or RMBS, government or agency securities and guaranteed loans. As of December 31, 2020 and 2019, we had $0 million and $475 million, respectively, of outstanding borrowings under these arrangements.

We have issued funding agreements to the FHLB. These funding agreements were issued in an investment spread strategy, consistent with other investment spread operations. As of December 31, 2020 and 2019, we had funding agreements outstanding with the FHLB in the aggregate principal amount of $2.0 billion and $1.2 billion, respectively.

The maximum FHLB indebtedness by a member is determined by the amount of collateral pledged and cannot exceed a specified percentage of the member's total statutory assets dependent on the internal credit rating assigned to the member by the FHLB. As of December 31, 2020, the total maximum borrowings under the FHLB facilities were limited to $30.6 billion. However, our ability to borrow under the facilities is constrained by the availability of assets that qualify as eligible collateral under the facilities and certain other limitations. Considering these limitations, we estimate that as of December 31, 2020 we had the ability to draw up to a total of approximately $3.7 billion, inclusive of borrowings then outstanding. This estimate is based on our internal analysis and assumptions and may not accurately measure collateral which is ultimately acceptable to the FHLB. Drawing such amounts would have an adverse impact on AADE's and/or AAIA's RBC ratio, which may further restrict our ability or willingness to draw up to our estimated capacity.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Securities Repurchase Agreements

We engage in repurchase transactions whereby we sell fixed income securities to third parties, primarily major brokerage firms or commercial banks, with a concurrent agreement to repurchase such securities at a determined future date. We require that, at all times during the term of the repurchase agreements, we maintain sufficient cash or other liquid assets sufficient to allow us to fund substantially all of the repurchase price. Proceeds received from the sale of securities pursuant to these arrangements are generally invested in short-term investments, with the offsetting obligation to repurchase the security included within payables for collateral on derivatives and securities to repurchase on the consolidated balance sheets. As per the terms of the repurchase agreements, we monitor the market value of the securities sold and may be required to deliver additional collateral (which may be in the form of cash or additional securities) to the extent that the value of the securities sold decreases prior to the repurchase date.

As of December 31, 2020, the fair value of securities and collateral held by counterparties and payables for repurchase agreements was $644 million and $598 million, respectively.

On May 1, 2020, we signed a $1.0 billion committed repurchase facility with BNP Paribas. The facility has an initial commitment period of 12 months and automatically renews for successive 12-month periods until terminated by either party. During the commitment period, we may sell and BNP Paribas is required to purchase eligible investment grade corporate bonds pursuant to repurchase transactions at pre-agreed discounts in exchange for a 41 basis points per annum commitment fee. As of December 31, 2020, we had no outstanding payables under this facility.

Cash Flows

Our cash flows were as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
Net income	$ 1,921	$ 2,185	$ 1,053
Payment at inception or recapture of reinsurance agreements, net	(723)	—	(394)
Non-cash revenues and expenses	2,956	471	2,215
Net cash provided by operating activities	4,154	2,656	2,874
Sales, maturities and repayments of investments	18,712	17,776	17,069
Purchases of investments	(33,230)	(27,687)	(24,852)
Deconsolidation of previously consolidated entities	(3)	—	(296)
Other investing activities	(296)	(45)	(94)
Net cash used in investing activities	(14,817)	(9,956)	(8,173)
Issuance of common stock	351	—	—
Net proceeds and repayments of debt	917	475	998
Inflows on investment-type policies and contracts	18,836	11,569	10,262
Withdrawals on investment-type policies and contracts	(7,067)	(6,548)	(6,205)
Net capital contributions and distributions to/from noncontrolling interests	194	575	—
Net change in cash collateral posted for derivative transactions and securities to repurchase	546	2,286	(1,354)
Issuance of preferred stock, net of expenses	1,140	1,172	—
Preferred stock dividends	(95)	(36)	—
Repurchase of common stock	(428)	(832)	(105)
Other financing activities	95	(124)	111
Net cash provided by financing activities	14,489	8,537	3,707
Effect of exchange rate changes on cash and cash equivalents	(26)	—	—
Net increase (decrease) in cash and cash equivalents[1]	$ 3,800	$ 1,237	$ (1,592)

[1] *Includes cash and cash equivalents and restricted cash.*

Cash flows from operating activities

The primary cash inflows from operating activities include net investment income, annuity considerations and insurance premiums. The primary cash outflows from operating activities are comprised of benefit payments and operating expenses. Our operating activities generated cash flows totaling $4.2 billion, $2.7 billion and $2.9 billion for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in cash provided by operating activities for the year ended December 31, 2020 compared to 2019 was primarily driven by higher cash received from PRT transactions whereas in the prior year we received more investments, partially offset by the restructuring of a coinsurance agreement to a funds withheld agreement with an existing reinsurance partner.

Cash flows from investing activities

The primary cash inflows from investing activities are the sales, maturities and repayments of investments. The primary cash outflows from investing activities are the purchases and acquisitions of new investments. Our investing activities used cash flows totaling $14.8 billion, $10.0 billion and $8.2 billion for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in cash used in investing activities for the year ended December 31, 2020 compared to 2019 was primarily attributed to an increase in purchases due to the deployment of significant cash inflows from organic growth, including large funding agreement and PRT transactions, partially offset by higher sales of investments.

Cash flows from financing activities

The primary cash inflows from financing activities are inflows on our investment-type policies, changes of cash collateral posted for derivative transactions, capital contributions and proceeds from borrowing activities. The primary cash outflows from financing activities are withdrawals on our investment-type policies, changes of cash collateral posted for derivative transactions, repayments of outstanding borrowings, repurchases of common stock and payment of preferred stock dividends. Our financing activities provided cash flows totaling $14.5 billion, $8.5 billion and $3.7 billion for the years ended December 31, 2020, 2019 and 2018, respectively. The increase in cash provided from financing activities for the year ended December 31, 2020 compared to 2019 was primarily attributed to higher investment-type inflows from retail, flow reinsurance and funding agreements net of liability outflows, proceeds of $992 million of long-term debt and the issuance of stock in connection with the strategic transaction with Apollo, partially offset by the change in cash collateral posted for derivative transactions driven by unfavorable equity market performance in 2020 compared to 2019 and the repayment of short-term debt.

Holding Company Liquidity

Dividends from Subsidiaries

AHL is a holding company whose primary liquidity needs include the cash-flow requirements relating to its corporate activities, including its day-to-day operations, debt servicing, preferred stock dividend payments and strategic transactions, such as acquisitions. The primary source of AHL's cash flow is dividends from its subsidiaries, which are expected to be adequate to fund cash flow requirements based on current estimates of future obligations.

The ability of AHL's insurance subsidiaries to pay dividends is limited by applicable laws and regulations of the jurisdictions where the subsidiaries are domiciled, as well as agreements entered into with regulators. These laws and regulations require, among other things, the insurance subsidiaries to maintain minimum solvency requirements and limit the amount of dividends these subsidiaries can pay.

Subject to these limitations and prior notification to the appropriate regulatory agency, the US insurance subsidiaries are permitted to pay ordinary dividends based on calculations specified under insurance laws of the relevant state of domicile. Any distributions above the amount permitted by statute in any twelve month period are considered to be extraordinary dividends, and require the approval of the appropriate regulator prior to payment. AHL does not currently plan on having the US subsidiaries pay any dividends to ALRe.

Dividends from ALRe are projected to be the primary source of AHL's liquidity. Under the Bermuda Insurance Act, ALRe is prohibited from paying a dividend in an amount exceeding 25% of the prior year's statutory capital and surplus, unless at least two members of ALRe's board of directors and its principal representative in Bermuda sign and submit to the BMA an affidavit attesting that a dividend in excess of this amount would not cause ALRe to fail to meet its relevant margins. In certain instances, ALRe would also be required to provide prior notice to the BMA in advance of the payment of dividends. In the event that such an affidavit is submitted to the BMA in accordance with the Bermuda Insurance Act, and further subject to ALRe meeting its relevant margins, ALRe is permitted to distribute up to the sum of 100% of statutory surplus and an amount less than 15% of its total statutory capital. Distributions in excess of this amount require the approval of the BMA. As of December 31, 2020 and 2019, ALRe was permitted to dividend or distribute up to $10.0 billion and $8.1 billion, respectively.

The maximum distribution permitted by law or contract is not necessarily indicative of our actual ability to pay such distributions, which may be further restricted by business and other considerations, such as the impact of such distributions on surplus, which could affect our ratings or competitive position and the amount of premiums that can be written. Specifically, the level of capital needed to maintain desired financial strength ratings from rating agencies, including S&P, A.M. Best and Fitch, is of particular concern when determining the amount of capital available for distributions. AHL believes its insurance subsidiaries have sufficient statutory capital and surplus, combined with additional capital available to be provided by AHL, to meet their financial strength ratings objectives. Finally state insurance laws and regulations require that the statutory surplus of our insurance subsidiaries following any dividend or distribution must be reasonable in relation to their outstanding liabilities and adequate for the insurance subsidiaries' financial needs.

Other Sources of Funding

If needed, we may seek to secure additional funding at the holding company level by means other than dividends from subsidiaries, such as by drawing on our undrawn $1.25 billion credit agreement or by pursuing future issuances of debt or equity securities to third-party investors. See *Note 9 – Debt* to the consolidated financial statements for more information regarding our credit agreement. However, such additional funding may not be available on terms favorable to us or at all, depending on our financial condition, results of operations or prevailing market conditions. Certain other sources of liquidity potentially available at the holding company level are discussed below.

Shelf Registration – Under our Shelf Registration Statement, subject to market conditions, we have the ability to issue, in indeterminate amounts, debt securities, preference shares, depositary shares, Class A common shares, warrants and units.

Debt – On January 12, 2018 we issued $1.0 billion in aggregate principal amount of 4.125% senior notes due 2028 (2028 Notes). On April 3, 2020, we issued $500 million in aggregate principal amount of 6.150% senior unsecured notes due 2030 (2030 Notes). On October, 8, 2020, we issued $500 million in aggregate principal amount of 3.500% senior unsecured notes due 2031 (2031 Notes).

Preferred Stock – On June 10, 2019, we issued 34,500 6.35% Fixed-to-Floating Rate Perpetual Non-Cumulative Preference Shares, Series A, par value of $1.00 per share with a liquidation preference of $25,000 per share, for aggregate proceeds of $839 million, net of the underwriters' discount and estimated expenses.

On September 19, 2019, we issued 13,800 5.625% Fixed-Rate Perpetual Non-Cumulative Preference shares, Series B, par value of $1.00 per share with a liquidation preference of $25,000 per share, for aggregate proceeds of $333 million, net of the underwriters' discount and estimated expenses.

On June 11, 2020, we issued 24,000 6.375% Fixed-Rate Reset Perpetual Non-Cumulative Preference shares, Series C, par value of $1.00 per share with a liquidation preference of $25,000 per share, for aggregate proceeds of $583 million, net of the underwriters' discount and estimated expenses.

On December 18, 2020, we issued 23,000 4.875% Fixed-Rate Perpetual Non-Cumulative Preference shares, Series D, par value of $1.00 per share with a liquidation preference of $25,000 per share, for aggregate proceeds of $557 million, net of the underwriters' discount and estimated expenses. See *Note 10 – Equity* to the consolidated financial statements for further information.

Intercompany Note – AHL has an unsecured revolving note payable with ALRe, which permits AHL to borrow up to $1 billion with a fixed interest rate of 1.25% and a maturity date of March 31, 2024. As of December 31, 2020 and 2019, the revolving note payable had an outstanding balance of $0 million and $38 million, respectively.

In light of the spread of COVID-19 and the resulting impact on economic conditions and the financial markets, additional funding of the type described above may not be available on terms favorable to us or at all. As a result of the economic consequences of the spread of COVID-19, we have observed an increase in our cost of debt. Though this trend has moderated as economic conditions have begun to stabilize, credit spreads remain elevated when compared to pre-COVID-19 levels. At the time of issuance, our 2028 Notes had a yield to maturity of 4.14% and a spread to benchmark treasury of T + 160 basis points. At the time of issuance, our 2030 Notes had a yield to maturity of 6.18% and a spread to benchmark treasury of T + 550 basis points. At the time of issuance, our 2031 Notes had a yield to maturity of 3.67% and a spread to benchmark treasury of T + 290 basis points.

Use of Captives

While our business strategy does not involve the use of captives, we ceded certain liabilities to a captive reinsurer that we acquired in connection with the Aviva USA acquisition. The captive reinsurer was formed in 2011 and is domiciled in the state of Vermont. The statutory reserves of the affiliated captive reinsurer are supported by a combination of funds withheld receivable assets and letters of credit issued by an unaffiliated financial institution. The reinsurance activities within the captive reinsurer are eliminated in consolidation. As discussed in *Note 13 – Statutory Requirements* to the consolidated financial statements, a permitted practice of the state of Vermont allows the captive to include issued and outstanding letters of credit in the amount of $134 million and $137 million as of December 31, 2020 and 2019, respectively, as admitted assets in its statutory financial statements. The NAIC and certain state insurance departments have scrutinized insurance companies' use of affiliated captive reinsurers. Regulatory changes regarding the use of captives could affect our financial position and results of operations.

Capital Resources

We believe that we have a strong capital position and that we are well positioned to meet policyholder and other obligations. We measure capital sufficiency using an internal capital model which reflects management's view on the various risks inherent to our business, the amount of capital required to support our core operating strategies and the amount of capital necessary to maintain our current ratings in a recessionary environment. The amount of capital required to support our core operating strategies is determined based upon internal modeling and analysis of economic risk, as well as inputs from rating agency capital models and consideration of NAIC RBC requirements. Capital in excess of this required amount is considered excess equity capital, which is available to deploy.

As of December 31, 2020 and 2019, our US insurance companies’ TAC, as defined by the NAIC, was $2.7 billion and $2.4 billion, respectively, and our US RBC ratio was 425% and 429%, respectively. Each US domestic insurance subsidiary’s state of domicile imposes minimum 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 TAC to its authorized control level RBC (ACL). Our TAC was significantly in excess of all regulatory standards as of December 31, 2020 and 2019, respectively.

Bermuda statutory capital and surplus for ALRe was $13.5 billion and $11.0 billion as of December 31, 2020 and 2019, respectively. ALRe adheres to BMA regulatory capital requirements to maintain statutory capital and surplus to meet the MMS and maintain minimum EBS capital and surplus to meet the ECR. Under the EBS framework, ALRe’s assets are recorded at market value and its insurance reserves are determined by reference to nine prescribed scenarios, with the scenario resulting in the highest reserve balance being ultimately required to be selected. ALRe’s EBS capital and surplus was $17.2 billion and $14.1 billion, resulting in a BSCR ratio of 254% and 310% as of December 31, 2020 and 2019, respectively. ALRe’s BSCR ratio includes the capital and surplus of ALRe and all of ALRe’s subsidiaries, including AUSA and AOG subsidiaries. An insurer must have a BSCR ratio of 100% or greater to be considered solvent by the BMA. As of December 31, 2020 and 2019, ALRe held the appropriate capital to adhere to these regulatory standards. Prior to the implementation of our internal capital model, we also utilized an ALRe RBC ratio to analyze and determine the amount of capital necessary to support our core operating strategies. As of December 31, 2020 and 2019, our ALRe RBC was 460% and 443%, respectively. The ALRe RBC ratio is calculated by applying the NAIC RBC factors to the statutory financial statements of ALRe and ALRe's non-U.S.reinsurance subsidiaries on an aggregate basis with certain adjustments made by management as described in the glossary. We exclude our interests in the AOG units and other subsidiary holding companies from our capital base for purposes of calculating ALRe RBC, but do reflect such interests within our capital analysis, net of risk charges.

Repurchase of Securities

Share Repurchase Program

In December of 2018, our board of directors established a share repurchase program with an initial authorization for the repurchase of up to $250 million of our Class A common shares. In 2019, our board of directors approved four additional authorizations under our share repurchase program for the purchase of up to an additional $1.3 billion of our Class A common shares, in the aggregate, for a total authorization of $1.6 billion. Pursuant to our share repurchase program, we repurchased 13.3 million Class A common shares for $419 million during the year ended December 31, 2020. As of February 19, 2021, we have repurchased, in the aggregate, 35.6 million Class A common shares for $1.3 billion since inception of our share repurchase program and have $221 million of repurchase authorization remaining. The timing and amount of share repurchases, if any, will be determined by management in accordance with the authority delegated by our board of directors.

Repurchase of Other Securities

We may from time to time seek to retire or purchase our other outstanding debt or equity securities through cash purchases and/or exchanges for other securities, purchases in the open market, privately negotiated transactions or otherwise. Any such repurchases will be dependent upon several factors, including our liquidity requirements, contractual restrictions, general market conditions and applicable regulatory, legal and accounting factors. Whether or not we repurchase any of our other securities and the size and timing of any such repurchases will be determined at our discretion.

Balance Sheet and Other Arrangements

Balance Sheet Arrangements

Contractual Obligations

The following table summarizes estimated future payments on our contractual obligations as of December 31, 2020:

	Payments Due by Period				
(In millions)	Total	2021	2022-2023	2024-2025	2026 and thereafter
Interest sensitive contract liabilities	$ 144,566	$ 14,111	$ 29,356	$ 25,447	$ 75,652
Future policy benefits	29,258	857	1,601	1,600	25,200
Other policy claims and benefits	130	130	—	—	—
Dividends payable to policyholders	110	6	10	9	85
Long-term debt[1]	2,781	85	179	179	2,338
Securities to repurchase[2]	657	13	26	618	—
Total	$ 177,502	$ 15,202	$ 31,172	$ 27,853	$ 103,275

[1] *The obligations for long-term debt payments include contractual maturities of principal and estimated future interest payments based on the terms of the debt agreements, as described in Note 9 – Debt to the consolidated financial statements.*

[2] *The obligations for securities to repurchase payments include contractual maturities of principal and estimated future interest payments based on the terms of the agreements.*

We also have other obligations related to collateral on derivatives, investment fund commitments and funds withheld liabilities which have not been included in the above table as the timing and amount of each of the return on the collateral, the fulfillment of the commitments and the funds withheld liabilities are uncertain. See *Note 15 – Commitments and Contingencies* to the consolidated financial statements for further discussion on the investment fund commitments.

Other

In the normal course of business, we invest in various investment funds which are considered VIEs, and we consolidate a VIE when we are considered the primary beneficiary of the entity. For further discussion of our involvement with VIEs, see *Note 4 – Variable Interest Entities* to the consolidated financial statements.

Off Balance Sheet Arrangements

None.

Critical Accounting Estimates and Judgments

The preparation of consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of any contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Amounts based on such estimates involve numerous assumptions subject to varying and potentially significant degrees of judgment and uncertainty, particularly related to the future performance of the underlying business, and will likely change in the future as additional information becomes available. Critical estimates and assumptions are evaluated on an ongoing basis based on historical developments, market conditions, industry trends and other information that is reasonable under the circumstances. There can be no assurance that actual results will conform to estimates and assumptions and that reported results of operations will not be materially affected by the need to make future accounting adjustments to reflect periodic changes in these estimates and assumptions, particularly as more information about the extent to which COVID-19 and the resulting impact on economic conditions and the financial markets become known. Critical accounting estimates are impacted significantly by our methods, judgments and assumptions used in the preparation of the consolidated financial statements and should be read in conjunction with our significant accounting policies described in *Note 1 – Business, Basis of Presentation and Significant Accounting Policies* to the consolidated financial statements. The following summary of our critical accounting estimates is intended to enhance one's ability to assess our financial condition and results of operations and the potential volatility due to changes in estimates.

Investments

We are responsible for the fair value measurement of certain investments presented in our consolidated financial statements. We perform regular analysis and review of our valuation techniques, assumptions and inputs used in determining fair value to evaluate if the valuation approaches are appropriate and consistently applied, and the various assumptions are reasonable. We also perform quantitative and qualitative analysis and review of the information and prices received from commercial pricing services and broker-dealers, to verify it represents a reasonable estimate of the fair value of each investment. In addition, we use both internally-developed and commercially-available cash flow models to analyze the reasonableness of fair values using credit spreads and other market assumptions, where appropriate. For investment funds, we typically recognize our investment, including those for which we have elected the fair value option, based on net asset value information provided by the general partner or related asset manager. For a discussion of our investment funds for which we have elected the fair value option, see *Note 5 – Fair Value* to the consolidated financial statements.

Valuation of Fixed Maturity and Equity Securities

The following table presents the fair value of fixed maturity and equity securities, including those with related parties and those held by consolidated VIEs, by pricing source and fair value hierarchy:

	December 31, 2020			
(In millions)	Total	Level 1	Level 2	Level 3
Fixed maturity securities				
AFS securities				
Priced via commercial pricing services	$ 39,075	$ —	$ 39,065	$ 10
Priced via independent broker-dealer quotations	50,012	332	43,807	5,873
Priced via other methods	286	—	—	286
Trading securities				
Priced via commercial pricing services	149	—	149	—
Priced via independent broker-dealer quotations	2,655	3	1,859	793
Priced via other methods	818	—	—	818
Total fixed maturity securities including related party	92,995	335	84,880	7,780
Equity securities				
Priced via commercial pricing services	319	57	262	—
Priced via independent broker-dealer quotations	82	—	—	82
Priced via other methods	1	—	—	1
Total equity securities including related party	402	57	262	83
Total fixed maturity and equity securities including related party	$ 93,397	$ 392	$ 85,142	$ 7,863
Percent of total	100.0 %	0.4 %	91.2 %	8.4 %

We measure the fair value of our securities based on assumptions used by market participants in pricing the assets, which may include inherent risk, restrictions on the sale or use of an asset, or nonperformance risk. The estimate of fair value is the price that would be received to sell a security in an orderly transaction between market participants in the principal market, or the most advantageous market in the absence of a principal market, for that security. Market participants are assumed to be independent, knowledgeable, able and willing to transact an exchange while not under duress. The valuation of securities involves considerable judgment, is subject to considerable variability and is revised as additional information becomes available. As such, changes in, or deviations from, the assumptions used in such valuations can significantly affect our consolidated financial statements. Financial markets are susceptible to severe events evidenced by rapid depreciation in security values accompanied by a reduction in asset liquidity. Our ability to sell securities, or the price ultimately realized upon the sale of securities, depends upon the demand and liquidity in the market and increases the use of judgment in determining the estimated fair value of certain securities. Accordingly, estimates of fair value are not necessarily indicative of the amounts that could be realized in a current or future market exchange.

For fixed maturity securities, we obtain the fair values, when available, based on quoted prices in active markets that are regularly and readily obtainable. Generally, these are liquid securities and the valuation does not require significant management judgment. When quoted prices in active markets are not available, fair value is based on market standard valuation techniques, giving priority to observable inputs. We obtain the fair value for most marketable bonds without an active market from several commercial pricing services. The pricing services incorporate a variety of market observable information in their valuation techniques, including benchmark yields, broker-dealer quotes, credit quality, issuer spreads, bids, offers, and other reference data. For certain fixed maturity securities without an active market, an internally-developed discounted cash flow or other approach is utilized to calculate the fair value. A discount rate is used, which adjusts a market comparable base rate for securities with similar characteristics for credit spread, market illiquidity or other adjustments. The fair value of privately placed fixed maturity securities are based on the credit quality and duration of comparable marketable securities, which may be securities of another issuer with similar characteristics. In some instances, we use a matrix-based pricing model, which considers the current level of risk-free interest rates, corporate spreads, credit quality of the issuer, and cash flow characteristics of the security. We also consider additional factors, such as net worth of the borrower, value of collateral, capital structure of the borrower, presence of guarantees, and our evaluation of the borrower's ability to compete in its relevant market.

For equity securities, we obtain the fair value, when available, based on quoted market prices. Other equity securities, typically private equities or equity securities not traded on an exchange, are valued based on other sources, such as commercial pricing services or brokers.

Credit Loss Allowances

Establishing allowances for expected credit losses is a quantitative and qualitative process, which is subject to risks and uncertainties and involves significant estimates and judgments by management. Changes in the estimates and judgments used in such analysis can have a significant impact on our consolidated results of operations.

The allowance for expected credit losses on assets held at amortized cost and off-balance sheet credit exposures is established utilizing quantitative modeling. Key inputs into the model include data pertaining to the characteristics of the assets, historical losses and current market conditions. Additionally, the model incorporates management's expectations around future economic conditions and macroeconomic forecasts over a reasonable and supportable forecast period, after which the model reverts to historical averages. For residential mortgage loans, key loan characteristics impacting the estimate include among others: time to maturity, delinquency status, original credit scores and loan-to-value ratios. Key macroeconomic variables include unemployment rates and the housing price index. For commercial mortgage loans, key loan characteristics impacting the estimate include among others: time to maturity, delinquency status, loan-to-value ratios and debt service coverage ratios. Key macroeconomic variables include unemployment rates, rent growth, capitalization rates, and the housing price index. These inputs, the reasonable and supportable forecast period, and reversion to historical average technique are subject to a formal governance and review process by management. Additionally, management considers qualitative adjustments to the model output to the extent that any relevant information regarding the collectability of the asset is available and not already considered in the quantitative model. If we determine that a financial asset has become collateral dependent, which we determine to occur when foreclosure is probable, the allowance is measured as the difference between amortized cost and the fair value of the collateral, less any expected costs to sell.

We evaluate AFS securities with a fair value that has declined below amortized cost to determine how the decline in fair value should be recognized. If we determine, based on the facts and circumstances related to the specific security, that we intend to sell a security or it is more likely than not that we would be required to sell a security before the recovery of its amortized cost, any existing allowance for credit losses is reversed and the amortized cost of the security is written down to fair value. If neither of these conditions exist, we evaluate whether the decline in fair value has resulted from a credit loss or other factors.

For non-structured AFS securities, we qualitatively consider relevant facts and circumstances in evaluating whether a decline below fair value is credit-related. Relevant facts and circumstances include but are not limited to: (1) the extent to which the fair value is less than amortized cost; (2) changes in agency credit ratings, (3) adverse conditions related to the security's industry or geographical area, (4) failure to make scheduled payments, and (5) other known changes in the financial condition of the issuer or quality of any underlying collateral or credit enhancements. For structured AFS securities meeting the definition of beneficial interests, the qualitative assessment is bypassed, and any securities having experienced a decline in fair value below amortized cost is subject solely to a quantitative analysis.

If upon completion of this analysis it is determined that a potential credit loss exists, an allowance for expected credit losses is established equal to the amount by which the present value of expected cash flows is less than amortized cost, limited by the amount by which fair value is less than amortized cost. A non-structured security's cash flow estimates are derived from scenario-based outcomes of expected corporate restructurings or the disposition of assets using security-specific facts and circumstances including timing, security interests and loss severity. A structured security's cash flow estimates are based on security-specific facts and circumstances that may include collateral characteristics, expectations of delinquency and default rates, loss severity, prepayments and structural support, including subordination and guarantees. The expected cash flows are discounted at the effective interest rate implicit to the security at the date of purchase or the current yield to accrete a structured security. For securities with a contractual interest rate that varies based on changes in an independent factor, such as an index or rate, the effective interest rate is calculated based on the factor as it changes over the life of the security. Inherently under the discounted cash flow model, both the timing and amount of cash flows affect the measurement of the allowance for expected credit losses.

Future Policy Benefits

The future policy benefit liabilities associated with long duration contracts include term and whole-life products, accident and health, disability, and deferred and immediate annuities with life contingencies. Liabilities for non-participating long duration contracts are established using accepted actuarial valuation methods which require us to make certain assumptions regarding expenses, investment yields, mortality, morbidity, and persistency, with a provision for adverse deviation, at the date of issue or acquisition. As of December 31, 2020, the reserve investment yield assumptions for non-participating contracts range from 2.3% to 5.4% and are specific to our expected earned rate on the asset portfolio supporting the reserves. We base other key assumptions, such as mortality and morbidity, on industry standard data adjusted to align with actual company experience, if necessary. Premium deficiency tests are performed periodically using current assumptions, without provisions for adverse deviation, in order to test the appropriateness of the established reserves. If the reserves using current assumptions are greater than the existing reserves, the excess is recorded and the initial assumptions are revised.

Liabilities for Guaranteed Living Withdrawal Benefits and Guaranteed Minimum Death Benefits

We issue and reinsure deferred annuity contracts which contain GLWB and GMDB riders. We establish future policy benefits for GLWB and GMDB by estimating the expected value of withdrawal and death benefits in excess of the projected account balance. We recognize the excess proportionally over the accumulation period based on total actual and expected assessments. The methods we use to estimate the liabilities have assumptions about policyholder behavior, which includes lapses, withdrawals and utilization of the benefit riders; mortality; and market conditions affecting the account balance growth.

Projected policyholder lapse and withdrawal behavior assumptions are set in one of two ways. For certain blocks of business, this behavior is a function of our predictive analytics model which considers various observable inputs. For the remaining blocks of business, these assumptions are set at the product level by grouping individual policies sharing similar features and guarantees and reviewed periodically against experience. Base lapse rates consider the level of surrender charges and are dynamically adjusted based on the level of current interest rates relative to the guaranteed rates and the amount by which any rider guarantees are in a net positive position. Rider utilization assumptions consider the number and timing of policyholders electing the riders. We track and update this assumption as experience emerges. Mortality assumptions are set at the product level and generally based on standard industry tables, adjusted for historical experience and a provision for mortality improvement. Projected guaranteed benefit amounts in excess of the underlying account balances are considered over a range of scenarios in order to capture our exposure to the guaranteed withdrawal and death benefits.

The assessments used to accrue liabilities are based on interest margins, rider charges, surrender charges and realized gains (losses). As such, future reserve changes are sensitive to changes in investment results and the impacts of shadow adjustments, which represent the impact of assuming unrealized gains (losses) are realized in future periods. As of December 31, 2020, the GLWB and GMDB liability balance, including the impacts of shadow adjustments, totaled $5.0 billion. The increase (decrease) to the GLWB and GMDB liability balance, including the impacts of shadow adjustments from hypothetical changes in projected assessments, changes in the discount rate and annual equity growth is summarized as follows:

(In millions)	December 31, 2020
+10% assessments	$ (163)
−10% assessments	179
+100 bps discount rate	151
−100 bps discount rate	(141)
1% higher annual equity growth	(43)
1% lower annual equity growth	45

Derivatives

Valuation of Embedded Derivatives on FIAs

We issue and reinsure products, primarily FIA products, or purchase investments that contain embedded derivatives. If we determine the embedded derivative has economic characteristics not clearly and closely related to the economic characteristics of the host contract, and 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, unless the fair value option is elected on the host contract. Under the fair value option, bifurcation of the embedded derivative is not necessary as the entire contract is carried at fair value with all related gains and losses recognized in investment related gains (losses) on the consolidated statements of income. Embedded derivatives are carried on the consolidated balance sheets at fair value in the same line item as the host contract.

FIA and indexed universal life insurance contracts allow the policyholder to elect a fixed interest rate return or an equity market component for which interest credited is based on the performance of certain stock market indices. The equity market option is an embedded derivative, similar to a call option. The benefit reserve is equal to the sum of the fair value of the embedded derivative and the host (or guaranteed) component of the contracts. The fair value of the embedded derivatives is computed as the present value of benefits attributable to the excess of the projected policy contract values over the projected minimum guaranteed contract values. The projections of policy contract values are based on assumptions for future policy growth, which include assumptions for expected index credits on the next policy anniversary date, future equity option costs, volatility, interest rates, and policyholder behavior. The projections of minimum guaranteed contract values include the same assumptions for policyholder behavior as were used to project policy contract values. The embedded derivative cash flows are discounted using a rate that reflects our own credit rating. The host contract is established at contract inception as the initial account value less the initial fair value of the embedded derivative and accreted over the policy's life. The host contract accretion rate is updated each quarter so that the present value of actual and expected guaranteed cash flows is equal to the initial host value. Changes in the fair value of embedded derivatives associated with FIAs and indexed universal life insurance contracts are reflected in interest sensitive contract benefits on the consolidated statements of income.

In general, the change in the fair value of the embedded derivatives will not directly correspond to the change in fair value of the hedging derivative assets. The derivatives are intended to hedge the index credits expected to be granted at the end of the current term. The options valued in the embedded derivatives represent the rights of the policyholder to receive index credits over the entire period the FIAs are expected to be in force, which are typically much longer than the current term of the options. From an economic basis we believe it is suitable to hedge with options that align with index terms of our FIA products because policyholder accounts are credited with index performance at the end of each index term. However, because the value of an embedded derivative in an FIA contract is longer-dated, there is a duration mismatch which may lead to differences in the recognition of income and expense for accounting purposes.

A significant assumption in determining policy liabilities for FIAs is the vector of rates used to discount the excess projected contract values. The change in risk free rates is expected to drive most of the movement in the discount rates between periods. Changes to credit spreads for a given credit rating as well as any change to our credit rating requiring a revised level of nonperformance risk would also be factors in the changes to the discount rate. If the discount rates used to discount the excess projected contract values were to fluctuate, there would be a resulting change in reserves for FIAs recorded through the consolidated statements of income.

As of December 31, 2020, we had embedded derivative liabilities classified as Level 3 in the fair value hierarchy of $12.9 billion. The increase (decrease) to the embedded derivatives on FIA products from hypothetical changes in discount rates is summarized as follows:

(In millions)	December 31, 2020
+100 bps discount rate	$ (1,057)
−100 bps discount rate	1,005

However, these estimated effects do not take into account potential changes in other variables, such as equity price levels and market volatility, which can also contribute significantly to changes in carrying values. Therefore, the quantitative impact presented in the table above does not necessarily correspond to the ultimate impact on the consolidated financial statements. In determining the ranges, we have considered current market conditions, as well as the market level of discount rates that can reasonably be anticipated over the near-term. For additional information regarding sensitivities to interest rate risk and public equity risk, see *Item 7A. Quantitative and Qualitative Disclosures About Market Risks*.

Valuation of Embedded Derivatives in Modco or Funds Withheld

Reinsurance agreements written on a funds withheld or modco basis contain embedded derivatives. The right to receive or obligation to pay the total return on the assets supporting the funds withheld at interest or funds withheld liability, respectively, represents a total return swap with a floating rate leg. The fair value of the embedded derivatives on funds withheld and modco agreements is computed as the unrealized gain (loss) on the underlying assets and is recognized in funds withheld at interest and funds withheld liability on the consolidated balance sheets for assumed and ceded agreements, respectively. The change in the fair value of the embedded derivatives is recorded in investment related gains (losses) on the consolidated statements of income.

Valuation of Derivative Contracts

Derivative contracts can be exchange-traded or OTC. Exchange-traded derivative contracts (for example, futures) typically fall within Level 1 of the fair value hierarchy depending on trading activity. OTC derivative contracts (for example, swaps) are valued using valuation models or an income approach using third-party broker-dealer valuations. Valuation models require a variety of inputs, including contractual terms, market prices, yield curves, credit curves, measures of volatility, prepayment rates, and correlation of the inputs. We consider and incorporate counterparty credit risk in the valuation process through counterparty credit rating requirements and monitoring of overall exposure. We also evaluate and include our own nonperformance risk in valuing derivative liabilities. The majority of our derivatives trade in liquid markets; therefore, the model inputs and model selection does not involve significant judgment. As of December 31, 2020, we had derivative contract assets classified in the fair value hierarchy as Level 1 of $58 million, Level 2 of $3.5 billion and Level 3 of $0 million. As of December 31, 2020, we had derivative contract liabilities classified in the fair value hierarchy as Level 1 of $2 million, Level 2 of $292 million and Level 3 of $4 million.

Deferred Acquisition Costs, Deferred Sales Inducements, and Value of Business Acquired

Costs related directly to the successful acquisition of new or renewal insurance or investment contracts are deferred to the extent they are recoverable from future premiums or gross profits. These costs consist of commissions and policy issuance costs, as well as sales inducements credited to policyholder account balances. We perform periodic tests, including at issuance, to determine if the deferred costs are recoverable. If it is determined that the deferred costs are not recoverable, we record a cumulative charge to the current period.

Deferred costs related to universal life-type policies and investment contracts with significant revenue streams from sources other than investment of the policyholder funds are amortized over the lives of the policies, based upon the proportion of the present value of actual and expected deferred costs to the present value of actual and expected gross profits to be earned over the life of the policies. Gross profits include investment spread margins, surrender charge income, policy administration, changes in the GLWB and GMDB reserves, and realized gains (losses) on investments. Current period gross profits for FIAs also include the change in fair value of both freestanding and embedded derivatives.

Our estimates of expected gross profits and margins are based on assumptions using accepted actuarial methods related to policyholder behavior, including lapses and the utilization of benefit riders, mortality, yields on investments supporting the liabilities, future interest credited amounts (including indexed related credited amounts on fixed indexed annuity products), and other policy changes as applicable, and the level of expenses necessary to maintain the policies over their expected lives. Each reporting period, we update estimated gross profits with actual gross profits as part of the amortization process. We also periodically revise the key assumptions used in the amortization calculation which results in revisions to the estimated future gross profits. The effects of changes in assumptions are recorded as unlocking in the period in which the changes are made.

We establish VOBA for blocks of insurance contracts acquired through the acquisition of insurance entities. The fair value of the liabilities purchased is determined using market participant assumptions at the time of acquisition and represents the amount an acquirer would expect to be compensated to assume the contracts. We record the fair value of the liabilities assumed in two components: reserves and VOBA. Reserves are established using our best estimate assumptions, as previously discussed in future policy benefits. VOBA is the difference between the fair value of the liabilities and the reserves. VOBA can be either positive or negative. Any negative VOBA is recorded to the same financial statement line on the consolidated balance sheets as the associated reserves. Positive VOBA is recorded in DAC, DSI and VOBA on the consolidated balance sheets.

VOBA associated with immediate annuity contracts classified as long-duration contracts is amortized at a constant rate in relation to net policyholder liabilities. For universal life-type policies and investment contracts with significant revenue streams from sources other than investment of policyholder funds, VOBA is amortized in relation to the present value of estimated gross profits using methods consistent with those used to amortize DAC and DSI. Negative VOBA is amortized at a constant rate in relation to applicable net policyholder liabilities.

Estimated future gross profits vary based on a number of factors but are typically most sensitive to changes in investment spread margins, which are the most significant component of gross profits. If estimated gross profits for all future years on business in force were to change, including the impacts of shadow adjustments, there would be a resulting increase or decrease to the balances of DAC, DSI and VOBA recorded as an increase or decrease to amortization of DAC, DSI, and VOBA on the consolidated statements of income or AOCI.

Actual gross profits will depend on actual margins, including the changes in the value of embedded derivatives. The most sensitive assumption in determining the value of the embedded derivative is the vector of rates used to discount the excess projected contract values. If the discount rates used to discount the excess projected contract values were to change, there would be a resulting increase or decrease to the balances of DAC, DSI and VOBA recorded as an increase or decrease in amortization of DAC, DSI, and VOBA on the consolidated statements of income.

As of December 31, 2020, DAC, DSI and VOBA totaled $4.9 billion. The increases (decreases) to DAC, DSI and VOBA from hypothetical changes in estimated future gross profits and the embedded derivative discount rate are summarized as follows:

	December 31, 2020			
(In millions)	DAC	DSI	VOBA	Total
+10% estimated future gross profits	$ 170	$ 40	$ 54	$ 264
−10% estimated future gross profits	(194)	(46)	(59)	(299)
+100 bps discount rate	(173)	(65)	(39)	(277)
−100 bps discount rate	173	63	34	270

Consolidation

We consolidate all entities in which we hold a controlling financial interest as of the financial statement date whether through a majority voting interest or otherwise, including those investment funds that meet the definition of a VIE in which we are determined to be the primary beneficiary. If we are not the primary beneficiary, the general partner or another limited partner may consolidate the investment fund, and we record the investment as an equity method investment. See *Note 4 – Variable Interest Entities* to the consolidated financial statements.

The determination as to whether an entity qualifies as a VIE depends on the underlying facts and circumstances surrounding each entity. Our assessment of whether an entity is a VIE may require significant judgment. Those judgments may include, but are not limited to: (1) determining whether the total equity investment at risk is sufficient to permit the entity to finance its activities without additional subordinated financial support; (2) evaluating whether the holders of the equity investment at risk, as a group, lack any characteristics of a controlling financial interest, such as the obligation to absorb losses, right to receive expected residual returns or the ability to make decisions that have a significant effect on the success of the entity; and (3) determining whether the equity investors' voting rights are not proportional to their economic rights, and whether substantially all of the activities of the entity either involve or are conducted on behalf of an investor with disproportionately fewer voting rights.

Judgments are also made in determining whether we, as a variable interest holder, are required to consolidate the VIE as its primary beneficiary. Determining whether we are the primary beneficiary may require significant judgment. Generally, the primary beneficiary is the party that has both the power to direct the activities that most significantly impact the VIE's economic performance and the right to receive benefits or obligation to absorb losses that could be potentially significant to the VIE. This analysis considers related party and de-facto agent relationships, as well as indirect interests we may hold in the entity being evaluated. For example, we may not be deemed to control the VIE; however, to the extent the controlling party is a related party or a de-facto agent, we perform an additional assessment to determine if substantially all of the activities of the VIE are conducted on our behalf and we are therefore the primary beneficiary. This assessment is primarily qualitative and focused on the relationship between us and the VIE being evaluated, but also includes an analysis of the VIE's economic impacts we receive. Additionally, in situations where the related parties share power or are under common control, we evaluate the nature of the relationship and activities of the parties involved to determine which party within the related-party group is most closely associated with the VIE and therefore required to consolidate.

Additionally, determining whether a VIE meets the criteria of an investment company is qualitative in nature and may involve significant judgment. The significance of this distinction relates to whether the investment fund retains the specialized accounting afforded investment companies.

To be deemed an investment company an entity must, at a minimum, meet the following fundamental criteria: (1) obtain funds from one or more investors and provides the investor(s) with defined investment management services, (2) commit to its investor(s) that its business purpose and only substantive activities are investing funds solely for returns from capital appreciation, investment income, or both, and (3) it or its affiliates do not obtain or have the objective of obtaining returns or benefits from an investee or its affiliates that are not normally attributable to ownership interests or that are other than capital appreciation or investment income.

If the three fundamental characteristics are met, we evaluate whether the entity possesses some or all of the following typical characteristics that are generally associated with an investment company: (1) has more than one investment, (2) has more than one investor, (3) has investors that are not related parties of the parent entity (if there is a parent) and the investment manager, (4) has ownership interests in the form of equity or partnership interests, and (5) manages substantially all of its investments on a fair value basis. Lacking one or more of these characteristics does not preclude an entity from being considered an investment company. All relevant facts and circumstances are taken into consideration in making a final determination.

Income Taxes

In determining our income taxes, management is required to interpret complex income tax laws and regulations. We are subject to examinations by federal, state, local and foreign income tax authorities that may give rise to different interpretations of these complex laws and regulations. Due to the nature of the examination process, it generally takes years before these examinations are completed and these matters are resolved. We recognize the tax benefit from an uncertain tax position only if it is more-likely-than-not that the tax position will be sustained on examination by the relevant taxing authorities based on the technical merits of our position. For those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. The aggregate amount of any additional income tax liabilities that may result from these examinations, if any, is not expected to have a material impact on our consolidated financial results. For more information regarding income taxes, see *Note 12 – Income Taxes* to the consolidated financial statements.

Accounting for income taxes involves numerous estimates and assumptions regarding various events and transactions based on management's judgment and interpretation of the laws and regulations enacted as of the reporting date. Deferred tax assets and liabilities resulting from temporary differences between the financial reporting and tax basis of assets and liabilities are measured at the balance sheet date using enacted tax rates expected to apply to taxable income in the years the temporary differences are expected to reverse. We routinely evaluate the likelihood of realizing the benefit of our deferred tax assets and may record a valuation allowance if, based on all available evidence, we determine that it is more-likely-than-not some portion of the tax benefit will not be realized. We have deferred tax assets primarily related to reserve valuation differences, net operating losses, DAC and employee benefit plans.

On a quarterly basis, we test the value of deferred tax assets for impairment at the taxpaying-component level within each tax jurisdiction. Significant judgment and estimates are required in determining whether valuation allowances should be established as well as the amount of such allowances. When making such determination, consideration is given to, among other things, the following:

- whether sufficient taxable income exists within the allowed carryback or carryforward periods;
- whether future reversals of existing taxable temporary differences will occur, including any tax planning strategies that could be used;
- nature or character (e.g., ordinary vs. capital) of the deferred tax assets and liabilities; and
- whether future taxable income exclusive of reversing temporary differences and carryforwards exists.

We may be required to change the provision for income taxes in certain circumstances. Examples of such circumstances include when the ultimate deductibility of certain items is challenged by taxing authorities, when it becomes clear that certain items will not be challenged, when forecasted results used in determining valuation allowances on deferred tax assets significantly change, or when receipt of new information indicates the need for adjustment in valuation allowances. Additionally, future events such as changes in tax legislation could have an impact on the provision for income tax and the effective tax rate. Any such changes could significantly affect the amounts reported in our consolidated financial statements in the period to which these changes apply.

We expect that earnings from AHL's US subsidiaries will not be subject to US dividend withholding tax under the UK Treaty. Any dividends remitted to AHL from ALRe are not subject to withholding tax.

Impact of Recent Accounting Pronouncements

For a discussion of new accounting pronouncements affecting us, see *Note 1 – Business, Basis of Presentation and Significant Accounting Policies* to the consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risks

Risk Management Framework

The function of our risk management framework is to identify, assess and prioritize risks to ensure that both senior management and the board of directors understand and can manage our risk profile. The processes supporting risk management are designed to ensure that our risk profile is consistent with our stated risk appetite and that we maintain sufficient capital to support our corporate plan, while meeting the requirements imposed by our policyholders, shareholders, and regulators. Risk management strives to enable us to maximize the value of our existing business platform to shareholders, preserve our ability to realize business and market opportunities under moderately stressful market conditions, and to withstand the impact of severely adverse events.

The risk management framework includes a governance committee structure that supports accountability in current risk-based decision making, and effective risk management. Governance committees are established at three levels: the board of directors, AHL management, and subsidiary management. We utilize a host of assessment tools to monitor and assess our risk profile, results of which are shared with senior management periodically at management level committees such as the management risk committee (MRC) and the management investment and asset liability committee (MIALC) and with the board of directors quarterly. Business management retains the primary responsibility for day-to-day management of risk.

Risk Management

The risk management team structure consists of an enterprise risk management (ERM) team, a derivatives trading team and an asset risk team. The risk management team is led by our Chief Risk Officer, who reports to the chair of the AHL Risk Committee. Our risk management team is comprised of approximately 40 dedicated, full-time employees.

Asset and Liability Management

Asset and liability risk management is a joint effort that spans business management and the entire risk management team. Processes established to analyze and manage the risks of our assets and liabilities include but are not limited to:

- analyzing our liabilities to ascertain their sensitivity to behavioral variations and changes in market conditions and actuarial assumptions;
- analyzing interest rate risk, cash flow mismatch, and liquidity risk management;
- performing scenario and stress analyses to examine their impacts on capital and earnings;
- performing cash flow testing and capital modeling;
- modeling the values of the derivatives embedded in our policy liabilities so that they can be effectively hedged;
- hedging unwanted risks, including from embedded derivatives, interest rate exposures and currency risks;
- reviewing our corporate plan and strategic objectives, and identifying prospective risks to those objectives under normal and stressed economic, behavioral and actuarial conditions; and
- providing appropriate risk reports that show consolidated risk exposures from assets and liabilities as well as the economic consequences of stress events and scenarios.

Market Risk and Management of Market Risk Exposures

Market risk is the risk of incurring losses due to adverse changes in market rates and prices. Included in market risk are potential losses in value due to credit and counterparty risk, interest rate risk, currency risk, commodity price risk, equity price risk and inflation risk. We are primarily exposed to credit risk, interest rate risk, equity price risk and inflation risk.

Credit Risk and Counterparty Risk

In order to operate our business model, which is based on earning spread income, we must bear credit risk. However, as we assume credit risk through our investment, reinsurance and hedging activities, we endeavor to ensure that risk exposures remain diversified, that we are adequately compensated for the risks we assume and that the level of risk is consistent with our risk appetite and objectives.

Credit risk is a key risk taken in the asset portfolio, as the credit spread on our investments is what drives our spread income. We manage credit risk by avoiding idiosyncratic risk concentrations, understanding and managing our systematic exposure to economic and market conditions through stress testing, monitoring investment activity daily and distinguishing between price and default risk from credit exposures. Concentration and portfolio limits are designed to ensure that exposure to default and impairment risk is sufficiently modest so as to not represent a solvency risk to us, even in severe economic conditions.

The investment teams within Apollo, which manage substantially all of our fixed income assets, focus on in-depth, bottom-up portfolio construction, and disciplined risk management. Their approach to taking credit risk is formulated based on:

- a fundamental view on existing and potential opportunities at the security level;
- an assessment of the current risk/reward proposition for each market segment;
- identification of downside risks and assigning a probability for those risks; and
- establishing a plan for best execution of the investment action.

Item 7A. Quantitative and Qualitative Disclosures About Market Risks

A dedicated set of AHL risk managers, who are on-site with Apollo, monitor the asset risks to ensure that such risks are consistent with our risk appetite, standards for committing capital, and overall strategic objectives. Our risk management team is also a key contributor to the credit impairment evaluation process.

In addition to credit-risk exposures from our investment portfolio, we are also exposed to credit risk from our counterparty exposures from our derivative hedging and reinsurance activities. Derivative counterparty risk is managed by trading on a collateralized basis with counterparties under International Swaps and Derivatives Association documents with a credit support annex having low or zero-dollar collateral thresholds.

We utilize reinsurance to mitigate risks that are inconsistent with our strategy or objectives. For example, we have reinsured much of the mortality risk we would otherwise have accumulated through our various acquisitions, allowing us to focus on our core annuity business. These reinsurance agreements expose us to the credit risk of our counterparties. We manage this risk to avoid counterparty risk concentrations through various mechanisms: utilization of reinsurance structures such as funds withheld or modco so as to retain ownership of the assets and limit counterparty risk to the cost of replacing the counterparty; diversification across counterparties; and when possible, novating policies to eliminate counterparty risk altogether.

Interest Rate Risk

Significant interest rate risk may arise from mismatches in the timing of cash flows from our assets and liabilities. Management of interest rate risk at the company-wide level, and at the various operating company levels, is one of the main risk management activities in which senior management engages.

Depending upon the materiality of the risk and our assessment of how we would perform across a spectrum of interest rate environments, we may seek to mitigate interest rate risk using on-balance-sheet strategies (portfolio management) or off-balance-sheet strategies (derivative hedges such as interest rate swaps and futures). We monitor ALM metrics (such as key-rate durations and convexity) and employ quarterly cash flow testing requirements across all of our insurance companies to assure the asset and liability portfolios are managed to maintain net interest rate exposures at levels that are consistent with our risk appetite. We have established a set of exposure and stress limits to communicate our risk tolerance and to ensure adherence to those risk tolerance levels. Risk management personnel and the MRC and/or MIALC (together, management committees) are notified in the event that risk tolerance levels are exceeded. Depending on the specific risk threshold that is exceeded, the appropriate management committee then makes a decision as to what actions, if any, should be undertaken.

Active portfolio management is performed by the investment managers at Apollo, with direction from the management committees. ALM risk is also managed by the management committees. The performance of our investment portfolio managed by Apollo is reviewed periodically by the management committees and the board of directors. The management committees strive to improve returns to shareholders and protect policyholders, while dynamically managing the risk within our expectations.

Equity Risk

Our FIAs require us to make payments to policyholders that are dependent on the performance of equity market indices. We seek to minimize the equity risk from our liabilities by economically defeasing this equity exposure with granular, policy-level-based hedging. In addition, our investment portfolio can be invested in strategies involving public and private equity positions, though in general, we have limited appetite for passive, public equity investments.

The equity index hedging framework implemented is one of static and dynamic replication. Unique policy-level liability options are matched with static OTC options and residual risk arising from policyholder behavior and other trading constraints (for example minimum trade size) are managed dynamically by decomposing the risk of the portfolio (asset and liability positions) into market risk measures which are managed to pre-established risk limits. The portfolio risks are measured overnight and rebalanced daily to ensure that the risk profile remains within risk appetite. Valuation is done at the position level, and risks are aggregated and shown at the level of each underlying index. Risk measures that have term structure sensitivity, such as index volatility risk, and interest rate risk, are monitored and risk managed along the term structure.

We are also exposed to equity risk in our alternative investment portfolio. The form of those investments is typically a limited partnership interest in a fund. We currently target fund investments that have characteristics resembling fixed income investments versus those resembling pure equity investments, but as holders of partnership positions, our investments are generally held as equity positions. Alternative investments are comprised of several categories, including at the most liquid end of the spectrum "liquid strategies," (which is mostly exposure to publicly traded equities), followed by "differentiated investments", "credit funds", "private equity" and "real assets."

Our investment mandate in our alternative investment portfolio is inherently opportunistic. Each investment is examined and analyzed on its own merits to gain a full understanding of the risks present, and with a view toward determining likely return scenarios, including the ability to withstand stress in a downturn. We have a strong preference for alternative investments that have some or all of the following characteristics, among others: (1) investments that constitute a direct investment or an investment in a fund with a high degree of co-investment; (2) investments with credit- or debt-like characteristics (for example, a stipulated maturity and par value), or alternatively, investments with reduced volatility when compared to pure equity; or (3) investments that we believe have less downside risk.

Item 7A. Quantitative and Qualitative Disclosures About Market Risks

The alternative investment portfolio is monitored to ensure diversification across asset classes and strategy, and the portfolio's performance under stress scenarios is evaluated routinely as part of management and board reviews. Since alternative investments are marked-to-market on the balance sheet, risk analyses focus on potential changes in market value across a variety of market stresses.

Currency Risk

We manage our currency risk so as to maintain minimal exposure to currency fluctuations. We attempt to hedge completely the currency risk arising in our investment portfolio, funding agreements or FIA products. In general, we match currency exposure of assets and liabilities. When the currency denominations of the assets and liabilities do not match, we generally undertake hedging activities to eliminate or mitigate currency mismatch risk.

Inflation Risk

We manage our inflation risk so as to maintain minimal exposure to changes in purchasing power. In general, we attempt to match inflation exposure of assets and liabilities. When the inflation exposure profiles of assets and liabilities do not match, we generally undertake hedging activities to eliminate or mitigate inflation mismatch risk. We attempt to hedge the majority of inflation risk arising from the PRT business that we reinsure.

Scenario Analysis

We evaluate our exposure to market risk by analyzing our portfolio’s performance during simulated periods of economic stress. We manage our business, capital and liquidity needs to withstand stress scenarios and target capital we believe will maintain our current ratings in a moderate recession scenario and maintain investment grade ratings under a substantially severe financial crisis akin to the Lehman scenario in 2008. In the recession scenario, we calibrate recessionary shocks to several key risk factors (including but not limited to, S&P 500, BBB corporate spreads, high yield corporate spreads and 2 year and 10 year US Treasury yields) using data from the 1991, 2001, and 2008 recessions, and estimate mark to market impacts to the various sectors in our portfolio using regression analysis of their credit spreads to the key risk factors. In the Lehman scenario, we use credit spread and interest rate movements from the 2008–2009 period to estimate mark to market changes, and we use default probabilities from the same 2008-2009 period, along with stressed recovery and ratings migration rates, to estimate impairment impacts. Management reviews the impacts of our stress test analyses on a quarterly basis.

Sensitivities

Interest Rate Risk

We assess interest rate exposure for financial assets and financial liabilities using hypothetical stress tests and exposure analyses. Assuming all other factors are constant, if there was an immediate parallel increase in interest rates of 25 basis points from levels as of December 31, 2020, we estimate a net decrease to our point-in-time pre-tax income from changes in the fair value of these financial instruments of $691 million. The net change in fair value for these financial instruments would directly impact the current period gross profits and assessments used in the calculations of DAC, DSI, and VOBA amortization and changes to rider reserves, resulting in an offsetting increase to our pre-tax income of $35 million. If there were a similar parallel increase in interest rates from levels as of December 31, 2019, we estimate a net decrease to our point-in-time pre-tax income from changes in the fair value of these financial instruments of $179 million with an offsetting increase to pre-tax income of $53 million from DAC, DSI, and VOBA amortization and changes in rider reserves. The increased sensitivity to point-in-time pre-tax income from changes in the fair value of financial instruments in the estimated outcome as of December 31, 2020, when compared to December 31, 2019, was driven by the June 2020 Jackson reinsurance transaction, which substantially increased our exposure to reinsurance unrealized gains and losses that are included in our pre-tax income. The financial instruments included in the sensitivity analysis are carried at fair value and changes in fair value are recognized in earnings. These financial instruments include derivative instruments, embedded derivatives and certain fixed maturity securities. The sensitivity analysis excludes those financial instruments carried at fair value for which changes in fair value are recognized in equity, such as AFS fixed maturity securities.

Assuming a 25 basis point increase in interest rates that persists for a 12-month period, the estimated impact to adjusted operating income would be an increase of approximately $35 – $45 million, and a 25 basis point decrease would generally result in a similar decrease. This is driven by a change in investment income from floating rate assets, offset by DAC, DSI, and VOBA amortization and rider reserve change, all calculated without regard to future changes to assumptions. We are unable to make forward-looking estimates regarding the impact on net income of changes in interest rates that persist for a period of time as a result of an inability to determine how such changes will affect certain of the items that we characterize as “non-operating adjustments” in our reconciliation between net income available to AHL common shareholders and adjusted operating income available to common shareholders. See *Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations by Segment* for the reconciliation of net income available to AHL common shareholders to adjusted operating income available to common shareholders. The impact of changing rates on these non-operating adjustments is likely to be significant. See above for a discussion regarding the estimated impact on net income of an immediate, parallel increase in interest rates of 25 basis points from levels as of December 31, 2020, which discussion encompasses the impact of such an increase on certain of the non-operating adjustment items.

Item 7A. Quantitative and Qualitative Disclosures About Market Risks

The models used to estimate the impact of a 25 basis point change in market interest rates incorporate numerous assumptions, require significant estimates and assume an immediate change in interest rates without any discretionary management action to counteract such a change. Consequently, potential changes in our valuations indicated by these simulations will likely be different from the actual changes experienced under any given interest rate scenarios and these differences may be material. Because we actively manage our assets and liabilities, the net exposure to interest rates can vary over time. However, any such decreases in the fair value of fixed maturity securities, unless related to credit concerns of the issuer requiring recognition of credit losses, would generally be realized only if we were required to sell such securities at losses to meet liquidity needs.

Public Equity Risk

We assess public equity market risk for financial assets and financial liabilities using hypothetical stress tests and exposure analyses. Assuming all other factors are constant, if there were a decline in public equity market prices of 10% as of December 31, 2020, we estimate a net decrease to our pre-tax income from changes in the fair value of these financial instruments of $508 million. The net change in fair value for these financial instruments would directly impact the current period gross profits and assessments used in the calculations of DAC, DSI, and VOBA amortization and changes to rider reserves, resulting in an offsetting increase to our pre-tax income of $110 million. As of December 31, 2019, we estimate that a decline in public equity market prices of 10% would cause a net decrease to our pre-tax income from changes in the fair value of these financial instruments of $415 million with an offsetting increase to our pre-tax income of $167 million from DAC, DSI, and VOBA amortization and changes in rider reserves. The increase in the estimated outcome of the sensitivity analysis as of December 31, 2020 when compared to that as of December 31, 2019 is driven by equity market performance during 2020 which has resulted in more equity exposure to public equity market price declines. The financial instruments included in the sensitivity analysis are carried at fair value and changes in fair value are recognized in earnings. These financial instruments include public equity investments, derivative instruments and the FIA embedded derivative.

Item 8. Financial Statements and Supplementary Data

Index to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders
of Athene Holding Ltd.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Athene Holding Ltd. and its subsidiaries (the "Company") as of December 31, 2020 and 2019, and the related consolidated statements of income, of comprehensive income (loss), of equity and of cash flows for each of the three years in the period ended December 31, 2020, including the related notes and financial statement schedules listed in the index appearing under Item 15(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2020, 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Annual Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated 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 regarding the amounts and disclosures in the consolidated 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 consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated 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.

Valuation of certain structured fixed maturity securities

As described in Notes 2 and 5 to the consolidated financial statements, structured fixed maturity securities include collateralized loan obligations (CLO), asset-backed securities (ABS), residential mortgage-backed securities (RMBS), and commercial mortgage-backed securities (CMBS), which represented approximately 15% of the Company's total $154,843 million in investments and 28% of the Company's $27,578 million in investments in related parties as of December 31, 2020. Management utilized third-party commercial pricing services; third-party brokers; industry-standard, vendor modeling software that uses market observable inputs; and other internal modeling techniques based on projected cash flows and unobservable inputs to value certain of its structured fixed maturity securities. The significant unobservable inputs included discount rates, issue specific credit adjustments, material non-public financial information, estimation of future earnings and cash flows, default rate assumptions, liquidity assumptions and indicative quotes from market makers.

The principal considerations for our determination that performing procedures relating to the valuation of certain structured fixed maturity securities is a critical audit matter are (i) the significant judgment by management in determining the fair value of these investments as the valuation uses significant unobservable inputs related to the discount rate, estimation of cash flows, and liquidity assumptions, which led to a high degree of auditor judgment, subjectivity and effort in performing the procedures relating to the estimate; and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of certain structured fixed maturity securities, including controls over the development of the model and the significant unobservable inputs. These procedures also included, among others, developing an independent estimate of the value for a sample of the securities by obtaining independent pricing from third party vendors, if available. For a sample of structured fixed maturity securities, professionals with specialized skill and knowledge were used to assist in developing an independent range of prices and comparing management's estimate to the independently developed ranges. Developing the independent estimate involved utilizing a range of available market inputs and assumptions specific to the discount rate, estimation of cash flows, and liquidity assumptions, and testing the completeness and accuracy of data provided by management.

Valuation of embedded derivatives of fixed indexed annuities

As described in Notes 1, 3 and 5 to the consolidated financial statements, the Company issues and reinsures fixed indexed annuity products that contain embedded derivatives, valued at $12,873 million as of December 31, 2020. Fixed indexed annuity contracts allow the policyholder to elect a fixed interest rate return or an equity market component for which interest credited is based on the performance of certain stock market indices. The equity market option is an embedded derivative. The fair value of the embedded derivatives is computed as the present value of benefits attributable to the excess of the projected policy contract values over the projected minimum guaranteed contract values. The projections of policy contract values are based on assumptions for future policy growth, which included assumptions for expected index credits on the next policy anniversary date, future equity option costs, volatility, interest rates, and policyholder behavior assumptions including lapses and the use of benefit riders.

The principal considerations for our determination that performing procedures relating to the valuation of embedded derivatives of fixed indexed annuities is a critical audit matter are (i) the significant judgment by management in estimating the fair value of embedded derivatives, specifically the significant policyholder behavior assumptions related to lapse and the use of benefit riders, which in turn led to a high degree of auditor judgment, subjectivity and effort in evaluating the audit evidence relating to the significant assumptions, and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of embedded derivatives of fixed indexed annuities, including controls over the development of significant assumptions. These procedures also included, among others, testing the completeness and accuracy of key data underlying the development of the significant assumptions, and the involvement of professionals with specialized skill and knowledge to assist in testing management's process for determining the valuation of embedded derivatives for fixed indexed annuities, which included (i) evaluating the appropriateness of the methods used in the valuation of the embedded derivatives of fixed indexed annuities, and (ii) evaluating the reasonableness of management's significant assumptions of policyholder behavior assumptions related to lapses and the use of benefit riders.

Valuation of guaranteed lifetime withdrawal benefits (GLWB)

As described in Note 1 to the consolidated financial statements, the Company issues and reinsures fixed indexed annuity products, which contain GLWB riders. The Company establishes future policy benefits reserve for GLWB by estimating the expected value of withdrawal benefits in excess of the projected policyholder account balance. The excess is recognized proportionally over the accumulation period based on total actual and expected assessments. The methods used to estimate future policy benefit reserve have assumptions about policyholder behavior, which includes lapses, withdrawals and utilization of benefit riders; mortality; expected yield on investments supporting the liability; and market conditions affecting the account balance growth.

The principal considerations for our determination that performing procedures relating to the valuation of the GLWB is a critical audit matter are (i) the significant judgment by management in estimating the future policy benefit reserve of the GLWB rider, specifically the significant policyholder behavior assumptions related to lapses and use of benefit riders, and the expected yield on investments supporting the liability which in turn led to a high degree of auditor judgment, subjectivity and effort in evaluating the audit evidence relating to the significant assumptions and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of GLWB, including controls over the development of significant assumptions. These procedures also included, among others, testing the completeness and accuracy of key data underlying the development of the significant assumptions, and the involvement of professionals with specialized skill and knowledge to assist in testing management's process for determining the valuation of GLWB, which included (i) evaluating the appropriateness of the method used in the valuation of GLWB, and (ii) evaluating the reasonableness of management's significant assumptions about policyholder behavior related to lapses and use of benefit riders, and the expected yield on investments supporting the liability.

Valuation of deferred acquisition costs (DAC)

As described in Notes 1 and 7 to the consolidated financial statements, costs related directly to the successful acquisition of new, or renewal of, insurance or investment contracts are deferred to the extent they are recoverable from future premiums or gross profits. Deferred costs related to universal life-type policies and investment contracts with significant revenue streams from sources other than investment of the policyholder funds are amortized over the lives of the policies, based upon the proportion of the present value of actual and expected deferred costs to the present value of actual and expected gross profits to be earned over the life of the policies. Estimates of the expected gross profits are based on assumptions using accepted actuarial methods related to policyholder behavior, including lapses and the utilization of benefit riders, mortality, yields on investments supporting the liabilities, future interest credited amounts (including indexed related credited amounts on fixed indexed annuity products), and other policy changes as applicable, and the level of expenses necessary to maintain the policies over their expected lives.

The principal considerations for our determination that performing procedures relating to the valuation of DAC is a critical audit matter are (i) the significant judgment by management in estimating the future gross profits used to amortize the DAC, specifically the significant policyholder behavior assumptions related to lapses and the use of benefit riders and yields on investments supporting the liabilities, which in turn led to a high degree of auditor judgment, subjectivity, and judgment in evaluating the audit evidence related to the significant assumptions and (ii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the valuation of DAC, including controls over the development of significant assumptions. These procedures also included, among others, testing the completeness and accuracy of key data underlying the development of the significant assumptions, and the involvement of professionals with specialized skill and knowledge to assist in testing management's process for determining the valuation of DAC, which included (i) evaluating the appropriateness of the actuarial methods used in the valuation of DAC, and (ii) evaluating the reasonableness of management's significant assumptions related to lapses and the use of benefit riders and yields on investments supporting the liabilities.

/s/ PricewaterhouseCoopers LLP
Des Moines, Iowa
February 19, 2021

We have served as the Company's auditor since 2015.

ATHENE HOLDING LTD.
Consolidated Balance Sheets

	December 31,	
(In millions)	2020	2019
Assets		
Investments		
Available-for-sale securities, at fair value (amortized cost: 2020 – $76,100 and 2019 – $67,479; allowance for credit losses: 2020 – $103)	$ 82,853	$ 71,374
Trading securities, at fair value (consolidated variable interest entities: 2020 – $0 and 2019 – $16)	2,093	2,070
Equity securities (portion at fair value: 2020 – $330 and 2019 – $247)	532	247
Mortgage loans (allowance for credit losses: 2020 – $232 and 2019 – $11; portion at fair value: 2020 – $19 and 2019 – $27; consolidated variable interest entities: 2020 – $1,880 and 2019 – $0)	15,264	14,306
Investment funds (portion at fair value: 2020 – $161 and 2019 – $154; consolidated variable interest entities: 2020 – $0 and 2019 – $19)	803	750
Policy loans	369	417
Funds withheld at interest (portion at fair value: 2020 – $1,944 and 2019 – $801)	48,612	15,181
Derivative assets	3,523	2,888
Short-term investments (portion at fair value: 2020 – $222 and 2019 – $406)	222	596
Other investments (allowance for credit losses: 2020 – $3; portion at fair value: 2020 – $105 and 2019 – $93)	572	158
Total investments	154,843	107,987
Cash and cash equivalents (consolidated variable interest entities: 2020 – $0 and 2019 – $3)	7,704	4,240
Restricted cash	738	402
Investments in related parties		
Available-for-sale securities, at fair value (amortized cost: 2020 – $6,444 and 2019 – $3,783; allowance for credit losses: 2020 – $1)	6,520	3,804
Trading securities, at fair value	1,529	785
Equity securities, at fair value (consolidated variable interest entities: 2020 – $0 and 2019 – $6)	72	64
Mortgage loans (allowance for credit losses: 2020 – $14 and 2019 – $0)	674	653
Investment funds (portion at fair value: 2020 – $2,119 and 2019 – $819; consolidated variable interest entities: 2020 – $0 and 2019 – $664)	5,284	3,550
Funds withheld at interest (portion at fair value: 2020 – $862 and 2019 – $594)	13,030	13,220
Other investments (allowance for credit losses: 2020 – $4)	469	487
Accrued investment income (related party: 2020 – $38 and 2019 – $27)	905	807
Reinsurance recoverable (portion at fair value: 2020 – $2,100 and 2019 – $1,821)	4,848	4,863
Deferred acquisition costs, deferred sales inducements and value of business acquired	4,906	5,008
Other assets (consolidated variable interest entities: 2020 – $1 and 2019 – $20)	1,249	1,005
Total assets	$ 202,771	$ 146,875

(Continued)

See accompanying notes to consolidated financial statements

ATHENE HOLDING LTD.
Consolidated Balance Sheets

	December 31,	
(In millions, except per share data)	2020	2019
Liabilities and Equity		
Liabilities		
Interest sensitive contract liabilities (related party: 2020 – $14,150 and 2019 – $15,285; portion at fair value: 2020 – $14,181 and 2019 – $11,992)	$ 144,566	$ 102,745
Future policy benefits (related party: 2020 – $1,610 and 2019 – $1,302; portion at fair value: 2020 – $2,376 and 2019 – $2,301)	29,258	23,330
Other policy claims and benefits (related party: 2020 – $2 and 2019 – $13)	130	138
Dividends payable to policyholders	110	113
Short-term debt	—	475
Long-term debt	1,976	992
Derivative liabilities	298	97
Payables for collateral on derivatives and securities to repurchase	3,801	3,255
Funds withheld liability (portion at fair value: 2020 – $59 and 2019 – $31)	452	408
Other liabilities (related party: 2020 – $112 and 2019 – $79; consolidated variable interest entities: 2020 – $134 and 2019 – $0)	2,040	1,181
Total liabilities	182,631	132,734
Commitments and Contingencies (Note 15)		
Equity		
Preferred stock		
Series A – par value $1 per share; $863 aggregate liquidation preference; authorized, issued and outstanding: 2020 and 2019 – 0.0 shares	—	—
Series B – par value $1 per share; $345 aggregate liquidation preference; authorized, issued and outstanding: 2020 and 2019 – 0.0 shares	—	—
Series C – par value $1 per share; $600 aggregate liquidation preference; authorized, issued and outstanding: 2020 – 0.0 shares	—	—
Series D – par value $1 per share; $575 aggregate liquidation preference; authorized, issued and outstanding: 2020 – 0.0 shares	—	—
Common stock		
Class A – par value $0.001 per share; authorized: 2020 and 2019 – 425.0 shares; issued and outstanding: 2020 – 191.5 and 2019 – 143.2 shares	—	—
Class B – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 325.0 shares; issued and outstanding: 2020 – 0.0 and 2019 – 25.4 shares	—	—
Class M-1 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 7.1 shares; issued and outstanding: 2020 – 0.0 and 2019 – 3.3 shares	—	—
Class M-2 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 5.0 shares; issued and outstanding: 2020 – 0.0 and 2019 – 0.8 shares	—	—
Class M-3 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 7.5 shares; issued and outstanding: 2020 – 0.0 and 2019 – 1.0 shares	—	—
Class M-4 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 7.5 shares; issued and outstanding: 2020 – 0.0 and 2019 – 4.0 shares	—	—
Additional paid-in capital	6,613	4,171
Retained earnings	8,073	6,939
Accumulated other comprehensive income (related party: 2020 – $59 and 2019 – $17)	3,971	2,281
Total Athene Holding Ltd. shareholders' equity	18,657	13,391
Noncontrolling interests	1,483	750
Total equity	20,140	14,141
Total liabilities and equity	$ 202,771	$ 146,875

(Concluded)

See accompanying notes to consolidated financial statements

ATHENE HOLDING LTD.
Consolidated Statements of Income

	Years ended December 31,		
(In millions, except per share data)	2020	2019	2018
Revenues			
Premiums (related party: 2020 – $322, 2019 – $243 and 2018 – $679)	$ 5,963	$ 6,382	$ 3,462
Product charges (related party: 2020 – $51, 2019 – $54 and 2018 – $34)	571	524	449
Net investment income (related party investment income: 2020 – $1,101, 2019 – $779 and 2018 – $594; consolidated variable interest entities: 2020 – $51, 2019 – $74 and 2018 – $56; and related party investment expense: 2020 – $490, 2019 – $426 and 2018 – $349)	4,885	4,596	4,060
Investment related gains (losses) (related party: 2020 – $702, 2019 – $1,009 and 2018 – $(98); and consolidated variable interest entities: 2020 – $22, 2019 – $5 and 2018 – $(18))	3,309	4,719	(1,360)
Other revenues	36	37	26
Total revenues	14,764	16,258	6,637
Benefits and expenses			
Interest sensitive contract benefits (related party: 2020 – $295, 2019 – $511 and 2018 – $63)	3,891	4,557	290
Amortization of deferred sales inducements	66	74	54
Future policy and other policy benefits (related party: 2020 – $405, 2019 – $365 and 2018 – $707)	7,187	7,587	4,281
Amortization of deferred acquisition costs and value of business acquired	521	958	174
Dividends to policyholders	38	36	37
Policy and other operating expenses (related party: 2020 – $53, 2019 – $45 and 2018 – $42)	855	744	626
Total benefits and expenses	12,558	13,956	5,462
Income before income taxes	2,206	2,302	1,175
Income tax expense	285	117	122
Net income	1,921	2,185	1,053
Less: Net income attributable to noncontrolling interests	380	13	—
Net income attributable to Athene Holding Ltd. shareholders	1,541	2,172	1,053
Less: Preferred stock dividends	95	36	—
Net income available to Athene Holding Ltd. common shareholders	$ 1,446	$ 2,136	$ 1,053
Earnings (loss) per share			
Basic – Class A	$ 8.51	$ 11.44	$ 5.34
Basic – Classes B, M-1, M-2, M-3 and M-4	(3.87)	11.44	5.34
Diluted – Class A	8.34	11.41	5.32
Diluted – Class B	(3.87)	11.44	5.34
Diluted – Class M-1	(3.87)	11.44	5.34
Diluted – Class M-2	(3.87)	11.44	5.31
Diluted – Class M-3	(3.87)	11.44	5.31
Diluted – Class M-4	(3.87)	9.94	4.11

See accompanying notes to consolidated financial statements

ATHENE HOLDING LTD.
Consolidated Statements of Comprehensive Income (Loss)

	Years ended December 31,		
(In millions)	2020	2019	2018
Net income	$ 1,921	$ 2,185	$ 1,053
Other comprehensive income (loss), before tax			
Unrealized investment gains (losses) on available-for-sale securities, net of offsets	2,358	3,438	(2,448)
Unrealized gains (losses) on hedging instruments	(106)	29	146
Foreign currency translation and other adjustments	18	1	(8)
Other comprehensive income (loss), before tax	2,270	3,468	(2,310)
Income tax expense (benefit) related to other comprehensive income (loss)	413	698	(431)
Other comprehensive income (loss)	1,857	2,770	(1,879)
Comprehensive income (loss)	3,778	4,955	(826)
Less: Comprehensive income (loss) attributable to noncontrolling interests	541	(4)	—
Comprehensive income (loss) attributable to Athene Holding Ltd. shareholders	$ 3,237	$ 4,959	$ (826)

See accompanying notes to consolidated financial statements

ATHENE HOLDING LTD.
Consolidated Statements of Equity

(In millions)	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive income (loss)	Total Athene Holding Ltd. shareholders' equity	Noncontrolling interests	Total equity
Balance at December 31, 2017	$ —	$ —	$ 3,472	$ 4,255	$ 1,449	$ 9,176	$ —	$ 9,176
Adoption of accounting standards	—	—	—	39	(42)	(3)	—	(3)
Net income	—	—	—	1,053	—	1,053	—	1,053
Other comprehensive loss	—	—	—	—	(1,879)	(1,879)	—	(1,879)
Issuance of common shares, net of expenses	—	—	2	—	—	2	—	2
Stock-based compensation	—	—	32	—	—	32	—	32
Retirement or repurchase of shares	—	—	(44)	(61)	—	(105)	—	(105)
Balance at December 31, 2018	—	—	3,462	5,286	(472)	8,276	—	8,276
Net income	—	—	—	2,172	—	2,172	13	2,185
Other comprehensive income (loss)	—	—	—	—	2,787	2,787	(17)	2,770
Issuance of preferred shares, net of expenses	—	—	1,172	—	—	1,172	—	1,172
Issuance of common shares, net of expenses	—	—	3	—	—	3	—	3
Stock-based compensation	—	—	28	—	—	28	—	28
Retirement or repurchase of shares	—	—	(349)	(483)	—	(832)	—	(832)
Preferred stock dividends	—	—	—	(36)	—	(36)	—	(36)
Subsidiary issuance of equity interests	—	—	(145)	—	(34)	(179)	754	575
Balance at December 31, 2019	—	—	4,171	6,939	2,281	13,391	750	14,141
Adoption of accounting standards	—	—	—	(117)	(6)	(123)	(2)	(125)
Net income	—	—	—	1,541	—	1,541	380	1,921
Other comprehensive income	—	—	—	—	1,696	1,696	161	1,857
Issuance of preferred shares, net of expenses	—	—	1,140	—	—	1,140	—	1,140
Issuance of common shares, net of expenses	—	—	1,510	—	—	1,510	—	1,510
Stock-based compensation	—	—	25	—	—	25	—	25
Retirement or repurchase of shares	—	—	(233)	(195)	—	(428)	—	(428)
Preferred stock dividends	—	—	—	(95)	—	(95)	—	(95)
Contributions from noncontrolling interests	—	—	—	—	—	—	240	240
Distributions to noncontrolling interests	—	—	—	—	—	—	(46)	(46)
Balance at December 31, 2020	$ —	$ —	$ 6,613	$ 8,073	$ 3,971	$ 18,657	$ 1,483	$ 20,140

See accompanying notes to consolidated financial statements

ATHENE HOLDING LTD.
Consolidated Statements of Cash Flows

(In millions)	Years ended December 31, 2020	2019	2018
Cash flows from operating activities			
Net income	$ 1,921	$ 2,185	$ 1,053
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of deferred acquisition costs and value of business acquired	521	958	174
Amortization of deferred sales inducements	66	74	54
Net accretion of net investment premiums, discounts and other	(203)	(94)	(178)
Payment at inception or recapture of reinsurance agreements, net (related party: 2020 – $0, 2019 – $0 and 2018 – $(407))	(723)	—	(394)
Net investment income (related party: 2020 – $(363), 2019 – $(171) and 2018 – $(103); consolidated variable interest entities: 2020 – $(29), 2019 – $0 and 2018 – $0)	(395)	(167)	(84)
Net recognized (gains) losses on investments and derivatives (related party: 2020 – $(27), 2019 – $(16) and 2018 – $12; consolidated variable interest entities: 2020 – $6, 2019 – $(5) and 2018 – $17)	(687)	(2,484)	1,112
Policy acquisition costs deferred	(633)	(645)	(919)
Changes in operating assets and liabilities:			
Accrued investment income (related party: 2020 – $(13), 2019 – $(2) and 2018 – $(15))	(130)	(128)	(66)
Interest sensitive contract liabilities (related party: 2020 – $276, 2019 – $471 and 2018 – $30)	3,347	4,003	(365)
Future policy benefits, other policy claims and benefits, dividends payable to policyholders and reinsurance recoverable (related party: 2020 – $291, 2019 – $295 and 2018 – $109)	3,246	1,171	2,457
Funds withheld assets and liabilities (related party: 2020 – $(902), 2019 – $(1,317) and 2018 – $113)	(2,241)	(2,582)	270
Other assets and liabilities	65	365	(240)
Net cash provided by operating activities	4,154	2,656	2,874
Cash flows from investing activities			
Sales, maturities and repayments of:			
Available-for-sale securities (related party: 2020 – $282, 2019 – $252 and 2018 – $181)	$ 11,384	$ 12,762	$ 12,121
Trading securities (related party: 2020 – $31, 2019 – $74 and 2018 – $44; consolidated variable interest entities: 2020 – $10, 2019 – $37 and 2018 – $14)	170	309	362
Equity securities (related party: 2020 – $5, 2019 – $123 and 2018 – $173; consolidated variable interest entities: 2020 – $0, 2019 – $51 and 2018 – $144)	820	305	276
Mortgage loans (related party: 2020 – $12, 2019 – $4 and 2018 – $13)	2,162	2,070	1,373
Investment funds (related party: 2020 – $691, 2019 – $296 and 2018 – $350; consolidated variable interest entities: 2020 – $20, 2019 – $13 and 2018 – $59)	788	429	540
Derivative instruments and other invested assets (related party: 2020 – $0, 2019 – $0 and 2018 – $2)	2,505	1,503	1,859
Short-term investments (related party: 2020 – $28, 2019 – $0 and 2018 – $172)	883	398	538
Purchases of:			
Available-for-sale securities (related party: 2020 – $(3,127), 2019 – $(2,897) and 2018 – $(811))	(23,404)	(17,237)	(15,435)
Trading securities (related party: 2020 – $(278), 2019 – $(6) and 2018 – $(4))	(341)	(495)	(54)
Equity securities (related party: 2020 – $(19), 2019 – $(262) and 2018 – $(150); consolidated variable interest entities: 2020 – $0, 2019 – $0 and 2018 – $(1))	(1,362)	(451)	(335)
Mortgage loans (related party: 2020 – $(61), 2019 – $(366) and 2018 – $(389))	(4,091)	(6,391)	(5,745)
Investment funds (related party: 2020 – $(1,372), 2019 – $(838) and 2018 – $(1,170); consolidated variable interest entities: 2020 – $0, 2019 – $(110) and 2018 – $(82))	(1,536)	(1,012)	(1,457)
Derivative instruments and other invested assets (related party: 2020 – $0, 2019 – $(100) and 2018 – $(150))	(1,879)	(1,299)	(1,348)
Short-term investments (related party: 2020 – $(28), 2019 – $0 and 2018 – $(121))	(617)	(802)	(478)
Deconsolidation of previously consolidated entities	(3)	—	(296)
Other investing activities, net	(296)	(45)	(94)
Net cash used in investing activities	(14,817)	(9,956)	(8,173)

(Continued)

See accompanying notes to consolidated financial statements

ATHENE HOLDING LTD.
Consolidated Statements of Cash Flows

(In millions)	Years ended December 31, 2020	2019	2018
Cash flows from financing activities			
Issuance of common stock	$ 351	$ —	$ —
Proceeds from short-term debt	—	475	183
Repayment of short-term debt	(75)	—	(183)
Proceeds from long-term debt	992	—	998
Deposits on investment-type policies and contracts (related party: 2020 – $86, 2019 – $146 and 2018 – $151)	18,836	11,569	10,262
Withdrawals on investment-type policies and contracts (related party: 2020 – $(382), 2019 – $(455) and 2018 – $(252))	(7,067)	(6,548)	(6,205)
Payments for coinsurance agreements on investment-type contracts, net	(27)	(44)	(2)
Capital contributions from noncontrolling interests	240	575	—
Capital distributions to noncontrolling interests	(46)	—	—
Net change in cash collateral posted for derivative transactions and securities to repurchase	546	2,286	(1,354)
Issuance of preferred stock, net of expenses	1,140	1,172	—
Preferred stock dividends	(95)	(36)	—
Repurchase of common stock	(428)	(832)	(105)
Other financing activities, net	122	(80)	113
Net cash provided by financing activities	14,489	8,537	3,707
Effect of exchange rate changes on cash and cash equivalents	(26)	—	—
Net increase (decrease) in cash and cash equivalents	3,800	1,237	(1,592)
Cash and cash equivalents at beginning of year[1]	4,642	3,405	4,997
Cash and cash equivalents at end of year[1]	$ 8,442	$ 4,642	$ 3,405
Supplementary information			
Cash paid for taxes	$ 168	$ 36	$ 52
Cash paid for interest	99	49	26
Non-cash transactions			
Deposits on investment-type policies and contracts through reinsurance agreements (related party: 2020 – $344, 2019 – $217 and 2018 – $17,619)	30,172	782	26,532
Withdrawals on investment-type policies and contracts through reinsurance agreements (related party: 2020 – $1,435, 2019 – $1,753 and 2018 – $1,050)	5,010	3,393	1,843
Investments received from settlements on reinsurance agreements	53	56	52
Investments received from settlements on related party reinsurance agreements	—	149	—
Investments received from pension risk transfer premiums	2,364	5,235	435
Investments exchanged for related party investments	—	—	95
Related party investments exchanged for investments	—	—	115
Related party investment funds exchanged for related party investments	516	—	—
Reduction in investments and other assets and liabilities relating to recapture of reinsurance agreement	4,298	—	—
Investment in Athora Holding Ltd. received upon deconsolidation	—	—	108
Ceding commission on reinsurance agreements settled in investments	—	—	266
Decrease in investments due to novation of related party reinsurance transactions	—	320	—
Related party investments received in exchange for the issuance of Class A common shares	1,147	—	—

[1] *Includes cash and cash equivalents and restricted cash.*

(Concluded)

See accompanying notes to consolidated financial statements

1. Business, Basis of Presentation and Significant Accounting Policies

Athene Holding Ltd. (AHL), a Bermuda exempted company, together with its subsidiaries (collectively, Athene, we, our, us, or the Company), is a leading retirement services company that issues, reinsures and acquires retirement savings products in the United States (US) and internationally.

We conduct business primarily through the following consolidated subsidiaries:

- Our non-US reinsurance subsidiaries, to which AHL's other insurance subsidiaries and third-party ceding companies directly and indirectly reinsure a portion of their liabilities, including Athene Life Re Ltd. (ALRe), a Bermuda exempted company, and Athene Life Re International Ltd.; and
- Athene USA Corporation, an Iowa corporation (together with its subsidiaries, AUSA).

Consolidation and Basis of Presentation—Our consolidated financial statements include our wholly owned subsidiaries and investees in which we hold a controlling financial interest, including variable interest entities (VIEs). Investees in which we do not hold a controlling financial interest, but have the ability to exercise significant influence over operating and financing decisions, other than investments for which we have elected the fair value option, are accounted for under the equity method. Intercompany balances and transactions have been eliminated.

For entities that are consolidated, but not wholly owned, we allocate a portion of the income or loss and corresponding equity to the owners other than us. We include the aggregate of the income or loss and corresponding equity that is not owned by us in noncontrolling interests in the consolidated financial statements.

We report investments in related parties separately, as further described in the accounting policies that follow.

We have prepared the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (GAAP), which requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the period. There are material risks and uncertainties surrounding the spread of the Coronavirus Disease of 2019 (COVID-19), which has resulted in significant volatility in the financial markets. Our estimates may vary as more information about the extent to which COVID-19 and the resulting impact on economic conditions and the financial markets become known. Actual experience could materially differ from these estimates and assumptions. Our principal estimates impact:

- fair value of investments;
- impairment of investments and allowances for expected credit losses;
- derivatives valuation, including embedded derivatives;
- deferred acquisition costs (DAC), deferred sales inducements (DSI) and value of business acquired (VOBA);
- future policy benefit reserves; and
- valuation allowances on deferred tax assets.

Additional details around these principal estimates and assumptions are discussed in the significant accounting policies that follow and the related footnote disclosures.

Summary of Significant Accounting Policies

Investments

Fixed Maturity Securities – Fixed maturity securities includes bonds, collateralized loan obligations (CLO), asset-backed securities (ABS), residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS) and redeemable preferred stock. We classify fixed maturity securities as available-for-sale (AFS) or trading at the time of purchase and subsequently carry them at fair value. Fair value hierarchy and valuation methodologies are discussed in *Note 5 – Fair Value*. Classification is dependent on a variety of factors including our expected holding period, election of the fair value option and asset and liability matching.

AFS Securities – AFS securities are held at fair value on the consolidated balance sheets with unrealized gains and losses, net of allowances for expected credit losses, tax and adjustments to DAC, DSI, VOBA and future policy benefits, if applicable, generally reflected in accumulated other comprehensive income (loss) (AOCI) on the consolidated balance sheets. Unrealized gains or losses relating to identified risks within AFS securities in fair value hedging relationships are reflected in investment related gains (losses) on the consolidated statements of income.

Trading Securities – We elected the fair value option for certain fixed maturity securities. These fixed maturity securities are classified as trading, with changes to fair value included in investment related gains (losses) on the consolidated statements of income. Although the securities are classified as trading, the trading activity related to these investments is primarily focused on asset and liability matching activities and is not intended to be an income strategy based on active trading. As such, the activity related to these investments on the consolidated statements of cash flows is classified as investing activities.

We generally record security transactions on a trade date basis, with any unsettled trades recorded in other assets or other liabilities on the consolidated balance sheets. Bank loans, private placements and investment funds are recorded on settlement date basis.

Equity Securities – Equity securities includes common stock, mutual funds and non-redeemable preferred stock. Equity securities with readily determinable fair values are carried at fair value with subsequent changes in fair value recognized in net income. We have elected to account for certain equity securities without readily determinable fair values that do not qualify for the practical expedient to estimate fair values based on net asset value (NAV) per share (or its equivalent) at cost less impairment, subject to adjustments based on observable price changes in orderly transactions for identical or similar investments of the same issuer.

Purchased Credit Deteriorated (PCD) Investments – We purchase certain structured securities, primarily RMBS, and re-performing mortgage loans having experienced a more-than-insignificant deterioration in credit quality since their origination which upon our assessment have been determined to meet the definition of PCD investments. Additionally, structured securities classified as beneficial interests follow the initial measurement guidance for PCD investments if there is a significant difference between contractual cash flows adjusted for expected prepayments and expected cash flows at the date of recognition. The initial allowance for credit losses for PCD investments is recorded through a gross-up adjustment to the initial amortized cost. For mortgage loans, the initial allowance is determined using the methodology described in the *Credit Losses – Assets Held at Amortized Cost and Off-Balance Sheet Credit Exposures* section. For structured securities classified as beneficial interests, the initial allowance is calculated as the present value of the difference between contractual cash flows adjusted for expected prepayments and expected cash flows at the date of recognition. The non-credit purchase discount or premium is amortized into investment income using the effective interest method. The credit discount, represented by the allowance for expected credit losses, is remeasured each period following the policies for measuring credit losses described in the *Credit Losses – Assets Held at Amortized Cost and Off-Balance Sheet Credit Exposures* and *Credit Losses – Available-for-Sale Securities* sections below.

Purchased Credit Impaired (PCI) Investments – Prior to January 1, 2020, certain securities purchased with deterioration in credit quality since their issuance were accounted for as PCI investments. The difference between the undiscounted expected future cash flows of the PCI investment and the recorded investment represented the initial accretable yield, which was accreted into investment income, net of related expenses, over its remaining life on a level-yield basis. The difference between the contractually required payments on the PCI investment and the undiscounted expected future cash flows represented the non-accretable difference at acquisition. Over time, based on actual payments received and changes in estimates of undiscounted expected future cash flows, the accretable yield and the non-accretable difference could change. PCI investments are presented on the consolidated financial statements consistent with AFS securities or mortgage loans depending on the underlying investment. Quarterly, we evaluated the undiscounted expected future cash flows associated with PCI investments based on updates to key assumptions.

Mortgage Loans – Mortgage loans are primarily stated at unpaid principal balance, adjusted for any unamortized premium or discount, and net of allowances for expected credit losses. Interest income is accrued on the principal amount of the loan based on its contractual interest rate. We record amortization of premiums and discounts using the effective yield method and contractual cash flows on the underlying loan. We accrue interest on loans until it is probable we will not receive interest or the loan is 90 days past due. Interest income, amortization of premiums and discounts, and prepayment fees are reported in net investment income on the consolidated statements of income. We have also elected the fair value option on a portion of our mortgage loans.

Investment Funds – We invest in certain non-fixed income, alternative investments in the form of limited partnerships or similar legal structures (investment funds). For investment funds in which we do not hold a controlling financial interest, and therefore are not required to consolidate, we typically account for these investments using the equity method, where the cost is recorded as an investment in the fund, or we have elected the fair value option. Adjustments to the carrying amount reflect our pro rata ownership percentage of the operating results as indicated by NAV in the investment fund financial statements, which can be on a lag of up to three months when investee information is not received in a timely manner.

We record our proportionate share of investment fund income within net investment income on the consolidated statements of income. Contributions paid or distributions received by us are recorded directly to the investment fund balance as an increase to carrying value or as a return of capital, respectively.

Policy Loans – Policy loans are funds provided to policyholders in return for a claim on the policyholder's account balance. The funds provided are limited to a specified percentage of the account balance. The majority of policy loans do not have a stated maturity and the balances and accrued interest are repaid with proceeds from the policyholder's account balance. Policy loans are reported at the unpaid principal balance. Interest income is recorded as earned using the contract interest rate and is reported in net investment income on the consolidated statements of income.

Funds Withheld at Interest – Funds withheld at interest represents a receivable for amounts contractually withheld by ceding companies in accordance with funds withheld coinsurance (funds withheld) and modified coinsurance (modco) reinsurance agreements in which we are the reinsurer. Generally, assets equal to statutory reserves are withheld and legally owned by the ceding company, and any excess or shortfall is settled periodically. The underlying agreements contain embedded derivatives as discussed below.

Short-term Investments – Short-term investments consists of financial instruments with maturities of greater than three months but less than twelve months when purchased. Short-term debt securities are accounted for as trading or AFS consistent with our policies for those investments. Short-term loans are carried at amortized cost. Fair values are determined consistent with methodologies described in *Note 5 – Fair Value* for the respective investment type.

Other Investments – Other investments includes, but is not limited to, term loans collateralized by mortgages on residential and commercial real estate. Mortgage collateralized term loans are stated at unpaid principal balance, adjusted for any unamortized premium or discount, and net of allowances for expected credit losses. Interest income is accrued on the principal amount of the loan based on its contractual interest rate. We record amortization of premiums and discounts using the effective interest method and contractual cash flows on the underlying loan. We accrue interest on loans until it is probable we will not receive interest or the loan is 90 days past due. Interest income, amortization of premiums and discounts, and prepayment and other fees are reported in net investment income on the consolidated statements of income.

Securities Repurchase and Reverse Repurchase Agreements – Securities repurchase and reverse repurchase transactions involve the temporary exchange of securities for cash or other collateral of equivalent value, with agreement to redeliver a like quantity of the same or similar securities at a future date and at a fixed and determinable price. We evaluate transfers of securities under these agreements to repurchase or resell to determine whether they satisfy the criteria for accounting treatment as secured borrowing or lending arrangements. Agreements not meeting the criteria would require recognition of the transferred securities as sales or purchases, with related forward repurchase or resale commitments. All of our securities repurchase transactions are accounted for as secured borrowings and are included in payables for collateral on derivatives and securities to repurchase on the consolidated balance sheets. Earnings from investing activities related to the cash received under our securities repurchase arrangements are included in net investment income on the consolidated statements of income. The associated borrowing cost is included in policy and other operating expenses on the consolidated statements of income. The investments purchased in reverse repurchase agreements, which represent collateral on a secured lending arrangement, are not reflected in our consolidated balance sheets; however, the secured lending arrangement is recorded as a short-term investment for the principal amount loaned under the agreement.

Investment Income – We recognize investment income as it accrues or is legally due, net of investment management and custody fees. Investment income on fixed maturity securities includes coupon interest, as well as the amortization of any premium and the accretion of any discount. Investment income on equity securities represents dividend income and preferred coupons interest. Realized gains and losses on sales of investments are included in investment related gains (losses) on the consolidated statements of income. Realized gains and losses on investments sold are determined based on a first-in first-out method.

Credit Losses – Assets Held at Amortized Cost and Off-Balance Sheet Credit Exposures – We establish an allowance for expected credit losses at the time of purchase for assets held at amortized cost, which primarily includes our residential and commercial mortgage loan portfolios, but also includes certain other loans and reinsurance assets. The allowance for expected credit losses represents the portion of the asset's amortized cost basis that we do not expect to collect due to credit losses over the asset's contractual life, considering past events, current conditions, and reasonable and supportable forecasts of future economic conditions or macroeconomic forecasts. We use a quantitative probability of default and loss given default methodology to develop our estimate of expected credit loss. We develop the estimate on a collective basis factoring in the risk characteristics of the assets in the portfolio. If an asset does not share similar risk characteristics with other assets, the asset is individually assessed.

Allowance estimates are highly dependent on expectations of future economic conditions and macroeconomic forecasts, which involve significant judgment and subjectivity. We use quantitative modeling to develop the allowance for expected credit losses. Key inputs into the model include data pertaining to the characteristics of the assets, historical losses and current market conditions. Additionally, the model incorporates management’s expectations around future economic conditions and macroeconomic forecasts over a reasonable and supportable forecast period, after which the model reverts to historical averages. These inputs, the reasonable and supportable forecast period, and reversion to historical average technique are subject to a formal governance and review process by management. Additionally, management considers qualitative adjustments to the model output to the extent that any relevant information regarding the collectability of the asset is available and not already considered in the quantitative model. If we determine that a financial asset has become collateral dependent, which we determine to be the point at which foreclosure is probable, the allowance is measured as the difference between amortized cost and the fair value of the collateral, less any expected costs to sell.

The initial allowance for invested assets held at amortized cost other than for PCD investments, and subsequent changes in the allowance including PCD investments, are recorded through a charge to credit loss expense within investment related gains (losses) on the consolidated statements of income. Credit loss expense for reinsurance assets held at amortized cost is recorded through policy and other operating expenses on the consolidated statements of income.

We limit accrued interest income on loans to 90 days of interest. Once a loan becomes 90 days past due, the loan is put on non-accrual status and any accrued interest is written off. Once a loan is on non-accrual status, we first apply any payments received to the principal of the loan, and once the principal is repaid, we include amounts received in net investment income. We have elected to present accrued interest receivable separately in accrued investment income on the consolidated balance sheets. We have also elected the practical expedient to exclude the accrued interest receivable from the amortized cost balance used to calculate the allowance given our policy to write off such balances in a timely manner. Any write-off of accrued interest is recorded through a reversal of net investment income on the consolidated statements of income.

Upon determining that all or a portion of the amortized cost of an asset is uncollectible, which is generally when all efforts for collection are exhausted, the amortized cost is written off against the existing allowance. Any write off in excess of the existing allowance is recorded through credit loss expense within investment related gains (losses) on the consolidated statements of income.

We also have certain off-balance sheet credit exposures for which we establish a liability for expected credit losses. These exposures primarily relate to commitments to fund commercial or residential mortgage loans that are not unconditionally cancelable. The methodology for estimating the liability for these credit exposures is consistent with that described above, with the additional consideration pertaining to the probability of funding. At the time the commitment expires or is funded, the liability is reversed and an allowance for expected credit losses is established, as applicable. The liability for off-balance sheet credit exposures is included in other liabilities on the consolidated balance sheets. The establishment of the initial liability and all subsequent changes are recorded through credit loss expense within investment related gains (losses) on the consolidated statements of income.

Credit Losses – Available-for-Sale Securities – We evaluate AFS securities with a fair value that has declined below amortized cost to determine how the decline in fair value should be recognized. If we determine, based on the facts and circumstances related to the specific security, that we intend to sell a security or it is more likely than not that we would be required to sell a security before the recovery of its amortized cost, any existing allowance for expected credit losses is reversed and the amortized cost of the security is written down to fair value. If neither of these conditions exist, we evaluate whether the decline in fair value has resulted from a credit loss or other factors.

For non-structured AFS securities, we qualitatively consider relevant facts and circumstances in evaluating whether a decline below fair value is credit-related. Relevant facts and circumstances include but are not limited to: (1) the extent to which the fair value is less than amortized cost; (2) changes in agency credit ratings, (3) adverse conditions related to the security's industry or geographical area, (4) failure to make scheduled payments, and (5) other known changes in the financial condition of the issuer or quality of any underlying collateral or credit enhancements. For structured AFS securities meeting the definition of beneficial interests, the qualitative assessment is bypassed, and any securities having experienced a decline in fair value below amortized cost move directly to a quantitative analysis.

If upon completion of this analysis it is determined that a potential credit loss exists, an allowance for expected credit losses is established equal to the amount by which the present value of expected cash flows is less than amortized cost, limited by the amount by which fair value is less than amortized cost. A non-structured security's cash flow estimates are derived from scenario-based outcomes of expected corporate restructurings or the disposition of assets using security-specific facts and circumstances including timing, security interests and loss severity. A structured security's cash flow estimates are based on security-specific facts and circumstances that may include collateral characteristics, expectations of delinquency and default rates, loss severity, prepayments and structural support, including subordination and guarantees. The expected cash flows are discounted at the effective interest rate implicit to the security at the date of purchase or the current yield to accrete a structured security. For securities with a contractual interest rate that varies based on changes in an independent factor, such as an index or rate, the effective interest rate is calculated based on the factor as it changes over the life of the security. Inherently under the discounted cash flow model, both the timing and amount of expected cash flows affect the measurement of the allowance for expected credit losses.

The allowance for expected credit losses is remeasured each period for the passage of time, any change in expected cash flows, and changes in the fair value of the security. All impairments, whether intent or requirement to sell or credit-related, are recorded through a charge to credit loss expense within investment related gains (losses) on the consolidated statements of income. All changes in the allowance for expected credit losses are recorded through credit loss expense within investment related gains (losses) on the consolidated statements of income.

We have elected to present accrued interest receivable separately in accrued investment income on the consolidated balance sheets. We have also elected the practical expedient to exclude the accrued interest receivable from the amortized cost balance used to calculate the allowance for expected credit losses, as we have a policy to write off such balances in a timely manner, when they become 90 days past due. Any write-off of accrued interest is recorded through a reversal of net investment income on the consolidated statements of income.

Upon determining that all or a portion of the amortized cost of an asset is uncollectible, which is generally when all efforts for collection are exhausted, the amortized cost is written off against the existing allowance. Any write off in excess of the existing allowance is recorded through credit loss expense within investment related gains (losses) on the consolidated statements of income.

Derivative Instruments—We invest in derivatives to hedge the risks experienced in our ongoing operations, such as equity, interest rate and cash flow risks, or for other risk management purposes, which primarily involve managing liability risks associated with our indexed annuity products and reinsurance agreements. Derivatives are financial instruments with values that are derived from interest rates, foreign exchange rates, financial indices or other combinations of an underlying and notional. Derivative assets and liabilities are carried at fair value on the consolidated balance sheets. We elect to present any derivatives subject to master netting provisions as a gross asset or liability and gross of collateral. Disclosures regarding balance sheet presentation of derivatives subject to master netting agreements are discussed in *Note 3 – Derivative Instruments*. We may designate derivatives as cash flow, fair value or net investment hedges.

Hedge Documentation and Hedge Effectiveness – To qualify for hedge accounting, at the inception of the hedging relationship, we formally document our designation of the hedge as a cash flow, fair value or net investment hedge and our risk management objective and strategy for undertaking the hedging transaction. In this documentation, we identify how the hedging instrument is expected to hedge the designated risks related to the hedged item and the method that will be used to retrospectively and prospectively assess the hedge effectiveness and the method which 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 hedge accounting relationship.

For a cash flow hedge, all changes in the fair value of the hedging derivative are reported within AOCI and the related gains or losses on the derivative are reclassified into the consolidated statements of income when the cash flows of the hedged item affect earnings.

For a fair value hedge, changes in the fair value of the hedging derivative and changes in the fair value of the hedged item related to the designated risk being hedged are reported on the consolidated statements of income according to the nature of the risk being hedged. Additionally, changes in the fair value of amounts excluded from the assessment of effectiveness are recorded in AOCI and amortized into income over the life of the hedge accounting relationship.

For a net investment hedge, changes in the fair value of the hedging derivative are reported within AOCI to offset the translation adjustments for subsidiaries with functional currencies other than US dollar.

We discontinue hedge accounting prospectively when: (1) we determine the derivative is no longer highly effective in offsetting changes in the estimated cash flows or fair value of a hedged item; (2) the derivative expires, is sold, terminated, or exercised; or (3) the derivative is de-designated as a hedging instrument. When hedge accounting is discontinued, the derivative continues to be carried on the consolidated balance sheets at fair value, with changes in fair value recognized in investment related gains (losses) on the consolidated statements of income.

For a derivative not designated as a hedge, changes in the derivative's fair value and any income received or paid on derivatives at the settlement date are included in investment related gains (losses) on the consolidated statements of income.

Embedded Derivatives – We issue and reinsure products, primarily fixed indexed annuity products, or purchase investments that contain embedded derivatives. If we determine the embedded derivative has economic characteristics not clearly and closely related to the economic characteristics of the host contract, and 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, unless the fair value option is elected on the host contract. Under the fair value option, bifurcation of the embedded derivative is not necessary as the entire contract is carried at fair value with all related gains and losses recognized in investment related gains (losses) on the consolidated statements of income. Embedded derivatives are carried on the consolidated balance sheets at fair value in the same line item as the host contract.

Fixed indexed annuity, index-linked variable annuity and indexed universal life insurance contracts allow the policyholder to elect a fixed interest rate return or an equity market component for which interest credited is based on the performance of certain stock market indices. The equity market option is an embedded derivative. The benefit reserve is equal to the sum of the fair value of the embedded derivative and the host (or guaranteed) component of the contracts. The fair value of the embedded derivatives is computed as the present value of benefits attributable to the excess of the projected policy contract values over the projected minimum guaranteed contract values. The projections of policy contract values are based on assumptions for future policy growth, which include assumptions for expected index credits on the next policy anniversary date, future equity option costs, volatility, interest rates and policyholder behavior assumptions including lapses and the use of benefit riders. The projections of minimum guaranteed contract values include the same assumptions for policyholder behavior as were used to project policy contract values. The embedded derivative cash flows are discounted using a rate that reflects our own credit rating. The host contract is established at contract inception as the initial account value less the initial fair value of the embedded derivative and accreted over the policy's life. The host contract accretion rate is updated each quarter so that the present value of actual and expected guaranteed cash flows is equal to the initial host value. Changes in the fair value of embedded derivatives associated with fixed indexed annuities, index-linked variable annuities and indexed universal life insurance contracts are included in interest sensitive contract benefits on the consolidated statements of income.

Additionally, reinsurance agreements written on a funds withheld or modco basis contain embedded derivatives. We have determined that the right to receive or obligation to pay the total return on the assets supporting the funds withheld at interest or funds withheld liability, respectively, represents a total return swap with a floating rate leg. The fair value of embedded derivatives on funds withheld and modco agreements is computed as the unrealized gain (loss) on the underlying assets and is included within funds withheld at interest and funds withheld liability on the consolidated balance sheets for assumed and ceded agreements, respectively. The change in the fair value of the embedded derivatives is recorded in investment related gains (losses) on the consolidated statements of income. Assumed and ceded earnings from funds withheld at interest, funds withheld liability and changes in the fair value of embedded derivatives are reported in operating activities on the consolidated statements of cash flows. Contributions to and withdrawals from funds withheld at interest and funds withheld liability are reported in operating activities on the consolidated statements of cash flows.

Variable Interest Entities—An entity that does not have sufficient equity to finance its activities without additional financial support, or in which the equity investors, as a group, do not have the characteristics typically afforded to common shareholders is a VIE. The determination as to whether an entity qualifies as a VIE depends on the facts and circumstances surrounding each entity and may require significant judgment. Our investment funds typically qualify as VIEs and are evaluated for consolidation under the VIE model.

We are required to consolidate a VIE if we are the primary beneficiary, defined as the variable interest holder with both the power to direct the activities that most significantly impact the VIE's economic performance and rights to receive benefits or obligations to absorb losses that could be potentially significant to the VIE. We determine whether we are the primary beneficiary of an entity based on a qualitative assessment of the VIE's capital structure, contractual terms, nature of the VIE's operations and purpose and our relative exposure to the related risks of the VIE. Since affiliates of Apollo Global Management, Inc. (AGM and, together with its subsidiaries, Apollo), a related party, are the decision makers in certain of the investment funds, we and a member of our related party group may together have the characteristics of the primary beneficiary of an investment fund. In this situation, we have concluded we are not under common control, as defined by GAAP, with the related party, and therefore we do not consolidate because the related party, whom is the decision maker, holds a significant indirect financial interest in the investee through its ownership interest in us. We reassess the VIE and primary beneficiary determinations on an ongoing basis.

For entities that we do not consolidate but can exercise significant influence over the entities' operating and financing decisions, we record our investment under the equity method. If we do not consolidate and do not have significant influence, generally on investment funds in which we own a less than 3% interest, we elect the fair value option. See *Note 4 – Variable Interest Entities* for discussion of our interest in entities that meet the definition of a VIE.

Reinsurance—We assume and cede insurance and investment contracts under coinsurance, funds withheld and modco. We follow reinsurance accounting for transactions that provide indemnification against loss or liability relating to insurance risk (risk transfer). To meet risk transfer requirements, a reinsurance agreement must transfer insurance risk arising from uncertainties about both underwriting and timing risks. Cessions under reinsurance do not discharge our obligations as the primary insurer, unless the requirements of assumption reinsurance have been met. We generally have the right of offset on reinsurance contracts, but have elected to present reinsurance settlement amounts due to and from the Company on a gross basis.

Assets and liabilities assumed or ceded under coinsurance, funds withheld, or modco are presented gross on the consolidated balance sheets. For investment contracts, the change in assumed and ceded reserves are presented net in interest sensitive contract benefits on the consolidated statements of income. For insurance contracts, the change in assumed and ceded reserves and benefits are presented net in future policy and other policy benefits on the consolidated statements of income. Assumed or ceded premiums are included in premiums on the consolidated statements of income.

Accounting for reinsurance requires the use of assumptions, particularly related to the future performance of the underlying business and the potential impact of counterparty credit risks. We attempt to minimize our counterparty credit risk through the structuring of the terms of our reinsurance agreements, including the use of trusts, and we monitor credit ratings of counterparties for signs of declining credit quality. When a ceding company does not report information on a timely basis, we record accruals based on the best available information at the time, which includes the reinsurance agreement terms and historical experience. We periodically compare actual and anticipated experience to the assumptions used to establish reinsurance assets and liabilities. See *Note 6 – Reinsurance* for more information.

Funds Withheld and ModCo – For business assumed or ceded on a funds withheld or modco basis, a funds withheld segregated portfolio, comprised of invested assets and other assets is maintained by the ceding entity, which is sufficient to support the current balance of statutory reserves. The fair value of the funds withheld is recorded as a funds withheld asset or liability and any excess or shortfall in relation to statutory reserves is settled periodically.

Cash and Cash Equivalents—Cash and cash equivalents include deposits and short-term highly liquid investments with a maturity of less than 90 days from the date of acquisition. Amounts included are readily convertible to known amounts of cash and are subject to an insignificant risk of change in value.

Restricted Cash—Restricted cash primarily consists of cash and cash equivalents held in funds in trust as part of certain coinsurance agreements to secure statutory reserves and liabilities of the coinsured parties. Restricted cash is reported separately on the consolidated balance sheets, but is included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period amounts shown on the consolidated statements of cash flows.

Investments in Related Parties—Investments in related parties and associated earnings, other comprehensive income and cash flows are separately identified on the consolidated financial statements and accounted for consistently with the policies described above for each category of investment. Investments in related parties are primarily comprised of investments over which Apollo can exercise significant influence.

Deferred Acquisition Costs, Deferred Sales Inducements and Value of Business Acquired

Deferred Acquisition Costs and Deferred Sales Inducements – Costs related directly to the successful acquisition of new, or renewal of, insurance or investment contracts are deferred to the extent they are recoverable from future premiums or gross profits. These costs consist of commissions and policy issuance costs, as well as sales inducements credited to policyholder account balances, and are included in deferred acquisition costs, deferred sales inducements and value of business acquired on the consolidated balance sheets. We perform periodic tests, including at issuance, to determine if the deferred costs are recoverable. If we determine that the deferred costs are not recoverable, we record a cumulative charge to the current period.

Deferred costs related to universal life-type policies and investment contracts with significant revenue streams from sources other than investment of the policyholder funds are amortized over the lives of the policies, based upon the proportion of the present value of actual and expected deferred costs to the present value of actual and expected gross profits to be earned over the life of the policies. Gross profits include investment spread margins, surrender charge income, policy administration charges and expenses, changes in the guaranteed lifetime withdrawal benefit (GLWB) and guaranteed minimum death benefit (GMDB) reserves and realized gains and losses on investments. Current period gross profits for fixed indexed annuities also include the change in fair value of both freestanding and embedded derivatives. Estimates of the expected gross profits and margins are based on assumptions using accepted actuarial methods related to policyholder behavior, including lapses and the utilization of benefit riders, mortality, yields on investments supporting the liabilities, future interest credited amounts (including indexed related credited amounts on fixed indexed annuity products), and other policy changes as applicable, and the level of expenses necessary to maintain the policies over their expected lives. Each reporting period, we update estimated gross profits with actual gross profits as part of the amortization process and adjust the DAC and DSI balances due to the other comprehensive income (OCI) effects of unrealized investment gains and losses on AFS securities. We also periodically revise the key assumptions used in the amortization calculation, which results in revisions to the estimated future gross profits. The effects of changes in assumptions are recorded as unlocking in the period in which the changes are made.

Deferred costs related to investment contracts without significant revenue streams from sources other than investment of the policyholder funds are amortized using the effective interest method. The effective interest method amortizes the deferred costs by discounting the future liability cash flows at a break-even rate. The break-even rate is solved for such that the present value of future liability cash flows is equal to the net liability at the inception of the contract.

Value of Business Acquired – We establish VOBA for blocks of insurance contracts acquired through the acquisition of insurance entities. We record the fair value of the liabilities assumed in two components: reserves and VOBA. Reserves are established using our best estimate assumptions consistent with the policies described below for future policy benefits and interest sensitive contract liabilities. VOBA is the difference between the fair value of the liabilities and the reserves. VOBA can be either positive or negative. Any negative VOBA is recorded to the same financial statement line on the consolidated balance sheets as the associated reserves. Positive VOBA is recorded in deferred acquisition costs, deferred sales inducements and value of business acquired on the consolidated balance sheets. We perform periodic tests to determine if the VOBA remains recoverable. If we determine that VOBA is not recoverable, we record a cumulative charge to the current period.

VOBA associated with investment contracts without significant revenue streams from sources other than investment of the policyholder funds is amortized using the effective interest method. VOBA associated with immediate annuity contracts classified as long duration contracts is amortized at a constant rate in relation to net policyholder liabilities. For universal life-type policies and investment contracts with significant revenue streams from sources other than investment of policyholder funds, VOBA is amortized in relation to the present value of estimated gross profits using methods consistent with those used to amortize DAC and DSI. Negative VOBA is amortized at a constant rate in relation to applicable net policyholder liabilities.

See *Note 7 – Deferred Acquisition Costs, Deferred Sales Inducements and Value of Business Acquired* for further discussion.

Interest Sensitive Contract Liabilities—Universal life-type policies and investment contracts include fixed indexed and traditional fixed annuities in the accumulation phase, funding agreements, universal life insurance, fixed indexed universal life insurance and immediate annuities without significant mortality risk (which includes pension risk transfer (PRT) annuities without life contingencies). We carry liabilities for fixed annuities, universal life insurance and funding agreements at the account balances without reduction for potential surrender or withdrawal charges, except for a block of universal life business ceded to Global Atlantic Financial Group Limited (together with its subsidiaries, Global Atlantic) which we carry at fair value. Liabilities for immediate annuities without significant mortality risk are calculated as the present value of future liability cash flows and policy maintenance expenses discounted at contractual interest rates. For a discussion regarding our indexed products, refer above to the embedded derivative discussion.

Changes in the interest sensitive contract liabilities, excluding deposits and withdrawals, are recorded in interest sensitive contract benefits or product charges on the consolidated statements of income. Interest sensitive contract liabilities are not reduced for amounts ceded under reinsurance agreements which are reported as reinsurance recoverable on the consolidated balance sheets. See the reinsurance accounting policy discussed in *–Reinsurance* above and *Note 6 – Reinsurance* for more information on reinsurance.

Future Policy Benefits—We issue contracts classified as long-duration, which includes term and whole life, accident and health, disability, and deferred and immediate annuities with life contingencies (which includes PRT annuities with life contingencies). Liabilities for non-participating long-duration contracts are established using accepted actuarial valuation methods which require the use of assumptions related to expenses, investment yields, mortality, morbidity and persistency, with a provision for adverse deviation, at the date of issue or acquisition. As of December 31, 2020, the reserve investment yield assumptions for non-participating contracts range from 2.3% to 5.4% and are specific to our expected earned rate on the asset portfolio supporting the reserves. We base other key assumptions, such as mortality and morbidity, on industry standard data adjusted to align with actual company experience, if necessary.

For long-duration contracts, the assumptions are locked in at contract inception and only modified if we deem the reserves to be inadequate. We periodically review actual and anticipated experience compared to the assumptions used to establish policy benefits. If the net GAAP liability (gross reserves less DAC, DSI and VOBA) is less than the gross premium liability, impairment is deemed to have occurred, and the DAC, DSI and VOBA asset balances are reduced until the net GAAP liability is equal to the gross premium liability. If the DAC, DSI and VOBA asset balances are completely written off and the net GAAP liability is still less than the gross premium liability, then an additional liability is recorded to arrive at the gross premium liability.

We issue and reinsure deferred annuity contracts which contain GLWB and GMDB riders. We establish future policy benefits for GLWB and GMDB riders by estimating the expected value of withdrawal and death benefits in excess of the projected policyholder account balances. We recognize the excess proportionally over the accumulation period based on total actual and expected assessments. The methods we use to estimate the liabilities have assumptions about policyholder behavior, which includes lapses, withdrawals and utilization of benefit riders; mortality, expected yield on investments supporting the liability; and market conditions affecting the account balance growth.

Future policy benefits includes liabilities for no-lapse guarantees on universal life insurance and fixed indexed universal life insurance. We establish future policy benefits for no-lapse guarantees by estimating the expected value of death benefits paid after policyholder account balances have been exhausted. We recognize these benefits proportionally over the life of the contracts based on total actual and expected assessments. The methods we use to estimate the liabilities have assumptions about policyholder behavior, mortality, expected yield on investments supporting the liability, and market conditions affecting policyholder account balance growth.

For the liabilities associated with GLWB and GMDB riders and no-lapse guarantees, each reporting period, we update expected excess benefits and assessments with actual excess benefits and assessments and adjust the liability balances due to the OCI effects of unrealized investment gains and losses on AFS securities. We also periodically revise the key assumptions used in the calculation of the liabilities which results in revisions to the expected excess benefits and assessments. The effects of changes in assumptions are recorded as unlocking in the period in which the changes are made.

Changes in future policy benefits other than the adjustment for the OCI effects of unrealized investment gains and losses on AFS securities, are recorded in future policy and other policy benefits on the consolidated statements of income. Future policy benefits are not reduced for amounts ceded under reinsurance agreements which are reported as reinsurance recoverable on the consolidated balance sheets. See the reinsurance accounting policy discussed in *–Reinsurance* above and *Note 6 – Reinsurance* for more information on reinsurance.

Closed Block Business—We established closed blocks of policies in connection with the reorganization of two predecessor subsidiaries from mutual companies to stock companies, collectively referred to as the Closed Blocks, and individually referred to as the AmerUs Life Insurance Company (AmerUs) closed block (AmerUs Closed Block) and the Indianapolis Life Insurance Company (ILICO) closed block (ILICO Closed Block). Insurance policies which had a dividend scale in effect as of each closed block establishment date were included in the respective closed block. The Closed Blocks were designed to give reasonable assurance to owners of insurance policies included therein that, after the reorganization, assets would be available to maintain the dividend scales and interest credits in effect prior to the reorganization, if the experience underlying such scales and crediting continued. The assets, including related revenue, allocated to the Closed Blocks will accrue solely to the benefit of the policyholders included in the Closed Blocks until they no longer exist. A policyholder dividend obligation is required to be established for earnings in the Closed Blocks that are not available to the shareholders. We have elected the fair value option for the AmerUs Closed Block and the ILICO Closed Block. See *Note 8 – Closed Block* for more information on the Closed Blocks.

Other Policy Claims and Benefits—Other policy claims and benefits include amounts payable relating to in course of settlements (ICOS) and incurred but not reported (IBNR) liabilities associated with interest sensitive contract liabilities and future policy benefits. For traditional life and universal life policies, ICOS claim liabilities are established when we are notified of the death of the policyholder but the claim has not been paid as of the reporting date. For immediate annuities and supplemental contracts, ICOS claim liabilities are established to accrue suspended benefit payments between the date of notification of death and the date of verification of death.

We determine IBNR claim liabilities using studies of past experience. The time that elapses from the death or claim date to when the claim is reported to us can vary significantly by product type, but generally ranges between one to six months for life business. We estimate IBNR claims 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.

Dividends Payable to Policyholders—Participating policies entitle the policyholders to receive dividends based on actual interest, mortality, morbidity and expense experience for the year. Dividends are distributed to the policyholders through annual or terminal dividends which the board of directors of the applicable insurance subsidiary approves. As of December 31, 2020 and 2019, 10% of life policies, inclusive of ceded policies, were participating, and the related liability is recorded in dividends payable to policyholders on the consolidated balance sheets. Premiums related to participating policies represented 32%, 30% and 26% of total life insurance direct premiums and deposits for the years ended December 31, 2020, 2019 and 2018, respectively.

Policyholder dividend liabilities are recorded in dividends payable to policyholders on the consolidated balance sheets and policyholder dividends are recorded in dividends to policyholders on the consolidated statements of income.

Share Repurchase—When shares are repurchased, we can choose to record treasury shares or account for the repurchase as a constructive retirement. We have accounted for share repurchases as constructive retirement, whereby we reduce common stock and additional paid-in capital by the amount of the original issuance, with any excess purchase price recorded as a reduction to retained earnings. Under this method, issued and outstanding shares are reduced by the shares repurchased, and no treasury stock is recognized on the consolidated balance sheets.

Earnings Per Share—We compute basic earnings per share (EPS) by dividing unrounded net income available to Athene Holding Ltd. shareholders by the weighted average number of common shares eligible for earnings and outstanding for the period. As a result, it may not be possible to recalculate EPS as presented in our consolidated financial statements. Diluted earnings per share includes the effect of all potentially dilutive instruments, such as common shares, options and restricted stock units (RSUs), outstanding during the period. See *Note 11 – Earnings Per Share* for further information.

Foreign Currency—The accounts of foreign-based subsidiaries and equity method investments are measured using their functional currency. Revenue and expenses of these subsidiaries are translated into US dollars at the average exchange rate for the period. Assets and liabilities are translated at the exchange rate as of the end of the reporting period. For the equity method investments, our proportionate share of the investee's income is translated into US dollars at the average exchange rate for the period and our investment is translated using the exchange rate as of the end of the reporting period. The resulting translation adjustments are included in equity as a component of AOCI. Gains or losses arising from transactions denominated in a currency other than the functional currency of the entity that is party to the transaction are included in net income. The impacts of any non-US dollar denominated AFS securities are included in AOCI along with the change in its fair value unless in a fair value hedging relationship as discussed in *–Derivative Instruments* above.

Recognition of Revenues and Related Expenses—Revenues for universal life-type policies and investment contracts, including surrender and market value adjustments, costs of insurance, policy administration, GMDB, GLWB and no-lapse guarantee charges, are earned when assessed against policyholder account balances during the period. Interest credited to policyholder account balances and the change in fair value of embedded derivatives within fixed indexed annuity contracts is included in interest sensitive contract benefits on the consolidated statements of income.

Premiums for long-duration contracts, including products with fixed and guaranteed premiums and benefits, are recognized as revenue when due from policyholders. When premiums are due over a significantly shorter period than the period over which benefits are provided, such as immediate annuities with life contingencies (which includes PRT annuities), a deferred profit liability is established equal to the excess of the gross premium over the net premium. The deferred profit liability is recognized in future policy benefits on the consolidated balance sheets and amortized into income in a constant relationship to the benefit reserve through future policy and other policy benefits on the consolidated statements of income.

All insurance related revenue is reported net of reinsurance ceded.

Income Taxes—We compute income taxes using the asset and liability method, under which deferred income taxes are provided for the temporary differences between the financial statement carrying amounts and the tax basis of our assets and liabilities using estimated tax rates expected to be in effect for the year in which the differences are expected to reverse. Such temporary differences are primarily due to the tax basis of reserves, DAC, VOBA, unrealized investment gains/losses, reinsurance related differences, embedded derivatives and net operating loss carryforwards. Changes in deferred income tax assets and liabilities associated with components of OCI are recorded directly to OCI. We evaluate the likelihood of realizing the benefit of our deferred tax assets and may record a valuation allowance if, based on all available evidence, we determine that it is more likely than not that some portion of the tax benefit will not be realized. We adjust the valuation allowance if, based on our evaluation, there is a change in the amount of deferred income tax assets that are deemed more-likely-than-not to be realized. Changes in deferred tax assets and liabilities attributable to changes in enacted income tax rates are recorded through net income in the period of enactment. We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the relevant taxing authorities, based on the technical merits of our position. For those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. We recognize any income tax interest and penalties in income tax expense.

See *Note 12 – Income Taxes* for discussion on withholding taxes for undistributed earnings of subsidiaries.

Reclassifications—Certain reclassifications have been made to conform with current year presentation.

Adopted Accounting Pronouncements

Reference Rate Reform (Topic 848) – Facilitation of the effects of Reference Rate Reform on Financial Reporting (ASU 2021-01, ASU 2020-04)
The new guidance provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, derivative contracts (including derivative instruments that use interest rates for margining, discounting, or contract price alignment), and other transactions affected by reference rate reform if certain criteria are met. The expedients and exceptions provided by the amendments do not apply to contract modifications made or hedging relationships entered into or evaluated after December 31, 2022, with exceptions for certain hedging relationships. The amendments are available for election from March 12, 2020 through December 31, 2022. This guidance may be elected and applied prospectively as contracts and hedging relationships are amended for the effects of reference rate reform. We adopted this update effective October 1, 2020. This update did not have a material impact on our consolidated financial statements. We will continue to evaluate the impacts of reference rate reform on contract modifications and hedging relationships.

Financial Instruments – Credit Losses (ASU 2019-05, ASU 2019-04, ASU 2018-19 and ASU 2016-13)
This update limits the number of credit impairment models used for different assets and results in accelerated credit loss recognition on assets held at amortized cost, which primarily includes our commercial and residential mortgage loans, but also includes certain other loans and reinsurance assets. The identification of PCD financial assets includes all assets that have experienced a more-than-insignificant deterioration in credit since origination. Additionally, changes in the expected cash flows of purchased credit-deteriorated financial assets are recognized immediately in the income statement. AFS securities are not in scope of the new credit loss model, but were subject to targeted improvements including the establishment of a valuation allowance for credit losses versus the previous direct write down approach. We adopted this update effective January 1, 2020 with a cumulative-effect adjustment that decreased retained earnings by $117 million, net of tax and offsetting impacts to DAC, DSI, VOBA and the SOP 03-1 reserve which amounted to $74 million. The adjustment to retained earnings primarily relates to the establishment of an allowance on our commercial mortgage loan portfolio, which represented 1.59% of the amortized cost of the portfolio, but also includes immaterial impacts relating to other assets in scope, including residential mortgage loans, funds withheld at interest, and reinsurance recoverable.

Additionally, the update requires investments previously considered purchased credit impaired (PCI), which includes certain of our residential mortgage loans and RMBS to become subject to a modified PCD framework at the transition date. Any required allowance at transition for these assets is to be recorded through a gross-up of the amortized cost, rather than a charge to retained earnings. Additionally, under the AFS impairment model, the recording of an allowance is prohibited in instances where fair value exceeds amortized cost as such securities are not considered impaired under the AFS impairment model. Therefore, no allowance was recorded at transition for PCI RMBS that were in an unrealized gain position. The transition increase in amortized cost and corresponding valuation allowance for residential mortgage loans and RMBS was $36 million and $17 million, respectively.

Collaborative Arrangements (ASU 2018-18)
The amendments in this update provide guidance on whether certain transactions between collaborative arrangement participants should be accounted for as revenue under Topic 606, providing comparability in the presentation of revenue for certain transactions. We adopted this update effective January 1, 2020. This update did not have a material effect on our consolidated financial statements.

Consolidation (ASU 2018-17)
The amendments in this update expand certain discussions in the VIE guidance, including considerations necessary for determining when a decision-making fee is a variable interest. We adopted this update effective January 1, 2020. This update did not have a material effect on our consolidated financial statements.

Cloud Computing Arrangements (ASU 2018-15)
The amendments in this update align the requirements for capitalizing implementation costs incurred in a cloud computing service arrangement with the requirements for capitalizing implementation costs incurred for internal-use software. We adopted this update on a prospective basis effective January 1, 2020. This update did not have a material effect on our consolidated financial statements.

Fair Value Measurement – Disclosure Requirements (ASU 2018-13)
The amendments in this update modify the disclosure requirements for fair value measurements by removing, modifying or adding certain disclosures. On October 1, 2018, we early adopted the removal and modification of certain disclosures as permitted. The additional disclosures in the update were adopted effective January 1, 2020. This update did not have a material effect on our consolidated financial statements.

Intangibles – Simplifying the Test for Goodwill Impairment (ASU 2017-04)
The amendments in this update simplify the subsequent measurement of goodwill by eliminating the comparison of the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill to determine the goodwill impairment loss. With the adoption of this guidance, a goodwill impairment is the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of the goodwill allocated to that reporting unit. Entities continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. We do not have material goodwill and adopted this update on a prospective basis effective January 1, 2020. This update did not have a material effect on our consolidated financial statements.

Recently Issued Accounting Pronouncements

Insurance – Targeted Improvements to the Accounting for Long-Duration Contracts (ASU 2020-11, ASU 2019-09, ASU 2018-12)
These updates amend four key areas pertaining to the accounting and disclosures for long-duration insurance and investment contracts.

- The update requires cash flow assumptions used to measure the liability for future policy benefits to be updated at least annually and no longer allows a provision for adverse deviation. The remeasurement of the liability associated with the update of assumptions is required to be recognized in net income. Loss recognition testing is eliminated for traditional and limited-payment contracts. The update also requires the discount rate used in measuring the liability to be an upper-medium grade fixed-income instrument yield, which is to be updated at each reporting date. The change in liability due to changes in the discount rate is to be recognized in other comprehensive income.
- The update simplifies the amortization of deferred acquisition costs and other balances amortized in proportion to premiums, gross profits, or gross margins, requiring such balances to be amortized on a constant level basis over the expected term of the contracts. Deferred costs are required to be written off for unexpected contract terminations but are not subject to impairment testing.

- The update requires certain contract features meeting the definition of market risk benefits to be measured at fair value. Among the features included in this definition are the GLWB and GMDB riders attached to our annuity products. The change in fair value of the market risk benefits is to be recognized in net income, excluding the portion attributable to changes in instrument-specific credit risk which is recognized in other comprehensive income.
- The update also introduces disclosure requirements around the liability for future policy benefits, policyholder account balances, market risk benefits, separate account liabilities, and deferred acquisition costs. This includes disaggregated rollforwards of these balances and information about significant inputs, judgments, assumptions and methods used in their measurement.

We are required to adopt these updates on January 1, 2023. Certain provisions of the update are required to be adopted on a fully retrospective basis, while others may be adopted on a modified retrospective basis. Early adoption is permitted. We are currently evaluating the impact of this guidance on our consolidated financial statements.

Codification Improvements to Subtopic 310-20, Receivables – Nonrefundable Fees and Other Costs (ASU 2020-08)
The amendments in this update clarify that callable debt securities should be reevaluated each reporting period to determine if the amortized cost exceeds the amount repayable by the issuer at the next earliest call date and, if so, the excess should be amortized to the next call date. We will be required to adopt this update January 1, 2021 and apply it on a prospective basis for existing or newly purchased callable debt securities. Early adoption is not permitted. We do not expect that the adoption of this update will have a material effect on our consolidated financial statements.

Income Taxes – Simplifying the Accounting for Income Taxes (ASU 2019-12)
The amendments in this update simplify the accounting for income taxes by eliminating certain exceptions to the tax accounting guidance related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities related to foreign investment ownership changes. It also simplifies aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill and allocating consolidated income taxes to separate financial statements of entities not subject to income tax. We will be required to adopt this update January 1, 2021 and apply certain aspects of the update retrospectively while other aspects will be applied on a modified retrospective basis. Early adoption is permitted. We are currently evaluating the impact of this guidance on our consolidated financial statements.

2. Investments

AFS Securities—The following table represents the amortized cost, allowance for credit losses, gross unrealized gains and losses and fair value our AFS investments by asset type:

	December 31, 2020				
(In millions)	Amortized Cost	Allowance for Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS securities					
US government and agencies	$ 349	$ —	$ 3	$ (1)	$ 351
US state, municipal and political subdivisions	864	—	169	—	1,033
Foreign governments	330	—	38	—	368
Corporate	51,934	(6)	6,368	(116)	58,180
CLO	9,631	(1)	145	(206)	9,569
ABS	4,259	(6)	140	(123)	4,270
CMBS	2,165	(10)	85	(71)	2,169
RMBS	6,568	(80)	447	(22)	6,913
Total AFS securities	76,100	(103)	7,395	(539)	82,853
AFS securities – related party					
Corporate	213	—	2	—	215
CLO	1,511	(1)	23	(13)	1,520
ABS	4,720	—	95	(30)	4,785
Total AFS securities – related party	6,444	(1)	120	(43)	6,520
Total AFS securities including related party	$ 82,544	$ (104)	$ 7,515	$ (582)	$ 89,373

ATHENE HOLDING LTD.
Notes to Consolidated Financial Statements

The following table represents the amortized cost, gross unrealized gains and losses, fair value and other-than-temporary impairment (OTTI) in AOCI of our AFS investments by asset type:

	December 31, 2019				
(In millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	OTTI in AOCI
AFS securities					
US government and agencies	$ 35	$ 1	$ —	$ 36	$ —
US state, municipal and political subdivisions	1,322	220	(1)	1,541	—
Foreign governments	298	29	—	327	—
Corporate	44,106	3,332	(210)	47,228	1
CLO	7,524	21	(196)	7,349	—
ABS	5,018	124	(24)	5,118	4
CMBS	2,304	104	(8)	2,400	1
RMBS	6,872	513	(10)	7,375	19
Total AFS securities	67,479	4,344	(449)	71,374	25
AFS securities – related party					
Corporate	18	1	—	19	—
CLO	951	3	(18)	936	—
ABS	2,814	37	(2)	2,849	—
Total AFS securities – related party	3,783	41	(20)	3,804	—
Total AFS securities including related party	$ 71,262	$ 4,385	$ (469)	$ 75,178	$ 25

The amortized cost and fair value of AFS securities, including related party, are shown by contractual maturity below:

	December 31, 2020	
(In millions)	Amortized Cost	Fair Value
AFS securities		
Due in one year or less	$ 817	$ 829
Due after one year through five years	8,146	8,684
Due after five years through ten years	13,975	15,235
Due after ten years	30,539	35,184
CLO, ABS, CMBS and RMBS	22,623	22,921
Total AFS securities	76,100	82,853
AFS securities – related party		
Due after one year through five years	18	20
Due after five years through ten years	195	195
CLO and ABS	6,231	6,305
Total AFS securities – related party	6,444	6,520
Total AFS securities including related party	$ 82,544	$ 89,373

Actual maturities can differ from contractual maturities as borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

Unrealized Losses on AFS Securities—The following summarizes the fair value and gross unrealized losses for AFS securities, including related party, for which an allowance for credit losses has not been recorded, aggregated by asset type and length of time the fair value has remained below amortized cost:

	December 31, 2020					
	Less than 12 months		12 months or more		Total	
(In millions)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
AFS securities						
US government and agencies	$ 31	$ (1)	$ —	$ —	$ 31	$ (1)
US state, municipal and political subdivisions	9	—	6	—	15	—
Foreign governments	2	—	—	—	2	—
Corporate	2,218	(66)	248	(24)	2,466	(90)
CLO	1,649	(33)	3,179	(167)	4,828	(200)
ABS	1,169	(73)	84	(18)	1,253	(91)
CMBS	710	(37)	48	(13)	758	(50)
RMBS	548	(11)	37	(2)	585	(13)
Total AFS securities	6,336	(221)	3,602	(224)	9,938	(445)
AFS securities – related party						
CLO	336	(3)	232	(10)	568	(13)
ABS	1,012	(30)	—	—	1,012	(30)
Total AFS securities – related party	1,348	(33)	232	(10)	1,580	(43)
Total AFS securities including related party	$ 7,684	$ (254)	$ 3,834	$ (234)	$ 11,518	$ (488)

The following summarizes the fair value and gross unrealized losses for AFS securities, including related party, aggregated by asset type and length of time the fair value has remained below amortized cost:

	December 31, 2019					
	Less than 12 months		12 months or more		Total	
(In millions)	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
AFS securities						
US government and agencies	$ 3	$ —	$ —	$ —	$ 3	$ —
US state, municipal and political subdivisions	78	(1)	10	—	88	(1)
Corporate	2,898	(140)	902	(70)	3,800	(210)
CLO	1,959	(38)	3,241	(158)	5,200	(196)
ABS	642	(6)	255	(18)	897	(24)
CMBS	220	(4)	41	(4)	261	(8)
RMBS	445	(6)	163	(4)	608	(10)
Total AFS securities	6,245	(195)	4,612	(254)	10,857	(449)
AFS securities – related party						
CLO	362	(7)	242	(11)	604	(18)
ABS	357	(2)	—	—	357	(2)
Total AFS securities – related party	719	(9)	242	(11)	961	(20)
Total AFS securities including related party	$ 6,964	$ (204)	$ 4,854	$ (265)	$ 11,818	$ (469)

The following summarizes the number of AFS securities that were in an unrealized loss position, including related party, for which an allowance for credit losses has not been recorded:

	December 31, 2020	
	Unrealized loss position	Unrealized loss position 12 months or more
AFS securities	1,264	356
AFS securities – related party	45	8

The unrealized losses on AFS securities can primarily be attributed to changes in market interest rates since acquisition. We did not recognize the unrealized losses in income as we intend to hold these securities and it is not more likely than not we will be required to sell a security before the recovery of its amortized cost.

Allowance for Credit Losses—The following table summarizes the activity in the allowance for credit losses for AFS securities by asset type:

	Years ended December 31, 2020					
		Additions		Reductions		
(In millions)	Beginning balance	Initial credit losses	Initial credit losses on PCD securities	Securities sold during the period	Additions (reductions) to previously impaired securities	Ending Balance
AFS securities						
Corporate	$ —	$ 44	$ —	$ (14)	$ (24)	$ 6
CLO	—	1	—	—	—	1
ABS	—	7	—	—	(1)	6
CMBS	—	24	—	(1)	(13)	10
RMBS	17	51	66	(17)	(37)	80
Total AFS securities	17	127	66	(32)	(75)	103
AFS securities – related party, CLO	—	2	—	(1)	—	1
Total AFS securities including related party	$ 17	$ 129	$ 66	$ (33)	$ (75)	$ 104

Net Investment Income—Net investment income by asset class consists of the following:

	Years ended December 31,		
(In millions)	2020	2019	2018
AFS securities	$ 3,225	$ 3,088	$ 2,855
Trading securities	192	189	200
Equity securities	14	16	12
Mortgage loans	742	670	457
Investment funds	721	382	287
Funds withheld at interest	269	527	492
Other	226	159	112
Investment revenue	5,389	5,031	4,415
Investment expenses	(504)	(435)	(355)
Net investment income	$ 4,885	$ 4,596	$ 4,060

Investment Related Gains (Losses)—Investment related gains (losses) by asset class consists of the following:

	Years ended December 31,		
(In millions)	2020	2019	2018
AFS securities			
Gross realized gains on investment activity	$ 602	$ 178	$ 165
Gross realized losses on investment activity	(415)	(56)	(151)
Net realized investment gains on AFS securities	187	122	14
Net recognized investment gains (losses) on trading securities	33	151	(254)
Net recognized investment gains (losses) on equity securities	(218)	25	(65)
Derivative gains (losses)	3,430	4,443	(1,099)
Provision for credit losses	(69)	—	—
Other gains (losses)	(54)	(22)	44
Investment related gains (losses)	$ 3,309	$ 4,719	$ (1,360)

Proceeds from sales of AFS securities were $7,911 million, $6,886 million and $6,547 million for the years ended December 31, 2020, 2019 and 2018, respectively.

The following table summarizes the change in unrealized gains (losses) on trading and equity securities, including related party and consolidated VIEs, we held as of the respective year end:

	Years ended December 31,		
(In millions)	2020	2019	2018
Trading securities	$ 130	$ 193	$ (143)
Trading securities – related party	(37)	(18)	(25)
Equity securities	(9)	19	(18)
Equity securities – related party	—	(18)	24

Purchased Financial Assets with Credit Deterioration—The following table summarizes our PCD investment purchases with the following amounts at the time of purchase:

	Year ended December 31, 2020	
(In millions)	Fixed maturity securities	Mortgage loans
Purchase price	$ 254	$ 524
Allowance for credit losses at acquisition	66	7
Discount (premiums) attributable to other factors	36	(13)
Par value	$ 356	$ 518

Purchased Credit Impaired Investments—Prior to January 1, 2020, we accounted for certain securities purchased with deterioration in credit quality since their issuance which met the definition of PCI investments. The following table summarizes our PCI investments as of December 31, 2019:

(In millions)	Fixed maturity securities	Mortgage loans
Contractually required payments receivable	$ 6,772	$ 3,647
Less: Cash flows expected to be collected[1]	(6,064)	(3,606)
Non-accretable difference	$ 708	$ 41
Cash flows expected to be collected[1]	$ 6,064	$ 3,606
Less: Amortized cost	(4,603)	(2,575)
Accretable difference	$ 1,461	$ 1,031
Fair value	$ 5,007	$ 2,756
Outstanding balance	5,740	2,925

[1] *Represents the undiscounted principal and interest cash flows expected.*

During the year ended December 31, 2019, we acquired PCI investments with the following amounts at the time of purchase:

(In millions)	Fixed maturity securities	Mortgage loans
Contractually required payments receivable	$ 176	$ 1,198
Cash flows expected to be collected	146	1,179
Fair value	124	910

The following table summarizes the activity for the accretable yield on PCI investments during 2019:

(In millions)	Fixed maturity securities	Mortgage loans
Beginning balance at January 1, 2019	$ 1,677	$ 697
Purchases of PCI investments, net of sales	1	191
Accretion	(307)	(115)
Net reclassification from non-accretable difference	90	258
Ending balance at December 31, 2019	$ 1,461	$ 1,031

Repurchase Agreements—The following table summarizes the maturities of our repurchase agreements:

	December 31, 2020					
	Remaining Contractual Maturity					
(In millions)	Overnight and continuous	Less than 30 days	30–90 days	91 days to 1 year	Greater than 1 year	Total
Payables for repurchase agreements[1]	$ —	$ —	$ —	$ —	$ 598	$ 598

[1] *Included in payables for collateral on derivatives and securities to repurchase on the consolidated balance sheets.*

	December 31, 2019					
	Remaining Contractual Maturity					
(In millions)	Overnight and continuous	Less than 30 days	30–90 days	91 days to 1 year	Greater than 1 year	Total
Payables for repurchase agreements[1]	$ —	$ 102	$ 200	$ 210	$ —	$ 512

[1] *Included in payables for collateral on derivatives and securities to repurchase on the consolidated balance sheets.*

The following table summarizes the securities pledged as collateral for repurchase agreements:

	December 31,			
	2020		2019	
(In millions)	Amortized Cost	Fair Value	Amortized Cost	Fair Value
AFS securities – Corporate	$ 559	$ 644	$ 498	$ 534

Reverse Repurchase Agreements—As of December 31, 2020 and 2019, amounts loaned under reverse repurchase agreements were $0 million and $190 million, respectively, and collateral received was $0 million and $630 million, respectively.

Mortgage Loans, including related party—Mortgage loans, net of allowances, consists of the following:

	December 31,	
(In millions)	2020	2019
Commercial mortgage loans	$ 11,383	$ 10,422
Commercial mortgage loans under development	232	93
Total commercial mortgage loans	11,615	10,515
Allowance for credit losses on commercial mortgage loans	(167)	(10)
Commercial mortgage loans, net of allowances	11,448	10,505
Residential mortgage loans	4,569	4,455
Allowance for credit losses on residential mortgage loans	(79)	(1)
Residential mortgage loans, net of allowances	4,490	4,454
Mortgage loans, net of allowances	$ 15,938	$ 14,959

We primarily invest in commercial mortgage loans on income producing properties including office and retail buildings, apartments, hotels, and industrial properties. We diversify the commercial mortgage loan portfolio by geographic region and property type to reduce concentration risk. We evaluate mortgage loans based on relevant current information to confirm if properties are performing at a consistent and acceptable level to secure the related debt.

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The distribution of commercial mortgage loans, including those under development, net of allowances, by property type and geographic region, is as follows:

	December 31,			
	2020		2019	
(In millions, except for percentages)	Net Carrying Value	Percentage of Total	Net Carrying Value	Percentage of Total
Property type				
Office building	$ 3,589	31.4 %	$ 2,899	27.6 %
Retail	2,083	18.2 %	2,182	20.8 %
Apartment	2,441	21.3 %	2,142	20.4 %
Hotels	1,294	11.3 %	1,104	10.5 %
Industrial	1,362	11.9 %	1,448	13.8 %
Other commercial	679	5.9 %	730	6.9 %
Total commercial mortgage loans	$ 11,448	100.0 %	$ 10,505	100.0 %
US Region				
East North Central	$ 1,209	10.5 %	$ 1,036	9.9 %
East South Central	402	3.5 %	428	4.1 %
Middle Atlantic	3,069	26.8 %	2,580	24.6 %
Mountain	487	4.2 %	528	5.0 %
New England	350	3.1 %	340	3.2 %
Pacific	2,746	24.0 %	2,502	23.8 %
South Atlantic	1,773	15.5 %	1,920	18.3 %
West North Central	145	1.3 %	146	1.4 %
West South Central	640	5.6 %	791	7.5 %
Total US Region	10,821	94.5 %	10,271	97.8 %
International Region	627	5.5 %	234	2.2 %
Total commercial mortgage loans	$ 11,448	100.0 %	$ 10,505	100.0 %

Our residential mortgage loan portfolio includes first lien residential mortgage loans collateralized by properties in various geographic locations and is summarized by proportion of the portfolio in the following table:

	December 31,	
	2020	2019
US States		
California	24.8 %	27.0 %
Florida	13.3 %	12.7 %
Texas	4.4 %	6.2 %
New York	6.2 %	3.3 %
Other[1]	36.7 %	38.4 %
Total US residential mortgage loan percentage	85.4 %	87.6 %
International		
Ireland	12.9 %	12.4 %
Other[2]	1.7 %	— %
Total International residential mortgage loan percentage	14.6 %	12.4 %
Total residential mortgage loan percentage	100.0 %	100.0 %

[1] *Represents all other states, with each individual state comprising less than 5% of the portfolio.*
[2] *Represents all other countries, with each individual country comprising less than 5% of the portfolio.*

Loan Valuation Allowance—The allowances for our mortgage loan portfolio and other loans is summarized as follows:

	December 31, 2020			
(In millions)	Commercial Mortgage	Residential Mortgage	Other Investments	Total
Beginning balance	$ 10	$ 1	$ —	$ 11
Adoption of accounting standard	167	43	11	221
Provision (reversal) for expected credit losses	(10)	29	(4)	15
Initial credit losses on PCD loans	—	7	—	7
Loans charged-off	—	(1)	—	(1)
Ending balance	$ 167	$ 79	$ 7	$ 253

Commercial mortgage loans – Our allowance model for commercial mortgage loans is based on the characteristics of the loans in our portfolio, historical economic data and loss information, and current and forecasted economic conditions. Key loan characteristics affecting the estimate include, among others: time to maturity, delinquency status, loan-to-value ratios, debt service coverage ratios, etc. Key macroeconomic variables include unemployment rates, rent growth, capitalization rates, and the housing price index. Management reviews and approves forecasted macroeconomic variables, along with the reasonable and supportable forecast period and mean reversion technique. Management also evaluates assumptions from independent third parties and these assumptions have a high degree of subjectivity. The mean reversion technique varies by macroeconomic variable and may vary by geographic location. As of December 31, 2020, our reasonable and supportable forecast period ranged from one to two years, after which, we revert to the 30-year or greater historical average or the average 10-year US Treasury constant maturity rate over a period of up to eight years.

Residential mortgage loans – Our allowance model for residential mortgage loans is based on the characteristics of the loans in our portfolio, historical economic data and loss information, and current and forecasted economic conditions. Key loan characteristics affecting the estimate include, among others: time to maturity, delinquency status, original credit scores and loan-to-value ratios. Key macroeconomic variables include unemployment rates and the housing price index. Management reviews and approves forecasted macroeconomic variables, along with the reasonable and supportable forecast period and mean reversion technique. Management also evaluates assumptions from independent third parties and these assumptions have a high degree of subjectivity. The mean reversion technique varies by macroeconomic variable and may vary by geographic location. As of December 31, 2020, our reasonable and supportable forecast period was one year, after which, we revert to the 30-year or greater historical average over a period of up to one year and then continue at those averages through the contractual life of the loan.

Other investments – The allowance model for the loans included in other investments and related party other investments derives an estimate based on historical loss data available for similarly rated unsecured corporate debt obligations, while also incorporating management's expectations around prepayment. See *Note 14 – Related Parties* for further information on the related party loans.

Credit Quality Indicators

Residential mortgage loans – The underwriting process for our residential mortgage loans includes an evaluation of relevant credit information including past loan performance, credit scores, loan-to-value and other relevant information. Subsequent to purchase or origination, we closely monitor economic conditions and loan performance to manage and evaluate our exposure to credit risk in our residential mortgage loan portfolio. The primary credit quality indicator monitored for residential mortgage loans is loan performance. Nonperforming residential mortgage loans are 90 days or more past due and/or are in non-accrual status.

The following represents our residential loan portfolio by origination year and performance status:

	December 31, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Current (less than 30 days past due)	$ 955	$ 942	$ 1,730	$ 485	$ 141	$ 6	$ 4,259
30 to 59 days past due	68	16	34	26	8	1	153
60 to 89 days past due	15	7	16	9	3	—	50
90 days or more past due	3	26	22	43	12	1	107
Total residential mortgages	$ 1,041	$ 991	$ 1,802	$ 563	$ 164	$ 8	$ 4,569

As of December 31, 2019, $67 million of our residential mortgage loans were nonperforming.

The following represents our residential loan portfolio in non-accrual status:

(In millions)	December 31, 2020
Beginning amortized cost of residential mortgage loans in non-accrual status	$ 67
Ending amortized cost of residential mortgage loans in non-accrual status	107
Amortized cost of residential mortgage loans in non-accrual status without a related allowance for credit losses	13

During the year ended December 31, 2020, we recognized $5 million of interest income on residential mortgage loans in non-accrual status.

Commercial mortgage loans – The following represents our commercial mortgage loan portfolio by origination year and loan performance status:

	December 31, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Current (less than 30 days past due)	$ 1,913	$ 4,400	$ 2,617	$ 987	$ 130	$ 1,452	$ 11,499
30 to 59 days past due	—	20	45	25	—	5	95
90 days or more past due	—	—	—	—	—	21	21
Total commercial mortgages	$ 1,913	$ 4,420	$ 2,662	$ 1,012	$ 130	$ 1,478	$ 11,615

As of December 31, 2019, none of our commercial loans were 30 days or more past due.

The following represents our commercial mortgage loan portfolio in non-accrual status:

(In millions)	December 31, 2020
Beginning amortized cost of commercial mortgage loans in non-accrual status	$ —
Ending amortized cost of commercial mortgage loans in non-accrual status	38
Amortized cost of commercial mortgage loans in non-accrual status without a related allowance for credit losses	—

During the year ended December 31, 2020, no interest income was recognized on commercial mortgage loans in non-accrual status.

Loan-to-value and debt service coverage ratios are measures we use to assess the risk and quality of commercial mortgage loans other than those under development. Loans under development are not evaluated using these ratios as the properties underlying these loans are generally not yet income-producing and the value of the underlying property significantly fluctuates based on the progress of construction. Therefore, the risk and quality of loans under development are evaluated based on the aging and geographical distribution of such loans as shown above.

The loan-to-value ratio is expressed as a percentage of the amount of the loan relative to the value of the underlying property. A loan-to-value ratio in excess of 100% indicates the unpaid loan amount exceeds the value of the underlying collateral. Loan-to-value information is updated annually as part of the re-underwriting process supporting the NAIC risk based capital rating criteria. The following represents the loan-to-value ratio of the commercial mortgage loan portfolio, excluding those under development, by origination year:

	December 31, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Less than 50%	$ 431	$ 600	$ 201	$ 152	$ 44	$ 1,153	$ 2,581
50% to 59%	315	1,320	765	300	40	147	2,887
60% to 69%	583	1,988	1,222	440	46	106	4,385
70% to 79%	478	485	375	95	—	13	1,446
80% to 99%	—	—	—	25	—	21	46
100% or greater	—	—	—	—	—	38	38
Commercial mortgage loans	$ 1,807	$ 4,393	$ 2,563	$ 1,012	$ 130	$ 1,478	$ 11,383

The following represents the loan-to-value ratio of the commercial mortgage loan portfolio, excluding those under development, net of valuation allowances:

(In millions)	December 31, 2019
Less than 50%	$ 2,640
50% to 59%	2,486
60% to 69%	4,093
70% to 79%	1,162
80% to 99%	31
Commercial mortgage loans	$ 10,412

The debt service coverage ratio is expressed as a percentage of a property's net operating income to its debt service payments. A debt service ratio of less than 1.0 indicates a property's operations do not generate enough income to cover debt payments. Debt service coverage ratios are updated as more recent financial statements become available, at least annually or as frequently as quarterly in some cases. The following represents the debt service coverage ratio of the commercial mortgage loan portfolio, excluding those under development, by origination year:

	December 31, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Greater than 1.20x	$ 1,274	$ 2,964	$ 2,440	$ 846	$ 129	$ 1,369	$ 9,022
1.00x – 1.20x	533	1,122	36	70	1	101	1,863
Less than 1.00x	—	307	87	96	—	8	498
Commercial mortgage loans	$ 1,807	$ 4,393	$ 2,563	$ 1,012	$ 130	$ 1,478	$ 11,383

The following represents the debt service coverage ratio of the commercial mortgage loan portfolio, excluding those under development, net of valuation allowances:

(In millions)	December 31, 2019
Greater than 1.20x	$ 9,212
1.00x – 1.20x	1,166
Less than 1.00x	34
Commercial mortgage loans	$ 10,412

Investment Funds—Our investment fund portfolio consists of funds that employ various strategies and include investments in real estate, real assets, credit, equity and natural resources. Investment funds can meet the definition of VIEs, which are discussed further in *Note 4 – Variable Interest Entities*. Our investment funds do not specify timing of distributions on the funds' underlying assets.

The following summarizes our investment funds, including related party:

	December 31,			
	2020		2019	
(In millions, except for percentages)	Carrying value	Percent of total	Carrying value	Percent of total
Investment funds				
Real estate	$ 348	43.3 %	$ 277	36.9 %
Credit funds	107	13.3 %	153	20.4 %
Private equity	267	33.3 %	236	31.5 %
Real assets	81	10.1 %	83	11.1 %
Natural resources	—	— %	1	0.1 %
Total investment funds	803	100.0 %	750	100.0 %
Investment funds – related parties				
Differentiated investments				
MidCap FinCo Designated Activity Company (MidCap)[1]	—	— %	547	15.4 %
AmeriHome Mortgage Company, LLC (AmeriHome)[2]	444	8.4 %	487	13.7 %
Catalina Holdings Ltd. (Catalina)	334	6.3 %	271	7.6 %
Athora Holding Ltd. (Athora)[1]	709	13.4 %	132	3.7 %
Venerable Holdings, Inc. (Venerable)[1]	123	2.3 %	99	2.8 %
Other	279	5.3 %	222	6.3 %
Total differentiated investments	1,889	35.7 %	1,758	49.5 %
Real estate	828	15.7 %	853	24.0 %
Credit funds	375	7.1 %	370	10.4 %
Private equity	473	8.9 %	105	3.0 %
Real assets	172	3.3 %	182	5.1 %
Natural resources	113	2.1 %	163	4.6 %
Public equities	110	2.1 %	119	3.4 %
Investment in Apollo[1]	1,324	25.1 %	—	— %
Total investment funds – related parties	5,284	100.0 %	3,550	100.0 %
Total investment funds including related party	$ 6,087		$ 4,300	

[1] *See further discussion on MidCap, Athora, Venerable and our investment in Apollo in Note 14 – Related Parties.*

[2] *Our AmeriHome investment is held indirectly through A-A Mortgage Opportunities, L.P. (A-A Mortgage). See further discussion on A-A Mortgage and AmeriHome in Note 14 – Related Parties.*

Summarized Ownership of Investment Funds—The following is the aggregated summarized financial information of equity method investees, including those for which we elected the fair value option and would otherwise be accounted for as an equity method investment, and may be presented on a lag due to the availability of financial information from the investee:

	December 31,	
(In millions)	2020	2019
Assets	$ 130,807	$ 50,563
Liabilities	109,654	31,821
Equity	21,153	18,742

	Years ended December 31,		
(In millions)	2020	2019	2018
Net income	$ 2,196	$ 817	$ 1,159

The following table presents the carrying value by ownership percentage of equity method investment funds, including related party investment funds:

	December 31,	
(In millions)	2020	2019
Ownership Percentage		
100%	$ 717	$ 11
50% – 99%	678	1,378
3% – 49%	2,412	1,938
Equity method investment funds	$ 3,807	$ 3,327

The following table presents the carrying value by ownership percentage of investment funds held at fair value, either due to election of the fair value option or requirement, including related party investment funds:

	December 31,	
(In millions)	2020	2019
Ownership Percentage		
50% – 99%	$ 28	$ 28
3% – 49%	2,109	772
Less than 3%	143	173
Fair value investment funds	$ 2,280	$ 973

Non-Consolidated Securities and Investment Funds

Fixed maturity securities – We invest in securitization entities as a debt holder or an investor in the residual interest of the securitization vehicle. These entities are deemed VIEs due to insufficient equity within the structure and lack of control by the equity investors over the activities that significantly impact the economics of the entity. In general, we are a debt investor within these entities and, as such, hold a variable interest; however, due to the debt holders' lack of ability to control the decisions within the trust that significantly impact the entity, and the fact the debt holders are protected from losses due to the subordination of the equity tranche, the debt holders are not deemed the primary beneficiary. Securitization vehicles in which we hold the residual tranche are not consolidated because we do not unilaterally have substantive rights to remove the general partner, or when assessing related party interests, we are not under common control, as defined by GAAP, with the related party, nor are substantially all of the activities conducted on our behalf; therefore, we are not deemed the primary beneficiary. Debt investments and investments in the residual tranche of securitization entities are considered debt instruments and are held at fair value on the balance sheet and classified as AFS or trading.

Investment funds – Investment funds include non-fixed income, alternative investments in the form of limited partnerships or similar legal structures.

Equity securities – We invest in preferred equity securities issued by entities deemed to be VIEs due to insufficient equity within the structure.

Our risk of loss associated with our non-consolidated investments depends on the investment. Investment funds, equity securities and trading securities are limited to the carrying value plus unfunded commitments. AFS securities are limited to amortized cost plus unfunded commitments.

The following summarizes the carrying value and maximum loss exposure of these non-consolidated investments:

	December 31,			
	2020		2019	
(In millions)	Carrying Value	Maximum Loss Exposure	Carrying Value	Maximum Loss Exposure
Investment funds	$ 803	$ 1,265	$ 750	$ 1,265
Investment in related parties – investment funds	5,284	7,989	3,550	5,955
Investment in fixed maturity securities	23,325	23,027	22,694	22,170
Investment in related parties – fixed maturity securities	7,834	8,126	4,570	4,878
Investment in related parties – equity securities	72	72	58	58
Total non-consolidated investments	$ 37,318	$ 40,479	$ 31,622	$ 34,326

3. Derivative Instruments

We use a variety of derivative instruments to manage risks, primarily equity, interest rate, credit, foreign currency and market volatility. See *Note 1 – Business, Basis of Presentation and Significant Accounting Policies* for a description of our accounting policies for derivatives and *Note 5 – Fair Value* for information about the fair value hierarchy for derivatives.

The following table presents the notional amount and fair value of derivative instruments:

	December 31,					
	2020			2019		
		Fair Value			Fair Value	
(In millions)	Notional Amount	Assets	Liabilities	Notional Amount	Assets	Liabilities
Derivatives designated as hedges						
Foreign currency swaps	4,417	$ 134	$ 181	3,158	$ 113	$ 56
Foreign currency forwards	2,038	3	9	717	1	9
Foreign currency forwards on net investments	173	—	2	139	—	2
Total derivatives designated as hedges		137	192		114	67
Derivatives not designated as hedges						
Equity options	53,666	3,209	22	49,549	2,746	5
Futures	24	58	2	8	10	1
Total return swaps	97	6	—	106	6	—
Foreign currency swaps	1,510	96	—	35	2	1
Interest rate swaps	803	—	34	776	3	4
Credit default swaps	10	—	4	10	—	3
Foreign currency forwards	3,595	17	44	1,924	7	16
Embedded derivatives						
Funds withheld including related party		2,806	59		1,395	31
Interest sensitive contract liabilities		—	12,873		—	10,942
Total derivatives not designated as hedges		6,192	13,038		4,169	11,003
Total derivatives		$ 6,329	$ 13,230		$ 4,283	$ 11,070

Derivatives Designated as Hedges

Foreign currency swaps – We use foreign currency swaps to convert foreign currency denominated cash flows of an investment to US dollars to reduce cash flow fluctuations due to changes in currency exchange rates. Certain of these swaps are designated and accounted for as cash flow hedges, which will expire by March 2052. During the years ended December 31, 2020, 2019 and 2018, we had foreign currency swap losses of $106 million and gains of $29 million and $146 million, respectively, recorded in OCI. There were no amounts reclassified to income and no amounts deemed ineffective during the years ended December 31, 2020, 2019 or 2018. As of December 31, 2020, no amounts are expected to be reclassified to income within the next 12 months.

Foreign currency forwards – We use foreign currency forward contracts to hedge certain exposures to foreign currency risk. The price is agreed upon at the time of the contract and payment is made at a specified future date. Certain of these forwards are designated and accounted for as fair value hedges. The following represents the carrying amount and the cumulative fair value hedging adjustments included in the hedged assets or liabilities:

	December 31, 2020	
(In millions)	Carrying amount of the hedged assets or liabilities	Cumulative amount of fair value hedging gains (losses)
AFS securities	$ 1,932	$ 117
Interest sensitive contract liabilities	65	(1)

The following is a summary of the gains (losses) related to the derivatives and related hedged items in fair value hedge relationships:

(In millions)	Derivatives	Hedged Items	Amount Excluded	Net
Year ended December 31, 2020				
Investment related gains (losses)	$ (118)	$ 116	$ —	$ (2)
Interest sensitive contract liabilities	1	(1)	—	—
Year ended December 31, 2019				
Investment related gains (losses)	2	—	—	2
Year ended December 31, 2018				
Investment related gains (losses)	(1)	1	—	—

Foreign currency forwards on net investments – We have foreign currency forwards designated as net investment hedges. These forwards hedge the foreign currency exchange rate risk of our investments in subsidiaries that have a reporting currency other than the US dollar. We assess hedge effectiveness based on the changes in forward rates. During the years ended December 31, 2020, 2019 and 2018, these derivatives had gains of $2 million and losses of $2 million and $0 million, respectively, which are included in foreign currency translation and other adjustments on the consolidated statements of comprehensive income. As of December 31, 2020 and 2019, the cumulative foreign currency translation recorded in AOCI related to these net investment hedges was losses of $0 million and $2 million, respectively. There were no amounts deemed ineffective for the years ended December 31, 2020, 2019 and 2018.

Derivatives Not Designated as Hedges

Equity options – We use equity indexed options to economically hedge fixed indexed annuity products that guarantee the return of principal to the policyholder and credit interest based on a percentage of the gain in a specified market index, primarily the S&P 500. To hedge against adverse changes in equity indices, we enter into contracts to buy equity indexed options. The contracts are net settled in cash based on differentials in the indices at the time of exercise and the strike price.

Futures – Futures contracts are purchased to hedge the growth in interest credited to the customer as a direct result of increases in the related indices. We enter into exchange-traded futures with regulated futures commission clearing brokers who are members of a trading exchange. Under exchange-traded futures contracts, we agree to purchase a specified number of contracts with other parties and to post variation margin on a daily basis in an amount equal to the difference in the daily fair values of those contracts.

Total return swaps – We purchase total rate of return swaps to gain exposure and benefit from a reference asset or index without ownership. Total rate of return swaps are contracts in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of the underlying asset or index, which includes both the income it generates and any capital gains.

Interest rate swaps – We use interest rate swaps to reduce market risks from interest rate changes and to alter interest rate exposure arising from duration mismatches between assets and liabilities. With an interest rate swap, we agree with another party to exchange the difference between fixed-rate and floating-rate interest amounts tied to an agreed-upon notional principal amount at specified intervals.

Credit default swaps – Credit default swaps provide a measure of protection against the default of an issuer or allow us to gain credit exposure to an issuer or traded index. We use credit default swaps coupled with a bond to synthetically create the characteristics of a reference bond. These transactions have a lower cost and are generally more liquid relative to the cash market. We receive a periodic premium for these transactions as compensation for accepting credit risk.

Hedging credit risk involves buying protection for existing credit risk. The exposure resulting from the agreements, which is usually the notional amount, is equal to the maximum proceeds that must be paid by a counterparty for a defaulted security. If a credit event occurs on a reference entity, then a counterparty who sold protection is required to pay the buyer the trade notional amount less any recovery value of the security.

Embedded derivatives – We have embedded derivatives which are required to be separated from their host contracts and reported as derivatives. Host contracts include reinsurance agreements structured on modco or funds withheld basis and indexed annuity products.

The following is a summary of the gains (losses) related to derivatives not designated as hedges:

	Years ended December 31,		
(In millions)	2020	2019	2018
Equity options	$ 819	$ 2,169	$ (877)
Futures	123	(13)	2
Swaps	82	43	(8)
Foreign currency forwards	(127)	(2)	16
Embedded derivatives on funds withheld	2,651	2,246	(232)
Amounts recognized in investment related gains (losses)	3,548	4,443	(1,099)
Embedded derivatives in indexed annuity products[1]	(1,384)	(2,526)	923
Total gains (losses) on derivatives not designated as hedges	$ 2,164	$ 1,917	$ (176)

[1] *Included in interest sensitive contract benefits on the consolidated statements of income.*

Credit Risk—We may be exposed to credit-related losses in the event of counterparty nonperformance on derivative financial instruments. Generally, the current credit exposure of our derivative contracts is the fair value at the reporting date less any collateral received from the counterparty.

We manage credit risk related to over-the-counter derivatives by entering into transactions with creditworthy counterparties. Where possible, we maintain collateral arrangements and use master netting agreements that provide for a single net payment from one counterparty to another at each due date and upon termination. We have also established counterparty exposure limits, where possible, in order to evaluate if there is sufficient collateral to support the net exposure.

Collateral arrangements typically require the posting of collateral in connection with its derivative instruments. Collateral agreements often contain posting thresholds, some of which may vary depending on the posting party's financial strength ratings. Additionally, a decrease in our financial strength rating to a specified level can result in settlement of the derivative position.

The estimated fair value of our net derivative and other financial assets and liabilities after the application of master netting agreements and collateral were as follows:

		Gross amounts not offset on the consolidated balance sheets				
(In millions)	Gross amount recognized[1]	Financial instruments[2]	Collateral received/pledged	Net amount	Off-balance sheet securities collateral[3]	Net amount after securities collateral
December 31, 2020						
Derivative assets	$ 3,523	$ (165)	$ (3,196)	$ 162	$ (46)	$ 116
Derivative liabilities	(298)	165	144	11	—	11
December 31, 2019						
Derivative assets	$ 2,888	$ (67)	$ (2,743)	$ 78	$ (145)	$ (67)
Derivative liabilities	(97)	67	31	1	—	1

[1] *The gross amounts of recognized derivative assets and derivative liabilities are reported on the consolidated balance sheets. As of December 31, 2020 and 2019, amounts not subject to master netting or similar agreements were immaterial.*

[2] *Represents amounts offsetting derivative assets and derivative liabilities that are subject to an enforceable master netting agreement or similar agreement that are not netted against the gross derivative assets or gross derivative liabilities for presentation on the consolidated balance sheets.*

[3] *For non-cash collateral received, we do not recognize the collateral on our balance sheet unless the obligor (transferor) has defaulted under the terms of the secured contract and is no longer entitled to redeem the pledged asset. Amounts do not include any excess of collateral pledged or received.*

Certain derivative instruments contain provisions for credit-related events, such as downgrades in our credit ratings or for a negative credit event of a credit default swap's reference entity. If a credit event were to occur, we may be required to settle an outstanding liability. The following is a summary of our exposure to credit-related events:

	December 31,	
(In millions)	2020	2019
Fair value of derivative liabilities with credit related provisions	$ 4	$ 3
Maximum exposure for credit default swaps	10	10

As of December 31, 2020 and 2019, no additional collateral would be required if a default or termination event were to occur.

4. Variable Interest Entities

We consolidate Hamlet Securitization Trust 2020-CRE1 (Hamlet), which was formed to securitize a portion of our commercial mortgage loan portfolio as CMBS securities held by AHL subsidiaries and third-party cedant portfolios. Securitization of these commercial mortgage loans allows retention of the full economics of these assets while being able to pledge these assets as collateral to the Federal Home Loan Bank (FHLB) under the funding agreement program. As substantially all of the activities and economics of Hamlet are conducted on our behalf, we are the primary beneficiary and consolidate Hamlet and the assets are included in mortgage loans on the consolidated balance sheets. Additionally, as Hamlet is in the form of a trust, the commercial mortgage loan assets are included in the pledged assets and funds in trust table in *Note 15 – Commitments and Contingencies*. No arrangement exists requiring us to provide additional funding in excess of our committed capital investment, liquidity, or the funding of losses or an increase to our loss exposure in excess of our investment in the VIE.

We consolidated the following VIEs during the years ended December 31, 2019 and 2018:

- AAA Investments (Co-Invest VI), L.P. (CoInvest VI);
- AAA Investments (Co-Invest VII), L.P. (CoInvest VII);
- AAA Investments (Other), L.P. (CoInvest Other);
- ALR Aircraft Investment Ireland Limited (ALR) and
- Entities included under our agreement to purchase funds managed by Apollo entities (Strategic Partnership). See *Note 14 – Related Parties* for further discussion on the Strategic Partnership.

We were the only limited partner or holder of profit participating notes in these investment funds and received all of the economic benefits and losses, other than management fees and carried interest, as applicable, paid to the general partner in each entity, or a related entity, which are related parties. We did not have any voting rights as limited partner and, as the limited partner or holder of profit participating notes, did not solely satisfy the power criteria to direct the activities that significantly impact the economics of the VIE. However, the criteria for the primary beneficiary were satisfied by our related party group and, because substantially all of the activities were conducted on our behalf, we consolidated the investment funds.

CoInvest VI, CoInvest VII and CoInvest Other were formed to make investments, including co-investments alongside private equity funds sponsored by Apollo. Investments held by CoInvest VI, CoInvest VII and CoInvest Other were related party investments because Apollo affiliates exercised significant influence over the management or operations of the investees. We received our interests in CoInvest VI, CoInvest VII and CoInvest Other as part of a contribution agreement in 2012 with AAA Guarantor – Athene, L.P. (AAA Investor) and its subsidiary, Apollo Life Re Ltd., in order to provide a capital base to support future acquisitions.

During the first quarter 2020, as a result of the AGM share transaction discussed further in *Note 14 – Related Parties*, we reassessed the consolidation conclusions for the following VIEs, which are managed by Apollo affiliates:

- CoInvest VI;
- CoInvest VII;
- CoInvest Other; and
- Entities included under the Strategic Partnership.

Following the AGM share transaction, we determined that we are no longer the primary beneficiary of CoInvest VI, CoInvest VII, CoInvest Other and the Strategic Partnership, as a result of Apollo receiving significant economics of these entities through their increased economic ownership in us. We did not recognize a gain or loss upon deconsolidation of these previously consolidated VIEs, as the deconsolidated VIEs accounted for their assets and liabilities at fair value. The investments remaining from the deconsolidated VIEs are included at NAV in related party investment funds on the consolidated balance sheets after March 31, 2020.

ALR was formed to invest in a joint venture that provides airplane lease financing to a major commercial airline. During the second quarter of 2020, we received final payment on the profit participating notes and no longer consolidate ALR.

5. Fair Value

Fair value is the price we would receive to sell an asset or pay to transfer a liability (exit price) in an orderly transaction between market participants. We determine fair value based on the following fair value hierarchy:

Level 1 – Unadjusted quoted prices for identical assets or liabilities in an active market.

Level 2 – Quoted prices for inactive markets or valuation techniques that require observable direct or indirect inputs for substantially the full term of the asset or liability. Level 2 inputs include the following:

- Quoted prices for similar assets or liabilities in active markets,
- Observable inputs other than quoted market prices, and
- Observable inputs derived principally from market data through correlation or other means.

Level 3 – Prices or valuation techniques with unobservable inputs significant to the overall fair value estimate. These valuations use critical assumptions not readily available to market participants. Level 3 valuations are based on market standard valuation methodologies, including discounted cash flows, matrix pricing or other similar techniques.

NAV – Investment funds are typically measured using NAV as a practical expedient in determining fair value and are not classified in the fair value hierarchy. The underlying investments of the investment funds may have significant unobservable inputs, which may include but are not limited to, comparable multiples and weighted average cost of capital rates applied in valuation models or a discounted cash flow model.

The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) 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 instrument's fair value measurement.

We use a number of valuation sources to determine fair values. Valuation sources can include quoted market prices; third-party commercial pricing services; third-party brokers; industry-standard, vendor modeling software that uses market observable inputs; and other internal modeling techniques based on projected cash flows. We periodically review the assumptions and inputs of third-party commercial pricing services through internal valuation price variance reviews, comparisons to internal pricing models, back testing to recent trades, or monitoring trading volumes.

The following represents the hierarchy for our assets and liabilities measured at fair value on a recurring basis:

	December 31, 2020				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Assets					
AFS securities					
US government and agencies	$ 351	$ —	$ 332	$ 19	$ —
US state, municipal and political subdivisions	1,033	—	—	999	34
Foreign governments	368	—	—	366	2
Corporate	58,180	—	—	57,402	778
CLO	9,569	—	—	9,361	208
ABS	4,270	—	—	3,470	800
CMBS	2,169	—	—	2,126	43
RMBS	6,913	—	—	6,913	—
Total AFS securities	82,853	—	332	80,656	1,865
Trading securities					
US government and agencies	6	—	3	3	—
US state, municipal and political subdivisions	106	—	—	106	—
Corporate	1,577	—	—	1,577	—
CLO	4	—	—	—	4
ABS	128	—	—	93	35
CMBS	52	—	—	52	—
RMBS	220	—	—	173	47
Total trading securities	2,093	—	3	2,004	86
Equity securities	330	—	57	262	11
Mortgage loans	19	—	—	—	19
Investment funds	161	144	—	—	17
Funds withheld at interest – embedded derivative	1,944	—	—	—	1,944
Derivative assets	3,523	—	58	3,465	—
Short-term investments	222	—	146	74	2
Other investments	105	—	—	105	—
Cash and cash equivalents	7,704	—	7,704	—	—
Restricted cash	738	—	738	—	—
Investments in related parties					
AFS securities					
Corporate	215	—	—	20	195
CLO	1,520	—	—	1,520	—
ABS	4,785	—	—	676	4,109
Total AFS securities – related party	6,520	—	—	2,216	4,304
Trading securities					
CLO	54	—	—	4	50
ABS	1,475	—	—	—	1,475
Total trading securities – related party	1,529	—	—	4	1,525
Equity securities	72	—	—	—	72
Investment funds	2,119	86	—	—	2,033
Funds withheld at interest – embedded derivative	862	—	—	—	862
Reinsurance recoverable	2,100	—	—	—	2,100
Total assets measured at fair value	$ 112,894	$ 230	$ 9,038	$ 88,786	$ 14,840

(Continued)

ATHENE HOLDING LTD.
Notes to Consolidated Financial Statements

	December 31, 2020				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Liabilities					
Interest sensitive contract liabilities					
Embedded derivative	$ 12,873	$ —	$ —	$ —	$ 12,873
Universal life benefits	1,308	—	—	—	1,308
Future policy benefits					
AmerUs Closed Block	1,600	—	—	—	1,600
ILICO Closed Block and life benefits	776	—	—	—	776
Derivative liabilities	298	—	2	292	4
Funds withheld liability – embedded derivative	59	—	—	59	—
Total liabilities measured at fair value	$ 16,914	$ —	$ 2	$ 351	$ 16,561

(Concluded)

	December 31, 2019				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Assets					
AFS securities					
US government and agencies	$ 36	$ —	$ 36	$ —	$ —
US state, municipal and political subdivisions	1,541	—	—	1,501	40
Foreign governments	327	—	—	327	—
Corporate	47,228	—	—	46,503	725
CLO	7,349	—	—	7,228	121
ABS	5,118	—	—	3,744	1,374
CMBS	2,400	—	—	2,354	46
RMBS	7,375	—	—	7,375	—
Total AFS securities	71,374	—	36	69,032	2,306
Trading securities					
US government and agencies	11	—	8	3	—
US state, municipal and political subdivisions	135	—	—	135	—
Corporate	1,456	—	—	1,456	—
CLO	6	—	—	—	6
ABS	108	—	—	92	16
CMBS	51	—	—	51	—
RMBS	303	—	—	251	52
Total trading securities	2,070	—	8	1,988	74
Equity securities	247	—	43	201	3
Mortgage loans	27	—	—	—	27
Investment funds	154	132	—	—	22
Funds withheld at interest – embedded derivative	801	—	—	—	801
Derivative assets	2,888	—	10	2,878	—
Short-term investments	406	—	46	319	41
Other investments	93	—	—	93	—
Cash and cash equivalents	4,240	—	4,240	—	—
Restricted cash	402	—	402	—	—

(Continued)

ATHENE HOLDING LTD.
Notes to Consolidated Financial Statements

	December 31, 2019				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Investments in related parties					
AFS securities					
Corporate	19	—	—	19	—
CLO	936	—	—	936	—
ABS	2,849	—	—	525	2,324
Total AFS securities – related party	3,804	—	—	1,480	2,324
Trading securities					
CLO	74	—	—	36	38
ABS	711	—	—	—	711
Total trading securities – related party	785	—	—	36	749
Equity securities	64	—	—	—	64
Investment funds	819	687	—	—	132
Funds withheld at interest – embedded derivative	594	—	—	—	594
Reinsurance recoverable	1,821	—	—	—	1,821
Total assets measured at fair value	$ 90,589	$ 819	$ 4,785	$ 76,027	$ 8,958
Liabilities					
Interest sensitive contract liabilities					
Embedded derivative	$ 10,942	$ —	$ —	$ —	$ 10,942
Universal life benefits	1,050	—	—	—	1,050
Future policy benefits					
AmerUs Closed Block	1,546	—	—	—	1,546
ILICO Closed Block and life benefits	755	—	—	—	755
Derivative liabilities	97	—	1	93	3
Funds withheld liability – embedded derivative	31	—	—	31	—
Total liabilities measured at fair value	$ 14,421	$ —	$ 1	$ 124	$ 14,296

(Concluded)

Fair Value Valuation Methods—We used the following valuation methods and assumptions to estimate fair value:

AFS and trading securities – We obtain the fair value for most marketable securities without an active market from several commercial pricing services. These are classified as Level 2 assets. The pricing services incorporate a variety of market observable information in their valuation techniques, including benchmark yields, trading activity, credit quality, issuer spreads, bids, offers and other reference data. This category typically includes US and non-US corporate bonds, US agency and government guaranteed securities, CLO, ABS, CMBS and RMBS.

We also have fixed maturity securities priced based on indicative broker quotes or by employing market accepted valuation models. For certain fixed maturity securities, the valuation model uses significant unobservable inputs and are included in Level 3 in our fair value hierarchy. Significant unobservable inputs used include: discount rates, issue specific credit adjustments, material non-public financial information, estimation of future earnings and cash flows, default rate assumptions, liquidity assumptions and indicative quotes from market makers. These inputs are usually considered unobservable, as not all market participants have access to this data.

We value privately placed fixed maturity securities based on the credit quality and duration of comparable marketable securities, which may be securities of another issuer with similar characteristics. In some instances, we use a matrix-based pricing model. These models consider the current level of risk-free interest rates, corporate spreads, credit quality of the issuer and cash flow characteristics of the security. We also consider additional factors such as net worth of the borrower, value of collateral, capital structure of the borrower, presence of guarantees and our evaluation of the borrower’s ability to compete in its relevant market. Privately placed fixed maturity securities are classified as Level 2 or 3.

Equity securities – Fair values of publicly traded equity securities are based on quoted market prices and classified as Level 1. Other equity securities, typically private equities or equity securities not traded on an exchange, we value based on other sources, such as commercial pricing services or brokers, and are classified as Level 2 or 3.

Mortgage loans – Mortgage loans for which we have elected the fair value option or those held for sale are carried at fair value. We estimate fair value on a monthly basis using discounted cash flow analysis and rates being offered for similar loans to borrowers with similar credit ratings. Loans with similar characteristics are aggregated for purposes of the calculations. The discounted cash flow model uses unobservable inputs, including estimates of discount rates and loan prepayments. Mortgage loans are classified as Level 3.

Investment funds – Certain investment funds for which we elected the fair value option are included in Level 3 and are priced based on market accepted valuation models. The valuation models use significant unobservable inputs, which include material non-public financial information, estimation of future distributable earnings and demographic assumptions. These inputs are usually considered unobservable, as not all market participants have access to this data.

Funds withheld at interest embedded derivative – We estimate the fair value of the embedded derivative based on the change in the fair value of the assets supporting the funds withheld payable under modco and funds withheld reinsurance agreements. As a result, the fair value of the embedded derivative is classified as Level 2 or 3 based on the valuation methods used for the assets held supporting the reinsurance agreements.

Derivatives – Derivative contracts can be exchange traded or over-the-counter. Exchange-traded derivatives typically fall within Level 1 of the fair value hierarchy depending on trading activity. Over-the-counter derivatives are valued using valuation models or an income approach using third-party broker valuations. Valuation models require a variety of inputs, including contractual terms, market prices, yield curves, credit curves, measures of volatility, prepayment rates and correlation of the inputs. We consider and incorporate counterparty credit risk in the valuation process through counterparty credit rating requirements and monitoring of overall exposure. We also evaluate and include our own nonperformance risk in valuing derivatives. The majority of our derivatives trade in liquid markets; therefore, we can verify model inputs and model selection does not involve significant management judgment. These are typically classified within Level 2 of the fair value hierarchy.

Cash and cash equivalents, including restricted cash – The carrying amount for cash equals fair value. We estimate the fair value for cash equivalents based on quoted market prices. These assets are classified as Level 1.

Interest sensitive contract liabilities embedded derivative – Embedded derivatives related to interest sensitive contract liabilities with fixed indexed annuity products are classified as Level 3. The valuations include significant unobservable inputs associated with economic assumptions and actuarial assumptions for policyholder behavior.

AmerUs Closed Block – We elected the fair value option for the future policy benefits liability in the AmerUs Closed Block. Our valuation technique is to set the fair value of policyholder liabilities equal to the fair value of assets. There is an additional component which captures the fair value of the open block's obligations to the closed block business. This component is the present value of the projected release of required capital and future earnings before income taxes on required capital supporting the AmerUs Closed Block, discounted at a rate which represents a market participant's required rate of return, less the initial required capital. Unobservable inputs include estimates for these items. The AmerUs Closed Block policyholder liabilities and any corresponding reinsurance recoverable are classified as Level 3.

ILICO Closed Block – We elected the fair value option for the ILICO Closed Block. Our valuation technique is to set the fair value of policyholder liabilities equal to the fair value of assets. There is an additional component which captures the fair value of the open block's obligations to the closed block business. This component uses the present value of future cash flows which include commissions, administrative expenses, reinsurance premiums and benefits, and an explicit cost of capital. The discount rate includes a margin to reflect the business and nonperformance risk. Unobservable inputs include estimates for these items. The ILICO Closed Block policyholder liabilities and corresponding reinsurance recoverable are classified as Level 3.

Universal life liabilities and other life benefits – We elected the fair value option for certain blocks of universal and other life business ceded to Global Atlantic. We use a present value of liability cash flows. Unobservable inputs include estimates of mortality, persistency, expenses, premium payments and a risk margin used in the discount rates that reflects the riskiness of the business. These universal life policyholder liabilities and corresponding reinsurance recoverable are classified as Level 3.

Fair Value Option—The following represents the gains (losses) recorded for instruments for which we have elected the fair value option, including related parties:

	Years ended December 31,		
(In millions)	2020	2019	2018
Trading securities	$ 33	$ 151	$ (254)
Investment funds	295	(3)	37
Future policy benefits	(54)	(103)	182
Total gains (losses)	$ 274	$ 45	$ (35)

Gains and losses on trading securities are recorded in investment related gains (losses) on the consolidated statements of income. For fair value option mortgage loans, we record interest income in net investment income and subsequent changes in fair value in investment related gains (losses) on the consolidated statements of income. Gains and losses related to investment funds, including related party investment funds, are recorded in net investment income on the consolidated statements of income. We record the change in fair value of future policy benefits to future policy and other policy benefits on the consolidated statements of income.

The following summarizes information for fair value option mortgage loans:

	December 31,	
(In millions)	2020	2019
Unpaid principal balance	$ 17	$ 25
Mark to fair value	2	2
Fair value	$ 19	$ 27

There were no fair value option mortgage loans 90 days or more past due as of December 31, 2020 and 2019.

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Level 3 Financial Instruments—The following are reconciliations for Level 3 assets and liabilities measured at fair value on a recurring basis:

	Year ended December 31, 2020							
		Total realized and unrealized gains (losses)						
(In millions)	Beginning balance	Included in income	Included in OCI	Net purchases, issuances, sales and settlements	Net transfers in (out)	Ending balance	Total gains (losses) included in earnings[1]	Total gains (losses) included in OCI[1]
Assets								
AFS securities								
US state, municipal and political subdivisions	$ 40	$ —	$ —	$ (6)	$ —	$ 34	$ —	$ —
Foreign governments	—	—	—	2	—	2	—	—
Corporate	725	10	5	10	28	778	—	5
CLO	121	—	—	109	(22)	208	—	—
ABS	1,374	20	(48)	(282)	(264)	800	—	(47)
CMBS	46	(4)	(5)	(5)	11	43	—	(4)
Trading securities								
CLO	6	(2)	—	—	—	4	—	—
ABS	16	—	—	19	—	35	—	—
RMBS	52	(9)	—	—	4	47	2	—
Equity securities	3	3	—	5	—	11	3	—
Mortgage loans	27	—	—	(8)	—	19	—	—
Investment funds	22	(5)	—	—	—	17	(5)	—
Funds withheld at interest – embedded derivative	801	1,143	—	—	—	1,944	—	—
Short-term investments	41	—	—	(39)	—	2	—	—
Investments in related parties								
AFS securities								
Corporate	—	—	—	195	—	195	—	—
ABS	2,324	24	37	1,889	(165)	4,109	—	37
Trading securities								
CLO	38	(13)	—	14	11	50	(9)	—
ABS	711	(13)	—	777	—	1,475	(14)	—
Equity securities	64	1	—	12	(5)	72	1	—
Investment funds	132	298	—	1,603	—	2,033	122	—
Funds withheld at interest – embedded derivative	594	268	—	—	—	862	—	—
Reinsurance recoverable	1,821	279	—	—	—	2,100	—	—
Total Level 3 assets	$ 8,958	$ 2,000	$ (11)	$ 4,295	$ (402)	$ 14,840	$ 100	$ (9)
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	$ (10,942)	$ (1,384)	$ —	$ (547)	$ —	$ (12,873)	$ —	$ —
Universal life benefits	(1,050)	(258)	—	—	—	(1,308)	—	—
Future policy benefits								
AmerUs Closed Block	(1,546)	(54)	—	—	—	(1,600)	—	—
ILICO Closed Block and life benefits	(755)	(21)	—	—	—	(776)	—	—
Derivative liabilities	(3)	(1)	—	—	—	(4)	(1)	—
Total Level 3 liabilities	$ (14,296)	$ (1,718)	$ —	$ (547)	$ —	$ (16,561)	$ (1)	$ —

[1] *Related to instruments held at end of period.*

	Year ended December 31, 2019						
		Total realized and unrealized gains (losses)					
(In millions)	Beginning balance	Included in income	Included in OCI	Net purchases, issuances, sales and settlements	Net transfers in (out)	Ending balance	Total gains (losses) included in earnings[1]
Assets							
AFS securities							
US state, municipal and political subdivisions	$ —	$ —	$ —	$ 40	$ —	$ 40	$ —
Corporate	898	14	12	(61)	(138)	725	—
CLO	107	—	3	50	(39)	121	—
ABS	1,615	7	32	120	(400)	1,374	—
CMBS	187	2	7	(131)	(19)	46	—
RMBS	56	2	2	(13)	(47)	—	—
Trading securities							
CLO	1	—	—	—	5	6	6
ABS	—	—	—	(9)	25	16	—
RMBS	134	(21)	—	10	(71)	52	1
Equity securities	3	—	—	—	—	3	—
Mortgage loans	32	—	—	(5)	—	27	—
Investment funds	29	(3)	—	(4)	—	22	(3)
Funds withheld at interest – embedded derivative	57	744	—	—	—	801	—
Short-term investments	—	—	—	41	—	41	—
Investments in related parties							
AFS securities, ABS	328	2	22	2,076	(104)	2,324	—
Trading securities							
CLO	113	(7)	—	(49)	(19)	38	3
ABS	149	(14)	—	473	103	711	(6)
Equity securities	133	(2)	—	(67)	—	64	(1)
Investment funds	120	7	—	19	(14)	132	7
Funds withheld at interest – embedded derivative	(110)	704	—	—	—	594	—
Reinsurance recoverable	1,676	145	—	—	—	1,821	—
Total Level 3 assets	$ 5,528	$ 1,580	$ 78	$ 2,490	$ (718)	$ 8,958	$ 7
Liabilities							
Interest sensitive contract liabilities							
Embedded derivative	$ (7,969)	$ (2,526)	$ —	$ (447)	$ —	$ (10,942)	$ —
Universal life benefits	(932)	(118)	—	—	—	(1,050)	—
Future policy benefits							
AmerUs Closed Block	(1,443)	(103)	—	—	—	(1,546)	—
ILICO Closed Block and life benefits	(730)	(25)	—	—	—	(755)	—
Derivative liabilities	(4)	1	—	—	—	(3)	1
Total Level 3 liabilities	$ (11,078)	$ (2,771)	$ —	$ (447)	$ —	$ (14,296)	$ 1

[1] *Related to instruments held at end of period.*

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The following represents the gross components of purchases, issuances, sales and settlements, net, and net transfers in (out) shown above:

	Year ended December 31, 2020							
(In millions)	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements	Transfers in	Transfers out	Net transfers in (out)
Assets								
AFS securities								
US state, municipal and political subdivisions	$ —	$ —	$ (5)	$ (1)	$ (6)	$ —	$ —	$ —
Foreign governments	2	—	—	—	2	—	—	—
Corporate	177	—	—	(167)	10	69	(41)	28
CLO	145	—	(8)	(28)	109	—	(22)	(22)
ABS	128	—	—	(410)	(282)	7	(271)	(264)
CMBS	—	—	(4)	(1)	(5)	11	—	11
Trading securities								
ABS	35	—	(16)	—	19	—	—	—
RMBS	—	—	—	—	—	5	(1)	4
Equity securities	11	—	—	(6)	5	—	—	—
Mortgage loans	—	—	—	(8)	(8)	—	—	—
Short-term investments	3	—	(7)	(35)	(39)	—	—	—
Investments in related parties								
AFS securities								
Corporate	195	—	—	—	195	—	—	—
ABS	2,156	—	(5)	(262)	1,889	—	(165)	(165)
Trading securities								
CLO	27	—	(13)	—	14	15	(4)	11
ABS	802	—	(11)	(14)	777	—	—	—
Equity securities	18	—	(1)	(5)	12	—	(5)	(5)
Investment funds	1,678	—	(75)	—	1,603	—	—	—
Total Level 3 assets	$ 5,377	$ —	$ (145)	$ (937)	$ 4,295	$ 107	$ (509)	$ (402)
Liabilities								
Interest sensitive contract liabilities – embedded derivative	$ —	$ (1,188)	$ —	$ 641	$ (547)	$ —	$ —	$ —
Total Level 3 liabilities	$ —	$ (1,188)	$ —	$ 641	$ (547)	$ —	$ —	$ —

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	Year ended December 31, 2019							
(In millions)	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements	Transfers in	Transfers out	Net transfers in (out)
Assets								
AFS securities								
US state, municipal and political subdivisions	$ 40	$ —	$ —	$ —	$ 40	$ —	$ —	$ —
Corporate	116	—	(3)	(174)	(61)	5	(143)	(138)
CLO	94	—	—	(44)	50	—	(39)	(39)
ABS	409	—	(172)	(117)	120	30	(430)	(400)
CMBS	—	—	(4)	(127)	(131)	—	(19)	(19)
RMBS	1	—	—	(14)	(13)	—	(47)	(47)
Trading securities								
CLO	—	—	—	—	—	5	—	5
ABS	—	—	(9)	—	(9)	25	—	25
RMBS	10	—	—	—	10	4	(75)	(71)
Mortgage loans	—	—	—	(5)	(5)	—	—	—
Investment funds	—	—	(4)	—	(4)	—	—	—
Short-term investments	74	—	—	(33)	41	—	—	—
Investments in related parties								
AFS securities, ABS	2,207	—	—	(131)	2,076	—	(104)	(104)
Trading securities								
CLO	—	—	(49)	—	(49)	17	(36)	(19)
ABS	511	—	—	(38)	473	103	—	103
Equity securities	75	—	(5)	(137)	(67)	—	—	—
Investment funds	20	—	(1)	—	19	—	(14)	(14)
Total Level 3 assets	$ 3,557	$ —	$ (247)	$ (820)	$ 2,490	$ 189	$ (907)	$ (718)
Liabilities								
Interest sensitive contract liabilities – embedded derivative	$ —	$ (937)	$ —	$ 490	$ (447)	$ —	$ —	$ —
Total Level 3 liabilities	$ —	$ (937)	$ —	$ 490	$ (447)	$ —	$ —	$ —

Significant Unobservable Inputs—Significant unobservable inputs occur when we could not obtain or corroborate the quantitative detail of the inputs. This applies to fixed maturity securities, equity securities, mortgage loans and certain derivatives, as well as embedded derivatives in liabilities. Additional significant unobservable inputs are described below.

AFS and trading securities – For certain fixed maturity securities, internal models are used to calculate the fair value. We use a discounted cash flow approach. The discount rate is the significant unobservable input due to the determined credit spread being internally developed, illiquid, or as a result of other adjustments made to the base rate. The base rate represents a market comparable rate for securities with similar characteristics. This excludes assets for which significant unobservable inputs are not developed internally, primarily consisting of broker quotes.

Interest sensitive contract liabilities – embedded derivative – Significant unobservable inputs we use in the fixed indexed annuities embedded derivative of the interest sensitive contract liabilities valuation include:

1. Nonperformance risk – For contracts we issue, we use the credit spread, relative to the US Department of the Treasury (Treasury) curve based on our public credit rating as of the valuation date. This represents our credit risk for use in the estimate of the fair value of embedded derivatives.
2. Option budget – We assume future hedge costs in the derivative's fair value estimate. The level of option budgets determines the future costs of the options and impacts future policyholder account value growth.
3. Policyholder behavior – We regularly review the lapse and withdrawal assumptions (surrender rate). These are based on our initial pricing assumptions updated for actual experience. Actual experience may be limited for recently issued products.

The following summarizes the unobservable inputs for AFS and trading securities and the embedded derivatives of fixed indexed annuities:

(In millions, except for percentages)	Fair value	Valuation technique	Unobservable inputs	Minimum	Maximum	Weighted average	Impact of an increase in the input on fair value
	December 31, 2020						
AFS and trading securities	$ 5,858	Discounted cash flow	Discount	1.7 %	35.0 %	4.6 % [1]	Decrease
Interest sensitive contract liabilities – fixed indexed annuities embedded derivatives	$ 12,873	Option budget method	Nonperformance risk	0.0 %	1.1 %	0.5 % [2]	Decrease
			Option budget	0.6 %	3.5 %	1.9 % [3]	Increase
			Surrender rate	5.3 %	9.5 %	7.1 % [4]	Decrease
	December 31, 2019						
AFS and trading securities	$ 1,289	Discounted cash flow	Discount	3.0 %	9.0 %	6.6 % [1]	Decrease
Interest sensitive contract liabilities – fixed indexed annuities embedded derivatives	$ 10,942	Option budget method	Nonperformance risk	0.2 %	1.1 %	0.6 % [2]	Decrease
			Option budget	0.7 %	3.7 %	1.9 % [3]	Increase
			Surrender rate	3.5 %	8.1 %	7.1 % [4]	Decrease

[1] *The discount weighted average is calculated based on the relative fair values of the securities.*

[2] *The nonperformance risk weighted average is based on the projected excess benefits of reserves used in the calculation of the embedded derivative.*

[3] *The option budget weighted average is calculated based on the indexed account values.*

[4] *The surrender rate weighted average is calculated based on projected account values.*

Financial Instruments Without Readily Determinable Fair Values—We have elected the measurement alternative for certain equity securities that do not have a readily determinable fair value. The equity securities are held at cost less any impairment. The carrying amount of the equity securities was $202 million, with an impairment of $231 million as of December 31, 2020. In connection with preparing our annual financial statements and as a result of adverse changes in the market, economic indicators, and a deterioration of the earnings performance of the investee, we recorded an impairment of $231 million in the fourth quarter of 2020.

Fair Value of Financial Instruments Not Carried at Fair Value—The following represents our financial instruments not carried at fair value on the consolidated balance sheets:

	December 31, 2020					
(In millions)	Carrying Value	Fair Value	NAV	Level 1	Level 2	Level 3
Financial assets						
Mortgage loans	$ 15,245	$ 15,811	$ —	$ —	$ —	$ 15,811
Investment funds	642	642	642	—	—	—
Policy loans	369	369	—	—	369	—
Funds withheld at interest	46,668	46,668	—	—	—	46,668
Other investments	467	471	—	—	—	471
Investments in related parties						
Mortgage loans	674	694	—	—	—	694
Investment funds	3,165	3,165	3,165	—	—	—
Funds withheld at interest	12,168	12,168	—	—	—	12,168
Other investments	469	499	—	—	—	499
Total financial assets not carried at fair value	$ 79,867	$ 80,487	$ 3,807	$ —	$ 369	$ 76,311
Financial liabilities						
Interest sensitive contract liabilities	$ 94,685	$ 98,945	$ —	$ —	$ —	$ 98,945
Long-term debt	1,976	2,259	—	—	2,259	—
Securities to repurchase	598	598	—	—	598	—
Funds withheld liability	393	393	—	—	393	—
Total financial liabilities not carried at fair value	$ 97,652	$ 102,195	$ —	$ —	$ 3,250	$ 98,945

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	December 31, 2019					
(In millions)	Carrying Value	Fair Value	NAV	Level 1	Level 2	Level 3
Financial assets						
Mortgage loans	$ 14,279	$ 14,719	$ —	$ —	$ —	$ 14,719
Investment funds	596	596	596	—	—	—
Policy loans	417	417	—	—	417	—
Funds withheld at interest	14,380	14,380	—	—	—	14,380
Short-term investments	190	190	—	—	—	190
Other investments	65	65	—	—	—	65
Investments in related parties						
Mortgage loans	653	641	—	—	—	641
Investment funds	2,731	2,731	2,731	—	—	—
Funds withheld at interest	12,626	12,626	—	—	—	12,626
Other investments	487	537	—	—	—	537
Total financial assets not carried at fair value	$ 46,424	$ 46,902	$ 3,327	$ —	$ 417	$ 43,158
Financial liabilities						
Interest sensitive contract liabilities	$ 57,272	$ 58,027	$ —	$ —	$ —	$ 58,027
Short-term debt	475	475	—	—	475	—
Long-term debt	992	1,036	—	—	1,036	—
Securities to repurchase	512	512	—	—	512	—
Funds withheld liability	377	377	—	—	377	—
Total financial liabilities not carried at fair value	$ 59,628	$ 60,427	$ —	$ —	$ 2,400	$ 58,027

We estimate the fair value for financial instruments not carried at fair value using the same methods and assumptions as those we carry at fair value. The financial instruments presented above are reported at carrying value on the consolidated balance sheets; however, in the case of policy loans, funds withheld at interest and liability, short-term investments, short-term debt and securities to repurchase, the carrying amount approximates fair value.

Other investments – The fair value of other investments is determined using a discounted cash flow model using discount rates for similar investments.

Interest sensitive contract liabilities – The carrying and fair value of interest sensitive contract liabilities above includes fixed indexed and traditional fixed annuities without mortality or morbidity risks, funding agreements and payout annuities without life contingencies. The embedded derivatives within fixed indexed annuities without mortality or morbidity risks are excluded, as they are carried at fair value. The valuation of these investment contracts is based on discounted cash flow methodologies using significant unobservable inputs. The estimated fair value is determined using current market risk-free interest rates, adding a spread to reflect our nonperformance risk and subtracting a risk margin to reflect uncertainty inherent in the projected cash flows.

Long-term debt – We obtain the fair value of long-term debt from commercial pricing services. These are classified as Level 2. The pricing services incorporate a variety of market observable information in their valuation techniques, including benchmark yields, trading activity, credit quality, issuer spreads, bids, offers and other reference data.

6. Reinsurance

The following summarizes the effect of reinsurance on premiums and future policy and other policy benefits on the consolidated statements of income:

	Years ended December 31,		
(In millions)	2020	2019	2018
Premiums			
Direct	$ 5,691	$ 5,449	$ 2,813
Reinsurance assumed	413	1,092	1,066
Reinsurance ceded	(141)	(159)	(417)
Total premiums	$ 5,963	$ 6,382	$ 3,462
Future policy and other policy benefits			
Direct	$ 7,016	$ 6,697	$ 3,739
Reinsurance assumed	522	1,223	1,093
Reinsurance ceded	(351)	(333)	(551)
Total future policy and other policy benefits	$ 7,187	$ 7,587	$ 4,281

Reinsurance typically provides for recapture rights on the part of the ceding company for certain events of default. Additionally, some agreements require us to place assets in trust accounts for the benefit of the ceding entity. The required minimum assets are equal to or greater than statutory reserves, as defined by the agreement, and were $6,538 million and $8,377 million as of December 31, 2020 and 2019, respectively. Although we own the assets placed in trust, their use is restricted based on the trust agreement terms. If the statutory book value of the assets, or in certain cases fair value, in a trust declines because of impairments or other reasons, we may be required to contribute additional assets to the trust. In addition, the assets within a trust may be subject to a pledge in favor of the applicable reinsurance company.

Reinsurance transactions

We have entered into various coinsurance and modco agreements to reinsure blocks of fixed deferred and fixed indexed and PRT annuities. The following summarizes those agreements at inception:

	Years ended December 31,		
(In millions)	2020	2019	2018
Liabilities assumed	$ 27,439	$ 791	$ 27,238
Less: Assets received	28,805	818	26,255
Ceding commission paid	—	—	(660)
Net cost of reinsurance	$ (1,366)	$ (27)	$ 1,643
DAC	$ —	$ —	$ 1,777
Unearned revenue reserve[1]	(1,366)	—	(69)
Deferred profit liability[2]	—	(27)	(65)
Net cost of reinsurance	$ (1,366)	$ (27)	$ 1,643

[1] *Included within interest sensitive contract liabilities on the consolidated balance sheets.*

[2] *Included within future policy benefits on the consolidated balance sheets.*

DAC and unearned revenue reserve balances are amortized over the life of the reinsurance agreements on a basis consistent with our DAC amortization policy. The deferred profit liability balance is amortized over the life of the reinsurance agreement on a constant relationship to the benefit reserves.

Certain of these reinsurance agreements were with related parties. See *Note 14 – Related Parties* for further information.

Effective July 1, 2020, we restructured our reinsurance agreement with Mass Mutual Life Insurance Company (MassMutual). MassMutual recaptured the existing coinsurance agreement and we immediately entered into a new funds withheld coinsurance agreement with our ALRe subsidiary. As a result, we recorded a $5,021 million increase in funds withheld at interest and a corresponding decrease in assets, primarily consisting of investments and cash.

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Global Atlantic – We have a 100% coinsurance and assumption agreement with Global Atlantic. The agreement ceded all existing open block life insurance business issued by Athene Annuity and Life Company (AAIA), with the exception of enhanced guarantee universal life insurance products. We also entered into a 100% coinsurance agreement with Global Atlantic to cede all policy liabilities of the ILICO Closed Block. The ILICO Closed Block consists primarily of participating whole life insurance policies. We also have an excess of loss arrangement with Global Atlantic to reimburse us for any payments required from our general assets to meet the contractual obligations of the AmerUs Closed Block not covered by existing reinsurance through Athene Re USA IV. The AmerUs Closed Block consists primarily of participating whole life insurance policies. Since all liabilities were covered by the existing reinsurance at close, no reinsurance premiums were ceded. The assets backing the AmerUs Closed Block are managed, on AAIA's behalf, by Goldman Sachs Asset Management, an affiliate of Global Atlantic.

As of December 31, 2020 and 2019, Global Atlantic maintained a series of trust and custody accounts under the terms of these agreements with assets equal to or greater than a required aggregate statutory balance of $3,022 million and $3,478 million, respectively.

Protective Life Insurance Company (Protective) – We reinsured substantially all of the existing life and health business of Athene Annuity & Life Assurance Company (AADE) to Protective under a coinsurance agreement in 2011. As of December 31, 2020 and 2019, Protective maintained a trust for our benefit with assets having a fair value of $1,722 million and $1,640 million, respectively.

Novations—We have novated certain open blocks of business ceded to Global Atlantic, in accordance with the terms of the coinsurance and assumption agreement. Additionally, during the year ended December 31, 2019, we novated the reinsurance agreement for blocks of endowment contracts and annuities assumed from Athora Lebensversicherung AG (ALV) to Athora Life Re Ltd. (ARE). The below table summarizes the decreases in amounts on the consolidated balance sheets as a result of the novations.

	Years ended December 31,	
(In millions)	2020	2019
Interest sensitive contract liabilities	$ 148	$ 407
Future policy benefits	52	305
Funds withheld liability	—	347
Investments, excluding policy loans	—	320
Policy loans	23	38
Reinsurance recoverable	177	674
Other assets (liabilities), net	—	27

Reinsurance Recoverables—The following summarizes our reinsurance recoverable from the following:

	December 31,	
(In millions)	2020	2019
Global Atlantic	$ 3,108	$ 2,981
Protective	1,558	1,605
Other[1]	182	277
Reinsurance recoverable	$ 4,848	$ 4,863

[1] *Represents all other reinsurers, with no single reinsurer having a carrying value in excess of 5% of total recoverable.*

7. Deferred Acquisition Costs, Deferred Sales Inducements and Value of Business Acquired

The following represents a rollforward of DAC, DSI and VOBA:

(In millions)	DAC	DSI	VOBA	Total
Balance at December 31, 2017	$ 1,375	$ 520	$ 1,077	$ 2,972
Additions	2,481	264	—	2,745
Unlocking	21	7	54	82
Amortization	(108)	(61)	(141)	(310)
Impact of unrealized investment (gains) losses	152	69	197	418
Balance at December 31, 2018	3,921	799	1,187	5,907
Additions	645	226	—	871
Unlocking	(117)	(9)	(24)	(150)
Amortization	(749)	(65)	(68)	(882)
Impact of unrealized investment (gains) losses	(426)	(131)	(181)	(738)
Balance at December 31, 2019	3,274	820	914	5,008
Adoption of accounting standard	12	5	5	22
Additions	633	178	—	811
Unlocking	(36)	(13)	(11)	(60)
Amortization	(414)	(53)	(60)	(527)
Impact of unrealized investment (gains) losses	(233)	(80)	(35)	(348)
Balance at December 31, 2020	$ 3,236	$ 857	$ 813	$ 4,906

The expected amortization of VOBA for the next five years is as follows:

(In millions)	Expected Amortization
2021	$ 86
2022	78
2023	73
2024	67
2025	64

8. Closed Block

We pay guaranteed benefits under all policies included in the Closed Blocks. In the event the performance of the Closed Blocks' assets is insufficient to maintain dividend scales and interest credits, we may reduce the policyholder dividend scales. In the event dividends have been reduced to zero and the Closed Blocks' assets remain insufficient to fund the Closed Blocks' guaranteed benefits, we would use assets supporting open block policies or surplus to meet the contractual benefits of the Closed Blocks' policyholders. The ILICO Closed Block has been ceded to Global Atlantic. Therefore, Global Atlantic would be required to provide funding for any asset insufficiency related to the ILICO Closed Block. Additionally, the AmerUs Closed Block has a letter of credit and tail risk reinsurance agreement in place that limits our exposure to potential asset insufficiency.

We elected the fair value option for the AmerUs Closed Block. The fair value of liabilities of the AmerUs Closed Block was derived at election as the sum of the fair value of the AmerUs Closed Block assets plus our cost of capital in the AmerUs Closed Block. The cost of capital was then determined to be the present value of the projected release of required capital and future after tax earnings on required capital supporting the AmerUs Closed Block, discounted at a rate which represents a market participant's required rate of return, less the initial required capital. At each reporting period, we record the fair value of the AmerUs Closed Block by adjusting the change in liabilities, exclusive of the cost of capital, to equal the change in assets. We do not record additional policyholder dividend obligations, as there are no future GAAP earnings available to the policyholders.

The excess of the fair value of the liabilities over the fair value of the assets represents our cost of capital in the AmerUs Closed Block. The maximum amount of future earnings from the assets and liabilities of the AmerUs Closed Block is represented by the reduction in the cost of capital in future years based on the operations of the AmerUs Closed Block and recalculation of the cost of capital each reporting period.

Summarized financial information of the AmerUs Closed Block is presented below.

	December 31,	
(In millions)	2020	2019
Liabilities		
Future policy benefits	$ 1,600	$ 1,546
Other policy claims and benefits	15	18
Dividends payable to policyholders	84	87
Total liabilities	1,699	1,651
Assets		
Trading securities	1,431	1,353
Mortgage loans, net of allowances	19	27
Policy loans	124	139
Total investments	1,574	1,519
Cash and cash equivalents	35	30
Accrued investment income	44	44
Reinsurance recoverable	16	19
Other assets	2	9
Total assets	1,671	1,621
Maximum future earnings to be recognized from AmerUs Closed Block	$ 28	$ 30

The following represents the contribution from AmerUs Closed Block.

	Years ended December 31,		
(In millions)	2020	2019	2018
Revenues			
Premiums	$ 48	$ 54	$ 48
Net investment income	71	74	77
Investment related gains (losses)	99	147	(118)
Total revenues	218	275	7
Benefits and Expenses			
Future policy and other policy benefits	177	234	(49)
Dividends to policyholders	38	36	36
Total benefits and expenses	215	270	(13)
Contribution from AmerUs Closed Block before income taxes	3	5	20
Income tax expense (benefit)	1	(1)	—
Contribution from AmerUs Closed Block, net of income taxes	$ 2	$ 6	$ 20

9. Debt

Credit Facility—We have a revolving credit agreement with Citibank, N.A. as administrative agent, which matures on December 3, 2024, subject to up to two one-year extensions (Credit Facility). The borrowing capacity under the Credit Facility is $1.25 billion, with potential increases up to $1.75 billion. In connection with the Credit Facility, AHL and AUSA guaranteed all of the obligations of AHL, ALRe, Athene Annuity Re Ltd. (AARe) and AUSA under this facility, and ALRe and AARe guaranteed certain of the obligations of AHL, ALRe, AARe and AUSA under this facility. The Credit Facility contains various standard covenants with which we must comply, including the following:

1. Consolidated debt to capitalization ratio of not greater than 35%;
2. Minimum consolidated net worth of no less than $7.3 billion; and
3. Restrictions on our ability to incur debt and liens, in each case with certain exceptions.

As of December 31, 2020 and 2019, we had no amounts outstanding under the Credit Facility and were in compliance with all covenants under the facility.

Interest accrues on outstanding borrowings at either the Eurodollar Rate (as defined in the Credit Facility) plus a margin or a base rate plus a margin, with the applicable margin varying based on AHL's Debt Rating (as defined in the Credit Facility). The Credit Facility has a commitment fee that is determined by reference to AHL's Debt Rating, and ranges from 0.10% to 0.30% of the undrawn commitment. As of December 31, 2020 and 2019, the commitment fee was 0.15% of the undrawn commitment.

Senior Notes—The following is a summary of our senior notes:

Issue date	January 12, 2018	April 3, 2020	October 8, 2020
Principal balance *(in millions)*	$ 1,000	$ 500	$ 500
Interest rate	4.125 %	6.150 %	3.500 %
Maturity date	January 12, 2028	April 3, 2030	January 15, 2031

The senior notes are callable by AHL at any time prior to three months before the scheduled maturity date, at a price equal to the greater of (1) 100% of the principal and any accrued and unpaid interest and (2) an amount equal to the sum of the present values of remaining scheduled payments, discounted from the scheduled payment date to the redemption date treasury rate plus a spread as defined in the applicable prospectus supplement and any accrued and unpaid interest.

Interest expense on long-term debt was $69 million, $42 million and $41 million for the years ended December 31, 2020, 2019 and 2018, respectively.

Short-term Borrowings—In the fourth quarter of 2019, we borrowed $475 million from the FHLB through their variable rate short-term federal funds program. During the first quarter of 2020, $75 million of the short-term borrowings matured. In the second quarter of 2020, the remaining $400 million of short-term borrowings were converted to funding agreements with the FHLB. See *Note 15 – Commitments and Contingencies* for further discussion regarding existing collateral posting with the FHLB.

10. Equity

Preferred Stock—We have four series of preferred stock: 6.35% Fixed-to-Floating Rate Perpetual Non-Cumulative Preference Shares, Series A (Series A); 5.625% Fixed-Rate Perpetual Non-Cumulative Preference Shares, Series B (Series B); 6.375% Fixed-Rate Reset Perpetual Non-Cumulative Preference Shares, Series C (Series C); and 4.875% Fixed-Rate Perpetual Non-Cumulative Preference Shares, Series D (Series D) as summarized below:

	Series A	Series B	Series C	Series D
Issue date	June 10, 2019	September 19, 2019	June 11, 2020	December 18, 2020
Authorized, issued and outstanding	34,500	13,800	24,000	23,000
Liquidation preference per share	$ 25,000	$ 25,000	$ 25,000	$ 25,000

The following summarizes dividends declared and paid per preferred stock share by series:

	Years ended December 31,		
(Per share)	2020	2019	2018
Series A	$ 1,587.51	$ 881.95	$ —
Series B	1,406.25	394.53	—
Series C	880.99	—	—
Series D	—	—	—

The following summarizes dividends declared and paid in the aggregate on the preferred stock by series:

	Years ended December 31,		
(In millions)	2020	2019	2018
Series A	$ 55	$ 31	$ —
Series B	19	5	—
Series C	21	—	—
Series D	—	—	—
Total dividends declared and paid	$ 95	$ 36	$ —

Preferred stock dividends are payable on a non-cumulative basis only when, as and if declared, quarterly in arrears on the 30th day of March, June, September and December of each year. Preferred stock ranks senior to our common stock with respect to dividends, to the extent declared, and in liquidation, to the extent of the liquidation preference.

Common Stock—Our bye-laws place certain restrictions on Class A shares such that a holder of Class A shares, except for shareholders permitted by our board of directors, which include members of the Apollo Group, as defined in our bye-laws, cannot control greater than 9.9% of the total outstanding vote and if a holder of Class A shares were to control greater than 9.9%, then such holder’s voting power is automatically reduced to 9.9% and the other holders of Class A shares would vote the remainder on a prorated basis.

During the first quarter of 2020, shareholders approved amendments to our bye-laws which eliminated our multi-class share structure at the closing of the share transaction with AGM. Class B shares outstanding were converted to Class A shares on a one-to-one basis. Class M shares outstanding were converted to Class A shares representing 5% of the Class M value and warrants representing 95% of the Class M value. The warrants were issued with substantially the same terms, including the same economic terms, as the Class M shares. As of December 31, 2020, we had 8.4 million warrants outstanding with a weighted average conversion price of $18.27. See *Note 14 – Related Parties* for further information on this transaction.

Prior to this transaction, we had six classes of common stock: Class A, Class B, Class M-1, Class M-2, Class M-3 and Class M-4. The Class M-1, Class M-2, Class M-3 and Class M-4 shares were collectively referred to as Class M shares. Class A shares collectively represented 55% of the total voting power of the Company. Class B shares collectively represented the remaining 45% of the total voting power of the Company, and were beneficially owned by shareholders who were members of the Apollo Group, as defined in our bye-laws. Class B shares were convertible to Class A shares on a one-to-one basis at any time upon notice to us. Class M shares were restricted, non-voting shares previously issued under equity incentive plans. Class M shares functioned similar to options in that they were exchangeable into Class A shares upon payment of a conversion price and satisfaction of other conditions, including vesting conditions.

Share Repurchase Authorizations

Our board of directors has approved authorizations of $1,567 million for the repurchase of our Class A shares under our repurchase program. We may repurchase shares in open market transactions, in privately negotiated transactions or otherwise. The size and timing of repurchases will depend on legal requirements, market and economic conditions and other factors, and are solely at our discretion. The program has no expiration date, but may be modified, suspended or terminated by the board at any time.

The following summarizes the activity on our share repurchase authorizations:

	Years ended December 31,		
(In millions)	2020	2019	2018
Beginning balance	$ 640	$ 150	$ —
Authorizations	—	1,317	250
Repurchases	(419)	(827)	(100)
Ending balance	$ 221	$ 640	$ 150

As of December 31, 2020, we had $407 million of capital stock authorized which remains undesignated.

The table below shows the changes in each class of shares issued and outstanding:

	Years ended December 31,		
(In millions)	2020	2019	2018
Class A			
Beginning balance	143.2	162.4	142.4
Issued shares	36.0	0.7	0.6
Forfeited shares	(0.1)	(0.1)	—
Repurchased shares	(13.3)	(19.8)	(2.6)
Converted from Class B shares	25.4	—	22.0
Converted from Class M	0.3	—	—
Ending balance	191.5	143.2	162.4
Class B			
Beginning balance	25.4	25.4	47.4
Converted to Class A shares	(25.4)	—	(22.0)
Ending balance	—	25.4	25.4
Class M-1			
Beginning balance	3.3	3.4	3.4
Converted to Class A shares	(0.2)	(0.1)	—
Converted to warrants	(3.1)	—	—
Ending balance	—	3.3	3.4
Class M-2			
Beginning balance	0.8	0.8	0.9
Converted to Class A shares	0.0	—	(0.1)
Converted to warrants	(0.8)	—	—
Ending balance	—	0.8	0.8
Class M-3			
Beginning balance	1.0	1.0	1.1
Converted to Class A shares	0.0	—	(0.1)
Converted to warrants	(1.0)	—	—
Ending balance	—	1.0	1.0
Class M-4			
Beginning balance	4.0	4.1	4.7
Converted to Class A shares	(0.1)	(0.1)	(0.5)
Converted to warrants	(3.6)	—	—
Repurchased shares	(0.3)	—	(0.1)
Ending balance	—	4.0	4.1

Accumulated Other Comprehensive Income (Loss)—The following provides the details and changes in AOCI:

(In millions)	Unrealized investment gains (losses) on AFS securities without a credit allowance	Unrealized investment gains (losses) on AFS securities with a credit allowance	DAC, DSI, VOBA and future policy benefits adjustments on AFS securities	Unrealized gains (losses) on hedging instruments	Foreign currency translation and other adjustments	Accumulated other comprehensive income (loss)
Balance at December 31, 2017	$ 2,089	$ —	$ (568)	$ (76)	$ 4	$ 1,449
Adoption of accounting standards	(46)	—	4	—	—	(42)
Other comprehensive income (loss) before reclassifications	(3,300)	—	852	146	(8)	(2,310)
Less: Reclassification adjustments for gains (losses) realized in net income[1]	1	—	(1)	—	—	—
Less: Income tax expense (benefit)	(630)	—	168	31	—	(431)
Balance at December 31, 2018	(628)	—	121	39	(4)	(472)
Other comprehensive income (loss) before reclassifications	4,929	—	(1,322)	29	1	3,637
Less: Reclassification adjustments for gains (losses) realized in net income[1]	225	—	(56)	—	—	169
Less: Income tax expense (benefit)	958	—	(266)	6	—	698
Less: Other comprehensive income attributable to NCI, net of subsidiary issuance of equity interests and tax	16	—	—	1	—	17
Balance at December 31, 2019	3,102	—	(879)	61	(3)	2,281
Adoption of accounting standards	4	(4)	(6)	—	—	(6)
Other comprehensive income (loss) before reclassifications	3,292	(41)	(634)	(106)	18	2,529
Less: Reclassification adjustments for gains (losses) realized in net income[1]	353	—	(94)	—	—	259
Less: Income tax expense (benefit)	562	(8)	(115)	(26)	—	413
Less: Other comprehensive income attributable to NCI	145	2	—	7	7	161
Balance at December 31, 2020	$ 5,338	$ (39)	$ (1,310)	$ (26)	$ 8	$ 3,971

[1] *Recognized in investment related gains (losses) on the consolidated statements of income.*

11. Earnings Per Share

The following represents our basic and diluted EPS calculations:

	Year ended December 31, 2020					
(In millions, except per share data)	Class A	Class B	Class M-1	Class M-2	Class M-3	Class M-4
Net income (loss) available to Athene Holding Ltd. common shareholders – basic and diluted	$ 1,573	$ (98)	$ (13)	$ (3)	$ (4)	$ (9)
Basic weighted average shares outstanding	184.9	25.4	3.3	0.8	1.0	2.4
Dilutive effect of stock compensation plans and warrants	3.7	—	—	—	—	—
Diluted weighted average shares outstanding	188.6	25.4	3.3	0.8	1.0	2.4
Earnings (loss) per share						
Basic	$ 8.51	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)
Diluted	$ 8.34	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)

(In millions, except per share data)	Year ended December 31, 2019 Class A	Class B	Class M-1	Class M-2	Class M-3	Class M-4
Net income available to Athene Holding Ltd. common shareholders – basic and diluted	$ 1,760	$ 291	$ 38	$ 10	$ 11	$ 26
Basic weighted average shares outstanding	153.9	25.4	3.3	0.8	1.0	2.2
Dilutive effect of stock compensation plans	0.4	—	—	—	—	0.3
Diluted weighted average shares outstanding	154.3	25.4	3.3	0.8	1.0	2.5
Earnings per share						
Basic	$ 11.44	$ 11.44	$ 11.44	$ 11.44	$ 11.44	$ 11.44
Diluted	$ 11.41	$ 11.44	$ 11.44	$ 11.44	$ 11.44	$ 9.94

(In millions, except per share data)	Year ended December 31, 2018 Class A	Class B	Class M-1	Class M-2	Class M-3	Class M-4
Net income available to Athene Holding Ltd. common shareholders – basic and diluted	$ 857	$ 157	$ 18	$ 5	$ 5	$ 11
Basic weighted average shares outstanding	160.5	29.3	3.4	0.8	1.0	2.1
Dilutive effect of stock compensation plans	0.6	—	—	—	—	0.6
Diluted weighted average shares outstanding	161.1	29.3	3.4	0.8	1.0	2.7
Earnings per share						
Basic	$ 5.34	$ 5.34	$ 5.34	$ 5.34	$ 5.34	$ 5.34
Diluted	$ 5.32	$ 5.34	$ 5.34	$ 5.31	$ 5.31	$ 4.11

For the periods in which we had multiple classes of stock participating in earnings, we used the two-class method for allocating net income to each class of our common stock. During the first quarter of 2020, as a result of the closing of the share transaction discussed further in *Note 14 – Related Parties*, we converted outstanding Class B shares to Class A shares and Class M shares were converted to Class A shares and warrants. As a result, the EPS calculation for the year ended December 31, 2020 allocates all net income for the second, third and fourth quarters to Class A shares. For the first quarter, the EPS calculation used only the weighted average shares for the first quarter to allocate first quarter net loss for Class B and Class M shares; however, for Class B and Class M shares, the weighted average shares outstanding represent only that period of time that the shares were outstanding. The warrants issued as part of the conversion of the Class M shares are evaluated for dilution and included within the dilutive effect of stock compensation plans and warrants above.

Dilutive shares are calculated using the treasury stock method. For Class A shares, this method takes into account shares that can be settled into Class A shares, net of a conversion price. The diluted EPS calculations for Class A shares excluded 1.8 million, 31.9 million and 34.9 million shares, RSUs, warrants and options as of December 31, 2020, 2019 and 2018, respectively.

12. Income Taxes

Income tax expense consists of the following:

(In millions)	Years ended December 31, 2020	2019	2018
Current	$ 107	$ 53	$ 78
Deferred	178	64	44
Income tax expense	$ 285	$ 117	$ 122

Income tax expense was calculated based on the following income (loss) before income taxes by jurisdiction:

(In millions)	Years ended December 31, 2020	2019	2018
Bermuda	$ 903	$ 1,895	$ 641
US	1,083	528	534
United Kingdom	220	(121)	—
Income before income taxes	$ 2,206	$ 2,302	$ 1,175

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The expected tax provision computed on pre-tax income at the weighted average tax rate has been calculated as the sum of the pre-tax income in each jurisdiction multiplied by that jurisdiction's applicable statutory tax rate. Statutory tax rates of 0%, 21% and 19% have been used for Bermuda, the US and the United Kingdom (UK), respectively, for the years ended December 31, 2020, 2019 and 2018. A reconciliation of the difference between the expected tax provision at the weighted average tax rate and income tax expense (benefit) is as follows:

	Years ended December 31,		
(In millions, except for percentages)	2020	2019	2018
Expected tax provision computed on pre-tax income at weighted average income tax rate	$ 268	$ 88	$ 112
Increase in income taxes resulting from:			
Deferred tax valuation allowance	8	16	—
Non-deductible expenses	5	17	—
Prior year true-up	(4)	2	11
Corporate owned life insurance	(6)	(6)	(3)
Stock compensation expense	—	2	1
State taxes and other	14	(2)	1
Income tax expense	$ 285	$ 117	$ 122
Effective tax rate	13 %	5 %	10 %

Total income taxes were as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
Income tax expense	$ 285	$ 117	$ 122
Income tax expense (benefit) from OCI	413	698	(431)
Total income tax expense (benefit)	$ 698	$ 815	$ (309)

Current income tax recoverable and deferred tax assets are included in other assets on the consolidated balance sheets, and current income tax payable and deferred tax liabilities are included in other liabilities on the consolidated balance sheets. Current and deferred income tax assets and liabilities were as follows:

	December 31,	
(In millions)	2020	2019
Current income tax recoverable	$ 55	$ —
Current income tax payable	—	14
Net current income tax recoverable (payable)	$ 55	$ (14)
Deferred tax assets	$ —	$ —
Deferred tax liabilities	972	423
Net deferred tax liabilities	$ (972)	$ (423)

Deferred income tax assets and liabilities consisted of the following:

	December 31,	
(In millions)	2020	2019
Deferred tax assets		
Insurance liabilities	$ 1,723	$ 1,753
Net operating and capital loss carryforwards	86	133
Tax credits	—	2
Employee benefits	20	21
Other	36	16
Total deferred tax assets	1,865	1,925
Valuation allowance	(74)	(63)
Deferred tax assets, net of valuation allowance	1,791	1,862
Deferred tax liabilities		
Investments, including derivatives	998	928
Net unrealized gains on AFS	997	585
DAC, DSI and VOBA	767	758
Other	1	14
Total deferred tax liabilities	2,763	2,285
Net deferred tax liabilities	$ (972)	$ (423)

As of December 31, 2020, we have gross deferred tax assets associated with US federal and state net operating losses of $552 million, which will begin to expire in 2022.

The valuation allowance consists of the following:

	December 31,	
(In millions)	2020	2019
US federal and state net operating losses and other deferred tax assets	$ 50	$ 47
UK net operating losses and other deferred tax assets	24	16
Total valuation allowance	$ 74	$ 63

AHL and its Bermuda subsidiaries file protective US income tax returns and its US subsidiaries file income tax returns with the US federal government and various US state governments. AADE is not subject to US federal and state examinations by tax authorities for years prior to 2013, while Athene Annuity & Life Assurance Company of New York (AANY) is not subject to examinations for years prior to 2015. The Internal Revenue Service is currently auditing the 2013 consolidated tax return filed by AUSA, is conducting a limited scope audit of the 2015 consolidated tax return filed by AADE, and is auditing the 2017 consolidated tax return filed by AADE. No material adverse proposed adjustments have been issued with respect to any examination.

Under current Bermuda law, we are not required to pay any taxes in Bermuda on either income or capital gains. We have received an undertaking from the Bermuda Minister of Finance that, in the event of any such taxes being imposed, the Company will be exempted from taxation until the year 2035.

We expect that earnings from AHL's US subsidiaries will not be subject to US dividend withholding tax under the benefits provided by the income tax treaty between the US and the UK. Any dividends remitted to AHL from ALRe are not subject to withholding tax.

13. Statutory Requirements

Our insurance and reinsurance subsidiaries are subject to insurance laws and regulations in the jurisdictions in which they operate including Bermuda and the US. Certain regulations include restrictions that limit the dividends or other distributions, such as loans or cash advances, available to shareholders without prior approval of the insurance regulatory authorities. The differences between financial statements prepared for insurance regulatory authorities and GAAP financial statements vary by jurisdiction.

Bermuda statutory requirements—ALRe, AARe and Athene Co-Invest Reinsurance Affiliate 1A Ltd. (ACRA 1A, and together with its subsidiaries, ACRA) are each licensed by the Bermuda Monetary Authority (BMA) as long-term insurers and are subject to the Insurance Act 1978, as amended (Bermuda Insurance Act) and regulations promulgated thereunder. The BMA implemented the Economic Balance Sheet (EBS) framework into the Bermuda Solvency Capital Requirement (BSCR), which was granted equivalence to the European Union's Directive (2009/138/EC) (Solvency II).

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Under the Bermuda Insurance Act, long-term insurers are required to maintain minimum statutory capital and surplus to meet the minimum margin of solvency (MMS) and minimum economic statutory capital and surplus (EBS capital and surplus) to meet the Enhanced Capital Requirement (ECR). For our Class C reinsurer, ACRA 1A, MMS is equal to the greater of $500,000, 1.5% of the total statutory assets or 25% of ECR. For our Class E reinsurers, ALRe and AARe, MMS is equal to the greater of $8 million, 2% of the first $500 million of statutory assets plus 1.5% of statutory assets above $500 million or 25% of ECR. For each class, the ECR is calculated based on a risk-based capital model where risk factor charges are applied to the EBS. The ECR is floored at the MMS. As of December 31, 2020, our Bermuda subsidiaries were in excess of the minimum levels required. For our Bermuda reinsurance subsidiaries, the ECR is the binding regulatory constraint. The following represents the EBS capital and surplus and BSCR ratios:

	EBS capital & surplus		BSCR ratio	
	December 31,		December 31,	
(In millions)	2020	2019	2020	2019
ALRe	$ 17,168	$ 14,073	254 %	310 %
AARe	2,441	2,898	967 %	257 %
ACRA 1A	2,945	1,237	236 %	341 %

Under the EBS framework, statutory financial statements are generally equivalent to GAAP financial statements, with the exception of permitted practices granted by the BMA. Our Bermuda subsidiaries have permission in the statutory financial statements to use amortized cost instead of fair value as the basis for certain investments. Additionally, our Bermuda subsidiaries use US statutory reserving principles for the calculation of insurance reserves instead of GAAP, subject to the reserves being proved adequate based on cash flow testing. The following represents the effect of the permitted practices to the statutory financial statements:

	December 31, 2020		
(In millions)	ALRe	AARe[1]	ACRA 1A
Decrease to capital and surplus due to permitted practices	$ (4,434)	$ (7,762)	$ (378)
Decrease to statutory net income due to permitted practices	(17)	(2,922)	(683)

[1] *AARe has permission to use amortized cost instead of fair value as the basis for certain investments but does not produce GAAP financial statements. The effect of the permitted practices to the AARe statutory financial statements reflects the impact of the difference between amortized cost and fair value for certain investments.*

Under the Bermuda Insurance Act, our Bermuda subsidiaries are prohibited from paying a dividend in an amount exceeding 25% of the prior year's statutory capital and surplus, unless at least two members of the companies' respective board of directors and its principal representative in Bermuda sign and submit to the BMA an affidavit attesting that a dividend in excess of this amount would not cause the subsidiary to fail to meet its relevant margins. In certain instances, the Bermuda subsidiary would also be required to provide prior notice to the BMA in advance of the payment of dividends. In the event that such an affidavit is submitted to the BMA, and further subject to meeting the MMS and ECR requirements, a Bermuda subsidiary is permitted to distribute up to the sum of 100% of statutory surplus and an amount less than 15% of statutory capital. Distributions in excess of this amount require the approval of the BMA. The following represents the maximum distribution our Bermuda subsidiaries would be permitted to remit to its parent without the need for prior approval:

	December 31,	
(In millions)	2020	2019
ALRe	$ 9,971	$ 8,141
AARe	1,096	1,216
ACRA 1A	1,592	59

US statutory requirements—Our regulated US subsidiaries and the corresponding insurance regulatory authorities are as follows:

Subsidiary	Regulatory Authority
AADE	Delaware Department of Insurance
AAIA	Iowa Insurance Division
AANY	New York Department of Financial Services
Athene Re USA IV	State of Vermont Department of Financial Regulation

Each entity's statutory statements are presented on the basis of accounting practices determined by the respective regulatory authority. The regulatory authority recognizes only statutory accounting practices prescribed or permitted by the corresponding state for determining and reporting the financial condition and results of operations of an insurance company and for determining its solvency under insurance law.

The maximum dividend these subsidiaries can pay to shareholders, without prior approval of the respective state insurance department, is subject to restrictions relating to statutory surplus or net gain from operations. The maximum dividend payment over a twelve-month period may not, without prior approval, be paid from a source other than earned surplus and may not exceed the greater of (1) the prior year's net gain from operations or (2) 10% of policyholders' surplus. Based on these restrictions, the maximum dividend AADE could pay to AUSA absent regulatory approval was $170 million and $152 million as of December 31, 2020 and 2019, respectively. Any dividends from AHL's other US statutory entities in excess of the amounts allowed for AADE would not be able to be remitted to AUSA without regulatory approval from the Delaware Department of Insurance.

As of December 31, 2020, our US subsidiaries' solvency, liquidity and risk-based capital amounts were significantly in excess of the minimum levels required.

In some instances, the states of domicile of our US subsidiaries have adopted prescribed accounting practices that differ from the required accounting outlined in National Association of Insurance Commissioners (NAIC) Statutory Accounting Principles (SAP). These subsidiaries also have certain accounting practices permitted by the states of domicile that differ from those found in NAIC SAP. These prescribed and permitted practices are described as follows:

AAIA – Among the products issued by AAIA are indexed universal life insurance and fixed indexed annuities. These products allow a portion of the premium to earn interest based on certain indices, primarily the S&P 500. We purchase call options, futures and variance swaps to hedge the growth in interest credited to the customer as a direct result of increases in the related index. The Iowa Insurance Division allows an insurer to elect (1) to use an amortized cost method to account for certain derivative instruments, such as call options, purchased to hedge the growth in interest credited to the customer on indexed insurance products and (2) to use an indexed annuity reserve calculation methodology under which call options associated with the current index interest crediting term are valued at zero. AAIA has elected to apply this option to its over-the-counter call options and reserve liabilities. As a result, AAIA's statutory surplus decreased by $84 million and $80 million as of December 31, 2020 and 2019, respectively.

Athene Re USA IV – AAIA has ceded the AmerUs Closed Block to Athene Re USA IV on a 100% funds withheld basis. A permitted practice in the State of Vermont allows Athene Re USA IV to include as admitted assets the face amount of all issued and outstanding letters of credit used to fund its reinsurance obligations to AAIA in its statutory financial statements. If Athene Re USA IV had not followed this permitted practice, then it would not have exceeded authorized control level risk based capital requirements. As of December 31, 2020 and 2019, Athene Re USA IV included as admitted assets $134 million and $137 million, respectively, related to the outstanding letters of credit.

Statutory capital and surplus and net income (loss)—The following table presents, for each of our primary insurance subsidiaries, the statutory capital and surplus and the statutory net income (loss), based on the most recent statutory financial statements to be filed with insurance regulators:

	Statutory capital & surplus		Statutory net income (loss)		
	December 31,		Years ended December 31,		
(In millions)	2020	2019	2020	2019	2018
ALRe	$ 13,518	$ 11,000	$ 1,544	$ 1,247	$ 418
AARe	2,457	2,343	92	248	997
ACRA 1A	2,718	808	1,522	265	(287)
AADE	1,700	1,526	54	(86)	18
AAIA	1,312	1,209	(8)	241	81
AANY	320	318	(25)	33	6

14. Related Parties

Apollo

Current fee structure – Substantially all of our investments are managed by Apollo. Apollo provides us a full suite of services that includes: direct investment management; asset sourcing and allocation; mergers and acquisition sourcing, execution and asset diligence; and strategic support and advice. Apollo also provides certain operational support services for our investment portfolio including investment compliance, tax, legal and risk management support.

Apollo has extensive experience managing our investment portfolio and its knowledge of our liability profile enables it to tailor an asset management strategy to fit our specific needs. This strategy has proven responsive to changing market conditions and focuses on earning incremental yield by taking liquidity risk and complexity risk, rather than assuming solely credit risk. Our partnership has enabled us to take advantage of investment opportunities that would likely not otherwise have been available to us.

During the second quarter of 2019, we entered into the Seventh Amended and Restated Fee Agreement, dated as of June 10, 2019, between us and AGM's subsidiary, Apollo Insurance Solutions Group LP (ISG) (Fee Agreement). Under the Fee Agreement, effective retroactive to January 1, 2019, we pay Apollo:

(1) a base management fee equal to the sum of (i) 0.225% per year of the lesser of (A) the aggregate market value of substantially all of the assets in substantially all of the investment accounts of or relating to us (collectively, the Accounts) on December 31, 2018 of $103.4 billion (Backbook Value) and (B) the aggregate market value of substantially all of the assets in the Accounts at the end of the respective month, plus (ii) 0.15% per year of the amount, if any (Incremental Value), by which the aggregate market value of substantially all of the assets in the Accounts at the end of the respective month exceeds the Backbook Value; plus

(2) with respect to each asset in an Account, subject to certain exceptions, that is managed by Apollo and that belongs to a specified asset class tier (Core, Core Plus, Yield, and High Alpha), a sub-allocation fee as follows, which will, in the case of assets acquired after January 1, 2019, be subject to a cap of 10% of the applicable asset's gross book yield:

(i) 0.065% of the market value of Core assets, which include public investment grade corporate bonds, municipal securities, agency RMBS or CMBS, and obligations of governmental agencies or government sponsored entities that are not expressly backed by the US government;
(ii) 0.13% of the market value of Core Plus assets, which include private investment grade corporate bonds, fixed rate first lien commercial mortgage loans (CML), and certain obligations issued or assumed by financial institutions and determined by Apollo to be "Tier 2 Capital" under Basel III, a set of recommendations for international banking regulations developed by the Bank for International Settlements;
(iii) 0.375% of the market value of Yield assets, which include non-agency RMBS, investment grade CLO, CMBS and other ABS (other than RMBS and CLO), emerging market investments, below investment grade corporate bonds, subordinated debt obligations, hybrid securities or surplus notes issued or assumed by a financial institution, rated preferred equity, residential mortgage loans (RML), bank loans, investment grade infrastructure debt, and floating rate CMLs on slightly transitional or stabilized traditional real estate;
(iv) 0.70% of the market value of High Alpha assets, which include subordinated CML, below investment grade CLO, unrated preferred equity, debt obligations originated by MidCap, CMLs for redevelopment or construction loans or secured by non-traditional real estate, below investment grade infrastructure debt, certain loans originated directly by Apollo (other than MidCap loans), and agency mortgage derivatives; and
(v) 0.00% of the market value of cash and cash equivalents, US treasuries, non-preferred equities and alternatives.

The following represents assets based on the above sub-allocation structure:

(In millions, except percentages)	December 31, 2020	Percent of Total	December 31, 2019	Percent of Total
Core	$ 49,392	27.3 %	$ 32,474	25.5 %
Core Plus	41,516	23.0 %	30,155	23.6 %
Yield	64,693	35.8 %	48,557	38.0 %
High Alpha	6,200	3.4 %	5,062	4.0 %
Other	19,088	10.5 %	11,302	8.9 %
Total sub-allocation assets	$ 180,889	100.0 %	$ 127,550	100.0 %

Additionally, the Fee Agreement provides for a possible payment by Apollo to us, or a possible payment by us to Apollo, equal to 0.025% of the Incremental Value as of the end of each year, beginning on December 31, 2019, depending upon the percentage of our investments that consist of Core and Core Plus assets. If more than 60% of our invested assets that are subject to the sub-allocation fees are invested in Core and Core Plus assets, we will receive a 0.025% fee reduction on the Incremental Value. If less than 50% of our invested assets that are subject to the sub-allocation fee are invested in Core and Core Plus assets, we will pay an additional fee of 0.025% on Incremental Value. Under the Fee Agreement fees payable to Apollo for sub-advisory services are encompassed within the current fee structure and we no longer separately pay sub-advisory fees (as defined below). See –*Historical fee structure* below for further discussion of the prior fee structure.

For the years ended December 31, 2020, 2019 and 2018, we incurred management fees, inclusive of the base and sub-allocation fees, of $490 million, $426 million and $349 million, respectively. Management fees are included within net investment income on the consolidated statements of income. As of December 31, 2020 and 2019, management fees payable were $41 million and $42 million, respectively, and are included in other liabilities on the consolidated balance sheets. Such amounts include fees incurred attributable to ACRA including 100% of the noncontrolling interest in ACRA. In addition to the assets on our consolidated balance sheets managed by Apollo, Apollo manages the assets underlying our funds withheld receivable. For these assets, the third-party cedants pay Apollo fees based upon the same fee construct we have with Apollo. Such fees directly reduce the settlement payments that we receive from the third-party cedant and, as such, we indirectly pay those fees. Finally, Apollo charges management fees and carried interest on Apollo-managed funds and other entities in which we invest. Neither the fees paid by such third-party cedants nor the fees or carried interest paid by such Apollo-managed funds or other entities are included in the investment management fee amounts cited above.

Historical fee structure – Prior to January 1, 2019, we paid AAM an annual fee of 0.40%, subject to certain discounts and exceptions, on all assets that AAM managed in accounts owned by us in the US and Bermuda or in accounts supporting reinsurance ceded to our US and Bermuda subsidiaries by third-party insurers (North American Accounts) up to $65,846 million and 0.30% per year on assets managed in excess of such amount. Additionally, for certain assets which required specialized sourcing and underwriting capabilities, AAM had chosen to mandate sub-advisors rather than build out in-house capabilities. AAM entered into Master Sub-Advisory Agreements (MSAAs) with certain Apollo affiliates to sub-advise AAM with respect to a portion of our assets, with the fees recharged to us, in addition to the gross fee paid to AAM as described above.

AAM paid Apollo 0.40% per year on all assets in the North American Accounts explicitly sub-advised by Apollo up to $10,000 million, 0.35% per year on all assets in such accounts explicitly sub-advised by Apollo in excess of $10,000 million up to $12,441 million, 0.40% per year on all assets in such accounts explicitly sub-advised by Apollo in excess of $12,441 million up to $16,000 million, and 0.35% per year on all assets in such accounts explicitly sub-advised by Apollo in excess of $16,000 million, subject to certain exceptions (sub-advisory fees).

Investment management agreement (IMA) termination – Our bye-laws currently provide that we may not, and will cause our subsidiaries not to, terminate any IMA among us or any of our subsidiaries, on the one hand, and a member of the Apollo Group (as defined in our bye-laws), on the other hand, other than on June 4, 2023 or any two year anniversary of such date (each such date, an IMA Termination Election Date) and any termination on an IMA Termination Election Date requires (i) the approval of two-thirds of our Independent Directors (as defined in the bye-laws) and (ii) prior written notice to the applicable Apollo subsidiary of such termination at least 30 days, but not more than 90 days, prior to an IMA Termination Election Date. If our Independent Directors make such election to terminate and notice of such termination is delivered, the termination will be effective no earlier than the second anniversary of the applicable IMA Termination Election Date (IMA Termination Effective Date). Notwithstanding the foregoing, (A) except as set forth in clause (B) below, our board of directors may only elect to terminate an IMA on an IMA Termination Election Date if two-thirds of our Independent Directors determine, in their sole discretion and acting in good faith, that either (i) there has been unsatisfactory long-term performance materially detrimental to us by the applicable Apollo subsidiary or (ii) the fees being charged by the applicable Apollo subsidiary are unfair and excessive compared to a comparable asset manager (provided, that in either case such Independent Directors must deliver notice of any such determination to the applicable Apollo subsidiary and the applicable Apollo subsidiary will have until the applicable IMA Termination Effective Date to address such concerns, and provided, further, that in the case of such a determination that the fees being charged by the applicable Apollo subsidiary are unfair and excessive, the applicable Apollo subsidiary has the right to lower its fees to match the fees of such comparable asset manager) and (B) upon the determination by two-thirds of our Independent Directors, we or our subsidiaries may also terminate an IMA with the applicable Apollo subsidiary, on a date other than an IMA Termination Effective Date, as a result of either (i) a material violation of law relating to the applicable Apollo subsidiary's advisory business, or (ii) the applicable Apollo subsidiary's gross negligence, willful misconduct or reckless disregard of its obligations under the relevant agreement, in each case of this clause (B), that is materially detrimental to us, and in either case of this clause (B), subject to the delivery of written notice at least 30 days prior to such termination; provided, that in connection with an event described in clause (B)(i) or (B)(ii), the applicable Apollo subsidiary shall have the right to dispute such determination of the Independent Directors within 30 days after receiving notice from us of such determination, in which case the matter will be submitted to binding arbitration and such IMA shall continue to remain in effect during the period of the arbitration (the events described in the foregoing clauses (A) and (B) are referred to in more detail in our bye-laws as "AHL Cause").

Governance – We have a management investment committee, which includes members of our senior management and reports to the risk committee of our board of directors. The committee focuses on strategic decisions involving our investment portfolio, such as approving investment limits, new asset classes and our allocation strategy, reviewing large asset transactions, as well as monitoring our credit risk, and the management of our assets and liabilities.

A significant voting interest in the Company is held by shareholders who are members of the Apollo Group. Also, James Belardi, our Chief Executive Officer, is an employee of ISG and receives remuneration from acting as Chief Executive Officer of ISG. Mr. Belardi also owns a 5% profit interest in ISG (Interest). It is expected that the Interest will be revised such that Mr. Belardi will receive a lesser interest in the equity of ISG and also receive a specified percentage of other fee streams earned by Apollo, potentially comprised of or including the sub-allocation fees. Additionally, six of the sixteen members of our board of directors are employees of or consultants to Apollo (including Mr. Belardi). In order to protect against potential conflicts of interest resulting from transactions into which we have entered and will continue to enter into with the Apollo Group, our bye-laws require us to maintain a conflicts committee comprised solely of directors who are not officers or employees of any member of the Apollo Group. The conflicts committee reviews and approves material transactions between us and the Apollo Group, subject to certain exceptions.

Other related party transactions

A-A Mortgage – We have an equity method investment of $444 million and $487 million as of December 31, 2020 and 2019, respectively, in A-A Mortgage, which has an investment in AmeriHome. We have a loan purchase agreement with AmeriHome. The agreement allows us to purchase residential mortgage loans which AmeriHome has purchased from correspondent sellers and pooled for sale in the secondary market. AmeriHome retains the servicing rights to the sold loans. We purchased $169 million, $411 million and $722 million of residential mortgage loans under this agreement during the years ended December 31, 2020, 2019 and 2018, respectively. Additionally, we hold investments issued by AmeriHome or AmeriHome affiliates of $360 million and $170 million as of December 31, 2020 and 2019, respectively, which are included in related party AFS securities on the consolidated balances sheets. We also have commitments to make additional equity investments in A-A Mortgage of $381 million as of December 31, 2020. On February 16, 2021, Apollo, Athene and AmeriHome announced the sale of AmeriHome to a subsidiary of Western Alliance Bancorporation. We currently anticipate that this transaction will close during the second quarter of 2021, subject to customary closing conditions. We estimate approximately $175 million of revenue from the premium of the platform sale, net of carry and transaction expenses.

MidCap – During the third quarter of 2020, CoInvest VII was dissolved. CoInvest VII held a significant investment in MidCap. CoInvest VII was included in related party investment funds on the consolidated balance sheets and was reflected as a consolidated VIE prior to the first quarter of 2020. Subsequent to dissolution of CoInvest VII, we now hold MidCap directly as profit participating notes. We have also advanced amounts under a subordinated debt facility to Midcap. During the second quarter of 2020, we invested in MidCap redeemable preferred stock. The subordinated debt facility is included in related party other investments and the redeemable preferred stock and profit participating notes are included in related party trading securities on the consolidated balance sheets. The following summarizes these investments in MidCap:

	December 31,	
(In millions)	2020	2019
Profit participating notes	$ 534	$ —
Investment fund	—	547
Subordinated debt facility	328	339
Redeemable preferred stock	77	—
Total investment in MidCap	$ 939	$ 886

Additionally, we hold ABS and CLO securities issued by MidCap affiliates of $630 million and $624 million as of December 31, 2020 and 2019, respectively, which are included in related party AFS securities on the consolidated balance sheets.

Athora – We have a cooperation agreement with Athora, pursuant to which, among other things, (1) for a period of 30 days from the receipt of notice of a cession, we have the right of first refusal to reinsure (i) up to 50% of the liabilities ceded from Athora's reinsurance subsidiaries to Athora Life Re Ltd. and (ii) up to 20% of the liabilities ceded from a third party to any of Athora's insurance subsidiaries, subject to a limitation in the aggregate of 20% of Athora's liabilities, (2) Athora agreed to cause its insurance subsidiaries to consider the purchase of certain funding agreements and/or other spread instruments issued by our insurance subsidiaries, subject to a limitation that the fair market value of such funding agreements purchased by any of Athora's insurance subsidiaries may generally not exceed 3% of the fair market value of such subsidiary's total assets, (3) we provide Athora with a right of first refusal to pursue acquisition and reinsurance transactions in Europe (other than the UK) and (4) Athora provides us and our subsidiaries with a right of first refusal to pursue acquisition and reinsurance transactions in North America and the UK. Notwithstanding the foregoing, pursuant to the cooperation agreement, Athora is only required to use its reasonable best efforts to cause its subsidiaries to adhere to the provisions set forth in the cooperation agreement and therefore Athora's ability to cause its subsidiaries to act pursuant to the cooperation agreement may be limited by, among other things, legal prohibitions or the inability to obtain the approval of the board of directors or other applicable governing body of the applicable subsidiary, which approval is solely at the discretion of such governing body. As of December 31, 2020, we have not exercised our right of first refusal to reinsure liabilities ceded to Athora's insurance or reinsurance subsidiaries.

During the fourth quarter of 2018, we entered into a coinsurance agreement with ALV to reinsure endowment contracts and annuities, in which we assumed liabilities of $325 million. We then retroceded these endowment contracts and annuities through a modco agreement to ARE, in which we recorded a funds withheld liability of $337 million. ARE modco assets were recorded as reinsurance recoverable on the consolidated balance sheets. During the fourth quarter of 2019, we novated the reinsurance agreement for the ALV endowment contracts and annuities to ARE, which resulted in a decrease of $663 million of liabilities and related assets on the consolidated balance sheets.

Our investment in Athora, which is included in related party investment funds on the consolidated balance sheets, was $709 million and $132 million as of December 31, 2020 and 2019, respectively. During the second quarter of 2020, we contributed capital of $361 million to Athora. Additionally, as of December 31, 2020 and 2019, we had $122 million and $146 million, respectively, of funding agreements outstanding to Athora. We also have commitments to make additional equity investments in Athora of $305 million as of December 31, 2020.

Venerable – On June 1, 2018, we entered into coinsurance and modco agreements with Voya Insurance and Annuity Company (VIAC) to reinsure a block of fixed and fixed indexed annuities, in which we assumed liabilities of $18,578 million. VIAC is a related party due to our minority equity investment in its holding company's parent, VA Capital Company LLC (VA Capital), which was $123 million and $99 million as of December 31, 2020 and 2019, respectively. The minority equity investment in VA Capital is included in related party investment funds on the consolidated balance sheets and accounted for as an equity method investment. VA Capital is owned by a consortium of investors, led by affiliates of AGM, Crestview Partners and Reverence Capital Partners, and is the parent of Venerable, which is the parent of VIAC. Additionally, we have a 15-year term loan receivable from Venerable due in 2033, which is included in related party other investments on the consolidated balance sheets. The loan is held at the principal balance less allowances and was $145 million and $148 million as of December 31, 2020 and 2019, respectively. While management views the overall transactions with Venerable as favorable to us, the stated interest rate of 6.257% on the term loan to Venerable represents a below-market interest rate, and management considered such rate as part of its evaluation and pricing of the reinsurance transactions.

Strategic Partnership – On October 24, 2018, we entered into an agreement pursuant to which we may invest up to $2.5 billion over three years in funds managed by Apollo entities (Strategic Partnership). This arrangement is intended to permit us to invest across the Apollo alternatives platform into credit-oriented, strategic and other alternative investments in a manner and size that is consistent with our existing investment strategy. Fees for such investments payable by us to Apollo would be more favorable to us than market rates, and consistent with our existing alternative investments, investments made under the Strategic Partnership require approval of ISG and remain subject to our existing governance processes, including approval by our conflicts committee where applicable. As of December 31, 2020 and 2019, we had $214 million and $97 million, respectively, of investments under the Strategic Partnership and these investments are included in related party investment funds on the consolidated balance sheets and were reflected as consolidated VIEs in periods prior to March 31, 2020.

PK AirFinance – During the fourth quarter of 2019, we and Apollo purchased PK AirFinance (PK), an aviation lending business, including PK's in force loan portfolio (Aviation Loans), from the Aviation Services Unit of GE Capital (GE). The Aviation Loans are generally fully secured by aircraft leases and aircraft. In connection with such transaction, Apollo acquired the PK loan origination platform, including personnel and systems and, pursuant to certain agreements entered into between us, Apollo, and certain entities managed by Apollo (collectively, PK Transaction Agreements), the existing Aviation Loans were acquired and securitized by a newly formed SPV for which Apollo acts as ABS manager (ABS-SPV). The ABS-SPV issued tranches of senior notes and subordinated notes, which are secured by the Aviation Loans.

In connection with the acquisition of the existing Aviation Loans by the ABS-SPV (i) a tranche of senior notes was acquired by third-party investors and (ii) we purchased mezzanine tranches of the senior notes and the subordinated notes. As of December 31, 2020 and 2019, our investment in securitizations of loans originated by PK was $1,373 million and $1,282 million, respectively, and are included in related party AFS or trading securities on the consolidated balance sheets. We also have commitments to make additional investment in securitizations of loans originated by PK of $229 million as of December 31, 2020.

In addition to the investment in the senior notes and subordinated notes, we also have a right to acquire, whether directly, through the ABS-SPV or through a similar vehicle, all Aviation Loans originated by PK (Forward Flow Loans). All servicing and administrative costs and expenses of Apollo (determined at cost, without mark-up) that are incurred in connection with the sourcing, origination, servicing and maintaining the Forward Flow Loans, net of any service fees and servicing and administrative cost and expense reimbursement amounts received directly from the ABS-SPV or other entities investing in the Forward Flow Loans are allocated to, and reimbursed by the ABS-SPV or us, as applicable, subject to an agreed-upon annual cap.

In addition to the payment of the expenses described in the preceding paragraph and the base management fee paid to Apollo on all assets managed by Apollo, we have paid or expect to pay the following fees to Apollo or certain service providers that are affiliates of, or are companies managed by, Apollo in connection with the PK Transaction Agreements:

(A) To Apollo, sub-allocation fees on the senior notes based on the rates applicable to Yield assets and sub-allocation fees on the subordinated notes based on the rates applicable to High Alpha assets.
(B) To Redding Ridge Asset Management LLC, a company in which certain funds managed by Apollo have an interest, as consideration for assistance with the structuring, monitoring, support and maintenance of the securitization transactions, a one-time structuring fee, as well as ongoing support fees equal to 1.5 bps on the total capitalization amount and certain other fees, which may become due upon the occurrence of certain events; and
(C) To Merx Aviation Servicing Limited, a company externally managed by Apollo Investment Management, L.P., with respect to certain diligence, technical support and enforcement, remarketing and restructuring services with respect to the existing Aviation Loans and the Forward Flow Loans, a one-time servicing fee, as well as certain special situations fees, which may become due upon the occurrence of certain events.

Apollo/Athene Dedicated Investment Program (ADIP) – On October 1, 2019, we sold 67% of our equity interests in our subsidiary, ACRA, to ADIP, which is managed by AGM, for $575 million. As a result, we reduced APIC and AOCI by $145 million and $34 million, respectively, and recorded $754 million for the issuance of equity to noncontrolling interests. The shares held by ADIP are non-voting and our shares represent 100% of the voting power and, subsequent to the sale, we owned the remaining 33% of the equity interests in ACRA. On April 1, 2020, ALRe purchased 14,000 newly issued ACRA shares for $66 million, which resulted in ALRe holding 36.55% of the economic interests in ACRA. The remaining 63.45% of the economic interests in ACRA are held by ADIP. During the year ended December 31, 2020, we received capital contributions of $240 million from ADIP and paid a dividend of $46 million to ADIP.

Apollo Share Exchange and Related Transactions – On February 28, 2020, we closed a strategic transaction with AGM and certain affiliates of AGM which collectively comprise the Apollo Operating Group (AOG), pursuant to which we sold 27,959,184 newly issued Class A common shares to the AOG for an investment in Apollo of 29,154,519 newly issued AOG units valued at $1.1 billion and we sold 7,575,758 newly issued Class A common shares to the AOG for $350 million. Additionally, Apollo Management Holdings, L.P. (AMH) has the right to purchase up to that number of Class A common shares that would increase by 5 percentage points the percentage of the issued and outstanding Class A common shares beneficially owned by the AOG and certain affiliates, employees and consultants of AGM (inclusive of Class A common shares over which any such persons have a valid proxy), calculated on a fully diluted basis. In connection with the closing of the transaction, we made certain amendments to our bye-laws which, among other things, eliminated our multi-class common share structure.

Concurrent with our entry into the transaction agreements, AMH, James Belardi, our Chief Executive Officer, and William Wheeler, our President (each an "Other Shareholder"), entered into a voting agreement, pursuant to which each Other Shareholder irrevocably appointed AMH as its proxy and attorney-in-fact (Proxy) to vote all of such Other Shareholder's Class A common shares at any meeting of our shareholders occurring following the closing date and in connection with any written consent of our shareholders following the closing date. The Proxy will be of no force and effect if Apollo and certain affiliates thereof cease to hold some minimum level of ownership not to exceed 7.5% of our Class A common shares.

AA Infrastructure Fund 1 LLC (AA Infrastructure) – We have an investment in preferred shares of AA Infrastructure, which is a fund managed by ISG. As of December 31, 2020 and 2019, we held $72 million and $58 million, respectively, of preferred shares, which are included in related party equity securities on the consolidated balance sheets. In the fourth quarter of 2019, AA Infrastructure issued $267 million of ABS securities as a return of capital on the preferred shares. As of December 31, 2020 and 2019, we held AA Infrastructure ABS securities of $420 million and $267 million, respectively, which are included in related party trading securities on the consolidated balance sheets. We also have commitments to make additional investments in AA Infrastructure of $36 million as of December 31, 2020.

15. Commitments and Contingencies

Contingent Commitments—We had commitments to make investments, primarily capital contributions to investment funds, inclusive of related party commitments discussed previously, of $7,472 million and $4,793 million as of December 31, 2020 and 2019, respectively. We expect most of our current commitments will be invested over the next five years; however, these commitments could become due any time upon counterparty request.

Funding Agreements—We are a member of the FHLB and, through membership, we have issued funding agreements to the FHLB in exchange for cash advances. As of December 31, 2020 and 2019, we had $2,002 million and $1,226 million, respectively, of FHLB funding agreements outstanding. We are required to provide collateral in excess of the funding agreement amounts outstanding, considering any discounts to the securities posted and prepayment penalties.

We have a funding agreement backed notes (FABN) program, which allows Athene Global Funding, a special-purpose, unaffiliated statutory trust, to offer its senior secured medium-term notes. Athene Global Funding uses the net proceeds from each sale to purchase one or more funding agreements from us. As of December 31, 2020 and 2019, we had $8,822 million and $3,700 million, respectively, of FABN funding agreements outstanding. We had $6.3 billion of FABN capacity remaining as of December 31, 2020.

During the third quarter of 2020, we established a secured funding agreement backed repurchase agreement (FABR) program, in which a special-purpose, unaffiliated entity entered into repurchase agreements with a bank and the proceeds of the repurchase agreements were used by the special purpose entity to purchase funding agreements from us. As of December 31, 2020, we had $1,000 million of FABR funding agreements outstanding.

Pledged Assets and Funds in Trust (Restricted Assets)—The total restricted assets included on the consolidated balance sheets are as follows:

	December 31,	
(In millions)	2020	2019
AFS securities	$ 9,884	$ 9,369
Trading securities	60	45
Equity securities	26	22
Mortgage loans	5,028	2,535
Investment funds	68	84
Derivative assets	107	105
Short-term investments	52	92
Other investments	105	88
Restricted cash	738	402
Total restricted assets	$ 16,068	$ 12,742

The restricted assets are primarily related to reinsurance trusts established in accordance with coinsurance agreements and the FHLB and FABR funding agreements described above.

Letter of Credit—We have undrawn letters of credit totaling $1,408 million as of December 31, 2020. These letters of credit were issued for our reinsurance program and expire between December 10, 2021 and June 19, 2023.

Litigation, Claims and Assessments

Corporate-owned Life Insurance (COLI) Matter – In 2000 and 2001, two insurance companies which were subsequently merged into AAIA, purchased broad based variable COLI policies from American General Life Insurance Company (American General) that, as of December 31, 2020, had an asset value of $412 million, and is included in other assets on the consolidated balance sheets. In January 2012, the COLI policy administrator delivered to AAIA a supplement to the existing COLI policies and advised that American General and ZC Resource Investment Trust (ZC Trust) had unilaterally implemented changes set forth in the supplement that if effective, would: (1) potentially negatively impact the crediting rate for the policies and (2) change the exit and surrender protocols set forth in the policies. In March 2013, AAIA filed suit against American General, ZC Trust, and ZC Resource LLC in Chancery Court in Delaware, seeking, among other relief, a declaration that the changes set forth in the supplement were ineffectual and in breach of the parties' agreement. The parties filed cross motions for judgment as a matter of law, and the court granted defendants' motion and dismissed without prejudice on ripeness grounds. The issue that negatively impacts the crediting rate for one of the COLI policies has subsequently been triggered and on April 3, 2018, we filed suit against the same defendants in Chancery Court in Delaware seeking substantially similar relief. Defendants moved to dismiss and the court heard oral arguments on February 13, 2019. The court issued an opinion on July 31, 2019 that did not address the merits, but found that the Chancery Court did not have jurisdiction over our claims and directed us to either amend our complaint or transfer the matter to Delaware Superior Court. The matter has been transferred to the Delaware Superior Court. Defendants renewed their motion to dismiss and the Superior Court heard oral arguments on December 18, 2019. The Superior Court issued an opinion on May 18, 2020 in which it granted in part and denied in part defendants' motion. The Superior Court denied defendants' motion with respect to the issue that negatively impacts the crediting rate for one of the COLI policies, which issue will proceed to discovery. The Superior Court granted defendants' motion and dismissed without prejudice on ripeness grounds claims related to the exit and surrender protocols set forth in the policies, and dismissed defendant ZC Resource LLC. If the supplement is ultimately deemed to be effective, the purported changes to the policies could impair AAIA's ability to access the value of guarantees associated with the policies. The Superior Court issued a scheduling order providing for a July 2022 trial and the parties are currently engaged in discovery. The value of the guarantees included within the asset value reflected above is $194 million as of December 31, 2020.

Regulatory Matters – Beginning in 2015, our US insurance subsidiaries have experienced increased complaints related to the conversion and administration of the block of life insurance business acquired in connection with our acquisition of Aviva USA and reinsured to affiliates of Global Atlantic. The life insurance policies included in this block have been and are currently being administered by AllianceOne Inc. (AllianceOne), a subsidiary of DXC Technology Company, which was retained by such Global Atlantic affiliates to provide third party administration services on such policies. AllianceOne also administers a small block of annuity policies that were on Aviva USA's legacy policy administration systems that were also converted in connection with the acquisition of Aviva USA and have experienced some similar service and administration issues, but to a lesser degree.

As a result of the difficulties experienced with respect to the administration of such policies, we have received notifications from several state regulators, including but not limited to New York State Department of Financial Services (NYSDFS), the California Department of Insurance (CDI) and the Texas Department of Insurance (TDI), indicating, in each case, that the respective regulator planned to undertake a market conduct examination or enforcement proceeding of the applicable US insurance subsidiary relating to the treatment of policyholders subject to our reinsurance agreements with affiliates of Global Atlantic and the conversion of the life and annuity policies, including the administration of such blocks by AllianceOne. We entered into consent orders with several state regulators, including the NYSDFS, the CDI and the TDI, to resolve underlying matters in the respective states. All fines and costs, including those associated with remediation plans, paid in connection with the consent orders are subject to indemnification by Global Atlantic or affiliates of Global Atlantic.

In addition to the examinations and proceedings initiated to date, it is possible that other regulators may pursue similar formal examinations, inquiries or enforcement proceedings and that any examinations, inquiries and/or enforcement proceedings may result in fines, administrative penalties and payments to policyholders. While we do not expect the amount of any such fines, penalties or payments arising from these matters to be material to our financial condition, results of operations or cash flows, it is possible that such amounts could be material.

Pursuant to the terms of the reinsurance agreements between us and the relevant affiliates of Global Atlantic, the applicable affiliates of Global Atlantic have financial responsibility for the ceded life block and are subject to significant administrative service requirements, including compliance with applicable law. The agreements also provide for indemnification to us, including for administration issues.

On January 23, 2019, we received a letter from the NYSDFS, with respect to a PRT transaction, which expressed concerns with our interpretation and reliance upon certain exemptions from licensing in New York in connection with certain activities performed by employees in our PRT channel, including specific activities performed within New York. On April 13, 2020, we entered into a consent order with the NYSDFS to resolve this matter. Pursuant to the consent order, the NYSDFS imposed a fine of $45 million, which was accrued in other liabilities on the consolidated balance sheets as of December 31, 2019, and paid during the second quarter of 2020.

Caldera Matters – On May 3, 2018, AHL filed a writ commencing litigation in the Supreme Court of Bermuda against a former officer of AHL, a former director of AHL (who is also considered a former officer pursuant to Bermuda law), and Caldera Holdings, Ltd. (Caldera). AHL alleges in the writ, among other things, that the defendants breached various duties owed to AHL under Bermuda law by using AHL's confidential information in their attempted acquisition of a company referred to in the litigation as Company A. AHL is seeking injunctive relief and damages. Athene amended its writ on October 16, 2018. The trial court denied two separate motions to dismiss made by defendant Caldera on June 28, 2018 and by the former officer and former director defendants on January 14, 2019. On September 20, 2019, the Bermuda Court of Appeal affirmed both trial court rulings and dismissed the defendants' appeal. Defendants have not further pursued an appeal of this decision to the Judicial Committee of the Privy Council, the court of final appeal for matters litigated in Bermuda. On March 17, 2020, we filed an application for leave to amend the complaint to more broadly assert defendants' breaches of duties and that motion was approved by Order dated September 20, 2020.

On May 3, 2018, following AHL's filing of the writ in Bermuda described above, Caldera, Caldera Life Reinsurance Company, and Caldera Shareholder, L.P., commenced an action in the Supreme Court of the State of New York, County of New York, by filing a Summons with Notice against AHL, Apollo, certain affiliates of Apollo and Leon Black, a founder of Apollo. On July 12, 2018, plaintiffs filed a complaint alleging claims for tortious interference with prospective business relations, defamation, and unfair competition related to plaintiffs' attempt to purchase Company A and seeking alleged damages of "no less than $1.5 billion." AHL has moved to dismiss the complaint. On January 21, 2019, plaintiffs filed an amended complaint, which revised certain allegations about jurisdiction, venue and the merits of the plaintiffs' claims. We have renewed our motion to dismiss and, on December 20, 2019, the court granted our motion to dismiss. Plaintiffs have filed an appeal, but failed to timely effectuate the appeal. Thus, we believe that this litigation is concluded.

Central Laborers' Pension Fund (CLPF) and Cambria County Employees' Retirement System (Cambria) – On June 18, 2019 and July 25, 2019, CLPF and Cambria, respectively, filed derivative actions against AAM and AGM, as defendants, and us, as a nominal defendant, in New York State Court (the New York Actions). CLPF and Cambria, both purporting to be our shareholders, each allege that AAM and AGM injured us by causing us to pay excessive management fees to AAM and AGM. The complaints do not name any of our directors as defendants, but allege certain breaches of fiduciary duty. Both complaints seek forms of injunctive relief and disgorgement, but neither complaint seeks monetary relief from us.

On July 5, 2019 and July 29, 2019, the Supreme Court of Bermuda enjoined CLPF and Cambria, respectively, from taking any further steps to advance or otherwise positively participate in its respective New York Action in light of the exclusive jurisdiction provision in our bye-laws. On July 31, 2019, CLPF and Cambria each filed a notice that it was dismissing its claims in its respective New York Action. We moved for default judgments in the Supreme Court of Bermuda and, on October 15, 2019, the Court granted our applications and permanently enjoined CLPF and Cambria from taking any further steps in the New York Actions. The Supreme Court of Bermuda has awarded costs in our favor against CLPF and Cambria, which have been paid and we believe this litigation is concluded.

16. Segment Information

We operate our core business strategies out of one reportable segment, Retirement Services. In addition to Retirement Services, we report certain other operations in Corporate and Other.

Retirement Services—Retirement Services is comprised of our US and Bermuda operations, which issue and reinsure retirement savings products and institutional products. Retirement Services has retail operations, which provide annuity retirement solutions to our policyholders. Retirement Services also has reinsurance operations, which reinsure multi-year guaranteed annuities, fixed indexed annuities, traditional one-year guarantee fixed deferred annuities, immediate annuities and institutional products from our reinsurance partners. In addition, our institutional operations, including funding agreements and group annuities, are included in our Retirement Services segment.

Corporate and Other—Corporate and Other includes certain other operations related to our corporate activities such as corporate allocated expenses, merger and acquisition costs, debt costs, preferred stock dividends, certain integration and restructuring costs, certain stock-based compensation and intersegment eliminations. In addition, we also hold capital in excess of the level of capital we hold in Retirement Services to support our operating strategy.

Financial Measures—Segment adjusted operating income available to common shareholders and net investment earnings are internal measures used by the chief operating decision maker to evaluate and assess the results of our segments.

Adjusted operating revenue is a component of adjusted operating income available to common shareholders and excludes market volatility and adjustments for other non-operating activity. Our adjusted operating revenue equals our total revenue, adjusted to eliminate the impact of the following non-operating adjustments:

- Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets;
- Investment gains (losses), net of offsets; and
- VIE expenses, noncontrolling interests and other adjustments to revenues.

The table below reconciles segment adjusted operating revenues to total revenues presented on the consolidated statements of income:

	Years ended December 31,		
(In millions)	2020	2019	2018
Retirement Services	$ 10,681	$ 11,460	$ 8,118
Corporate and Other	266	117	44
Non-operating adjustments			
Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets	868	2,346	(1,020)
Investment gains (losses), net of offsets	720	1,685	(515)
Noncontrolling interests, VIE expenses and other adjustments to revenues	2,229	650	10
Total revenues	$ 14,764	$ 16,258	$ 6,637

Adjusted operating income available to common shareholders is an internal measure used to evaluate our financial performance excluding market volatility and expenses related to integration, restructuring, stock compensation and certain other expenses. Our adjusted operating income available to common shareholders equals net income available to Athene Holding Ltd. common shareholders adjusted to eliminate the impact of the following non-operating adjustments:

- Investment gains (losses), net of offsets;
- Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets;
- Integration, restructuring and other non-operating expenses;
- Stock-based compensation, excluding the long-term incentive plan (LTIP); and
- Income tax (expense) benefit – non-operating.

The table below reconciles segment adjusted operating income available to common shareholders to net income available to Athene Holding Ltd. common shareholders presented on the consolidated statements of income:

	Years ended December 31,		
(In millions)	2020	2019	2018
Retirement Services	$ 1,266	$ 1,322	$ 1,201
Corporate and Other	(24)	(33)	(61)
Non-operating adjustments			
Investment gains (losses), net of offsets	508	994	(274)
Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets	(235)	(65)	242
Integration, restructuring and other non-operating expenses	(10)	(70)	(22)
Stock-based compensation, excluding LTIP	(11)	(12)	(11)
Income tax expense – non-operating	(48)	—	(22)
Net income available to Athene Holding Ltd. common shareholders	$ 1,446	$ 2,136	$ 1,053

Net investment earnings used to evaluate the performance of our segments is an internal measure that does not correspond to GAAP net investment income. Adjustments are made to GAAP net investment income to arrive at a net investment earnings measure that reflects the profitability of our core business. Accordingly, we adjust net investment income to include earnings from our consolidated VIEs and earnings on certain alternative investments (primarily CLOs) classified in investment related gains (losses) on the consolidated statements of income. Additionally, we adjust for impacts of reinsurance embedded derivatives and noncontrolling interests on net investment income. The table below reconciles segment net investment earnings to net investment income presented on the consolidated statements of income:

	Years ended December 31,		
(In millions)	2020	2019	2018
Retirement Services	$ 5,287	$ 5,062	$ 4,188
Corporate and Other	41	117	44
Adjustments to net investment income			
Change in fair value of reinsurance assets	(1,408)	(680)	(301)
Alternative (gains) losses	102	(1)	34
Noncontrolling interests	559	61	—
Apollo investment gain	225	—	—
Held for trading amortization and other	79	37	95
Net investment income	$ 4,885	$ 4,596	$ 4,060

ATHENE HOLDING LTD.
Notes to Consolidated Financial Statements

Adjusted operating income available to common shareholders excludes the income tax impact of the taxable non-operating adjustments presented above. The income tax expense of non-operating income adjustments is comprised of the appropriate jurisdiction's tax rate applied to the non-operating adjustments subject to income tax. The table below reconciles segment income taxes included in adjusted operating income to income tax expense presented on the consolidated statements of income:

	Years ended December 31,		
(In millions)	2020	2019	2018
Retirement Services	$ 164	$ 117	$ 100
Corporate and Other	60	—	—
Adjustments to income tax expense			
Noncontrolling interest tax expense	13	—	—
Income tax expense – non-operating	48	—	22
Income tax expense	$ 285	$ 117	$ 122

The following represents total assets by segment:

	December 31,	
(In millions)	2020	2019
Retirement Services	$ 197,295	$ 143,881
Corporate and Other	5,476	2,994
Total assets	$ 202,771	$ 146,875

We market annuity products, primarily fixed rate and fixed indexed annuities. Deposits, which are generally not included in revenues on the consolidated statements of income, and premiums collected are as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
Fixed indexed annuities	$ 20,257	$ 7,304	$ 29,973
Fixed rate annuities	20,433	3,192	5,501
Payouts without life contingencies	545	341	535
Funding agreements	7,679	1,301	650
Life and other deposits	2	(13)	4
Total deposits	48,916	12,125	36,663
Payouts with life contingencies	5,911	6,332	3,408
Life and other premiums	52	50	54
Total premiums	5,963	6,382	3,462
Total premiums and deposits, net of ceded	$ 54,879	$ 18,507	$ 40,125

Deposits and premiums collected by the geographical location are as follows:

	Years ended December 31,		
(In millions)	2020	2019	2018
United States	$ 37,879	$ 17,159	$ 16,421
Bermuda	17,000	1,348	23,704
Total premiums and deposits, net of ceded	$ 54,879	$ 18,507	$ 40,125

17. Quarterly Results of Operations (Unaudited)

The unaudited quarterly results of operations for the years ended December 31, 2020 and 2019 are summarized in the table below:

	Three months ended			
(In millions, except per share data)	March 31	June 30	September 30	December 31
2020				
Total revenues	$ (1,549)	$ 4,398	$ 3,275	$ 8,640
Total benefits and expenses	(167)	3,317	2,251	7,157
Net income (loss)	(1,216)	931	884	1,322
Less: Net income (loss) attributable to noncontrolling interests	(169)	88	232	229
Net income (loss) attributable to Athene Holding Ltd. shareholders	(1,047)	843	652	1,093
Less: Preferred stock dividends	18	19	30	28
Net income (loss) available to Athene Holding Ltd. common shareholders	(1,065)	824	622	1,065
Earnings (loss) per share				
Basic – Class A	$ (5.81)	$ 4.25	$ 3.22	$ 5.57
Basic – Classes B, M-1, M-2, M-3 and M-4	(3.87)	*N/A*	*N/A*	*N/A*
Diluted – Class A	(5.81)	4.19	3.16	5.44
Diluted – Class B	(3.87)	*N/A*	*N/A*	*N/A*
Diluted – Class M-1	(3.87)	*N/A*	*N/A*	*N/A*
Diluted – Class M-2	(3.87)	*N/A*	*N/A*	*N/A*
Diluted – Class M-3	(3.87)	*N/A*	*N/A*	*N/A*
Diluted – Class M-4	(3.87)	*N/A*	*N/A*	*N/A*
2019				
Total revenues	$ 4,995	$ 3,423	$ 4,584	$ 3,256
Total benefits and expenses	4,255	2,673	4,305	2,723
Net income	708	720	293	464
Less: Net income attributable to noncontrolling interests	—	—	—	13
Net income attributable to Athene Holding Ltd. shareholders	708	720	293	451
Less: Preferred stock dividends	—	—	17	19
Net income available to Athene Holding Ltd. common shareholders	708	720	276	432
Earnings per share				
Basic – All classes	$ 3.65	$ 3.76	$ 1.50	$ 2.43
Diluted – Class A	3.64	3.75	1.50	2.42
Diluted – Class B	3.65	3.76	1.50	2.43
Diluted – Class M-1	3.65	3.76	1.50	2.43
Diluted – Class M-2	3.65	3.76	1.50	2.43
Diluted – Class M-3	3.65	3.76	1.50	2.43
Diluted – Class M-4	3.15	3.28	1.29	2.13

N/A – Not applicable. See Note 10 – Equity and Note 11 – Earnings Per Share for further information.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures as such term is defined under Exchange Act Rule 13a-15(e), that are designed to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives and our management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. We have carried out an evaluation, as of the end of the period covered by this report, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective at attaining the level of reasonable assurance noted above as of December 31, 2020.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). 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 GAAP. 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 GAAP, 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.

Under the supervision and with the participation of management, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on criteria established in the *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on our evaluation, management has concluded that our internal control over financial reporting was effective as of December 31, 2020.

Our independent registered public accounting firm, PricewaterhouseCoopers LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2020. Their report is included in *Item 8. Financial Statements and Supplementary Data*.

Changes in Internal Control Over Financial Reporting

There were no changes to our internal control over financial reporting during the three months ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information called for by this Item is incorporated herein by reference to the sections entitled “Management,” “Proposal 1: Election of Directors of the Company,” “Corporate Governance–Classified Board of Directors” and “Corporate Governance–Committees of the Board of Directors” in our definitive proxy statement for our 2021 Annual General Meeting of Shareholders to be filed by us with the SEC pursuant to Regulation 14A within 120 days after the year ended December 31, 2020 (2021 Proxy Statement).

Corporate Governance Guidelines and Code of Business Conduct and Ethics

We have adopted corporate governance guidelines and a code of business conduct and ethics that applies to all of our directors, officers and employees. These documents are available at www.athene.com. Information contained on our website or connected thereto does not constitute a part of, and is not incorporated by reference into, this report. We intend to satisfy our disclosure obligations under Item 5.05 of Form 8-K by posting information about amendments to, or waivers from a provision of, our code of business conduct and ethics that apply to our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer on our website at the address given above.

Item 11. Executive Compensation

The information called for by this Item is incorporated herein by reference to the sections entitled “Compensation of Executive Officers and Directors,” “Corporate Governance–Compensation Committee Interlocks and Insider Participation,” and “Corporate Governance–Committees of the Board of Directors–Compensation Committee” in our 2021 Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information called for by this Item is incorporated herein by reference to the sections entitled “Security Ownership of Certain Beneficial Owners,” “Proposal 5: Approval of an Amendment to the Athene Holding Ltd. 2019 Share Incentive Plan to Increase the Number of Shares Available for Issuance” and “Compensation of Executive Officers and Directors–Share Incentive Plan Information” in our 2021 Proxy Statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information called for by this Item is incorporated herein by reference to the sections entitled “Certain Relationships and Related Transactions” and “Corporate Governance–Director Independence” in our 2021 Proxy Statement.

Item 14. Principal Accountant Fees and Services

The information called for by this Item is incorporated herein by reference to the sections entitled “Additional Information and Matters–Principal Accountant Fees and Services” and “Corporate Governance–Committees of the Board of Directors–Audit Committee–Pre-Approval Policies and Procedures of the Audit Committee” in our 2021 Proxy Statement.

PART IV

Item 15. Exhibits, Financial Statement Schedules

The following documents are filed as part of this report:

ATHENE HOLDING LTD.
Schedule I — Summary of Investments — Other Than Investments in Related Parties

	December 31, 2020		
(In millions)	Cost or Amortized Cost	Fair Value	Amount Shown on Consolidated Balance Sheet
AFS securities			
US government and agencies	$ 349	$ 351	$ 351
US state, municipal and political subdivisions	864	1,033	1,033
Foreign governments	330	368	368
Public utilities	5,884	6,665	6,665
Redeemable preferred stock	130	141	141
Other corporate	45,920	51,374	51,374
CLO	9,631	9,569	9,569
ABS	4,259	4,270	4,270
CMBS	2,165	2,169	2,169
RMBS	6,568	6,913	6,913
Trading securities	1,770	2,093	2,093
Total fixed maturity securities	77,870	84,946	84,946
Equity securities			
Banks, trust and insurance companies common stock	433		202
Industrial, miscellaneous and all other common stock	76	68	68
Nonredeemable preferred stocks	250	262	262
Total equity securities	759	330	532
Mortgage loans, net of allowances	15,262		15,264
Investment funds	803		803
Policy loans	369		369
Funds withheld at interest	48,612		48,612
Derivative assets	3,523		3,523
Short-term investments	222		222
Other investments	572		572
Total investments	$ 147,992		$ 154,843

ATHENE HOLDING LTD.
Schedule II — Condensed Financial Information of Registrant (Parent Company Only) — Balance Sheets

	December 31,	
(In millions, except per share data)	2020	2019
Assets		
Investments		
Available-for-sale securities, at fair value (amortized cost: 2020 – $43 and 2019 – $56)	$ 52	$ 61
Cash and cash equivalents	342	171
Investments in related parties		
Available-for-sale securities, at fair value (amortized cost: 2020 – $0 and 2019 – $2)	—	2
Investment funds	709	132
Other assets	43	6
Notes receivable from subsidiaries	1,393	—
Intercompany receivable	21	13
Investments in subsidiaries	18,133	14,085
Total assets	$ 20,693	$ 14,470
Liabilities and Equity		
Liabilities		
Long-term debt	$ 1,976	$ 992
Note payable to subsidiary	—	38
Other liabilities	57	40
Intercompany payable	3	9
Total liabilities	2,036	1,079
Equity		
Preferred stock		
Series A – par value $1 per share; $863 aggregate liquidation preference; authorized, issued and outstanding: 2020 and 2019 – 0.0 shares	—	—
Series B – par value $1 per share; $345 aggregate liquidation preference; authorized, issued and outstanding: 2020 and 2019 – 0.0 shares	—	—
Series C – par value $1 per share; $600 aggregate liquidation preference; authorized, issued and outstanding: 2020 – 0.0 shares	—	—
Series D – par value $1 per share; $575 aggregate liquidation preference; authorized, issued and outstanding: 2020 – 0.0 shares	—	—
Common stock		
Class A – par value $0.001 per share; authorized: 2020 and 2019 – 425.0 shares; issued and outstanding: 2020 – 191.5 and 2019 – 143.2 shares	—	—
Class B – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 325.0 shares; issued and outstanding: 2020 – 0.0 and 2019 – 25.4 shares	—	—
Class M-1 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 7.1 shares; issued and outstanding: 2020 – 0.0 and 2019 – 3.3 shares	—	—
Class M-2 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 5.0 shares; issued and outstanding: 2020 – 0.0 and 2019 – 0.8 shares	—	—
Class M-3 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 7.5 shares; issued and outstanding: 2020 – 0.0 and 2019 – 1.0 shares	—	—
Class M-4 – par value $0.001 per share; convertible to Class A; authorized: 2020 – 0.0 and 2019 – 7.5 shares; issued and outstanding: 2020 – 0.0 and 2019 – 4.0 shares	—	—
Additional paid-in capital	6,613	4,171
Retained earnings	8,073	6,939
Accumulated other comprehensive income	3,971	2,281
Total Athene Holding Ltd. shareholders' equity	18,657	13,391
Total liabilities and equity	$ 20,693	$ 14,470

See accompanying notes to condensed financial information of registrant (parent company only)

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ATHENE HOLDING LTD.
Schedule II — Condensed Financial Information of Registrant (Parent Company Only)
Statements of Income and Comprehensive Income (Loss)

	Years ended December 31,		
(In millions)	2020	2019	2018
Revenue			
Net investment income (related party: 2020 – $146, 2019 – $8 and 2018 – $(3))	$ 147	$ 15	$ 17
Investment related gains (losses) (related party: 2020 – $0, 2019 – $1 and 2018 – $24)	(50)	6	14
Other revenues	—	—	20
Total revenues	97	21	51
Benefits and Expenses			
Operating expenses (related party: 2020 – $13, 2019 – $11 and 2018 – $7)	151	142	124
Total benefits and expenses	151	142	124
Loss before income taxes and equity earnings in subsidiaries	(54)	(121)	(73)
Income tax benefit	(2)	—	—
Equity earnings in subsidiaries	1,593	2,293	1,126
Net income available to Athene Holding Ltd. shareholders	1,541	2,172	1,053
Less: Preferred stock dividends	95	36	—
Net income available to Athene Holding Ltd. common shareholders	$ 1,446	$ 2,136	$ 1,053
Net income available to Athene Holding Ltd. shareholders	$ 1,541	$ 2,172	$ 1,053
Other comprehensive income (loss) attributable to Athene Holding Ltd. shareholders	1,696	2,787	(1,879)
Comprehensive income (loss) attributable to Athene Holding Ltd. shareholders	$ 3,237	$ 4,959	$ (826)

See accompanying notes to condensed financial information of registrant (parent company only)

ATHENE HOLDING LTD.
Schedule II — Condensed Financial Information of Registrant (Parent Company Only) — Statements of Cash Flows

	Years ended December 31,		
(In millions)	2020	2019	2018
Net cash used in operating activities	$ (145)	$ (106)	$ (66)
Cash flows from investing activities			
Capital contributions to subsidiary	(920)	(70)	(95)
Receipts on loans to subsidiaries	50	—	64
Issuances of loans to subsidiaries	(237)	—	(20)
Sales, maturities and repayments of:			
Available-for-sale securities (related party: 2020 – $2, 2019 – $0, and 2018 – $0)	17	4	178
Investment funds – related party	—	1	—
Short-term investments	—	—	64
Purchases of:			
Available-for-sale securities (related party: 2020 – $0, 2019 – $(2), and 2018 – $0)	(3)	(16)	(994)
Investment funds – related party	(455)	(20)	—
Short-term investments	—	—	(64)
Other investing activities, net	(51)	27	(90)
Net cash used in investing activities	(1,599)	(74)	(957)
Cash flows from financing activities			
Issuance of common stock	351	—	—
Proceeds from long-term debt	992	—	998
Proceeds from note payable with subsidiary	740	108	105
Repayment of note payable with subsidiary	(778)	(174)	—
Issuance of preferred stock, net of expenses	1,140	1,172	—
Preferred stock dividends	(95)	(36)	—
Repurchase of common stock	(428)	(832)	(105)
Other financing activities, net	(7)	1	(5)
Net cash provided by financing activities	1,915	239	993
Net increase (decrease) in cash and cash equivalents	171	59	(30)
Cash and cash equivalents at beginning of year	171	112	142
Cash and cash equivalents at end of year	$ 342	$ 171	$ 112
Supplementary information			
Cash paid for interest	$ 61	$ 46	$ 23
Non-cash transactions			
Non-cash capital contributions to subsidiaries	—	—	803
Investment in Athora Holding Ltd. received upon deconsolidation	—	—	108
Issuance of loan to subsidiary in exchange for Class A common shares and capital distribution	1,206	—	—

See accompanying notes to condensed financial information of registrant (parent company only)

ATHENE HOLDING LTD.
Schedule II — Condensed Financial Information of Registrant (Parent Company Only)
Notes to Condensed Financial Information of Registrant

1. Basis of Presentation

The accompanying condensed financial statements of Athene Holding Ltd. (AHL) should be read in conjunction with the consolidated financial statements and notes of AHL and its subsidiaries (consolidated financial statements).

For purposes of these condensed financial statements, AHL's wholly owned and majority owned subsidiaries are presented under the equity method of accounting. Under this method, the assets and liabilities of subsidiaries are not consolidated. The investments in subsidiaries are recorded on the condensed balance sheets. The income from subsidiaries is reported on a net basis as equity earnings of subsidiaries on the condensed statements of income.

2. Intercompany Transactions

Unsecured Revolving Notes Receivable—AHL has unsecured revolving notes receivable and an unsecured note receivable from subsidiaries Athene USA Corporation (AUSA), Athene Life Re Ltd. (ALRe) and Athene Life Re International Ltd. (ALReI).

The unsecured revolving note receivable from AUSA has a borrowing capacity of $250 million and had an outstanding balance of $187 million and $0 million as of December 31, 2020 and 2019, respectively. Interest accrues at a fixed rate of 2.61% per year, and the balance is due on September 30, 2025, or earlier at AHL's request.

The unsecured revolving note receivable from ALRe has a borrowing capacity of $1,000 million and had no outstanding balance as of December 31, 2020 and 2019. Interest accrues at a fixed rate of 1.25% and has a maturity date of March 31, 2024, or earlier at AHL's request. Additionally, AHL has an unsecured note receivable from ALRe with an outstanding balance of $1,206 million and $0 million as of December 31, 2020 and 2019, respectively. Interest accrues at a fixed rate of 2.34% per year until February 28, 2023, and at the three-month London Interbank Offer Rate rate plus a 0.98% margin thereafter. The balance is due on February 28, 2026, or earlier at AHL's request.

The unsecured revolving note receivable from ALReI has a borrowing capacity of $100 million and had no outstanding balance as of December 31, 2020 and 2019. Interest accrues at the US mid-term applicable federal rate per year and has a maturity date of December 5, 2024, or earlier at AHL's request.

Unsecured Revolving Note Payable—In addition to the unsecured revolving notes receivable described above, AHL has an unsecured revolving note payable with ALRe, which permits AHL to borrow up to $1,000 million with a fixed interest rate of 1.25% and a maturity date of March 31, 2024. As of December 31, 2020 and 2019, the revolving note payable had an outstanding balance of $0 million and $38 million, respectively.

Funds in Trust (Restricted Assets)—AHL had agreed to maintain the authorized control level risk-based capital (RBC) of its subsidiary, Athene Life Insurance Company of New York (ALICNY), at an amount not less than 450%. As a result, AHL had established a separate backstop trust account. If ALICNY's authorized control level RBC fell below 450%, the funds in the backstop trust account would be used to replenish ALICNY's authorized control level RBC to at least 450%. In 2020, this backstop trust agreement expired and the trust was closed. As of December 31, 2019, the backstop trust account had a fair value of $44 million, consisting of available-for-sale investments and cash.

3. Debt and Guarantees

AHL has guaranteed certain of the obligations of AUSA, ALRe, and Athene Annuity Re Ltd. in connection with its revolving credit facility. Additionally, AHL has issued senior notes. See *Note 9 – Debt* to the consolidated financial statements for further discussion on the credit facility and senior notes. AHL has entered into capital maintenance agreements with each of its material US insurance subsidiaries, pursuant to which AHL agrees to provide capital to the subsidiary to the extent that the capital of the subsidiary falls below a specified threshold as set with the applicable subsidiary's domestic regulator. In addition, on December 17, 2018, AHL entered into a capital maintenance agreement with its indirect subsidiary Athene London Assignment Corporation (Athene London) pursuant to which AHL agreed to contribute cash, cash equivalents, marketable securities, or other liquid assets so as to maintain capital in Athene London to ensure that it has the necessary funds to timely satisfy any obligations it has under any assumed settlement agreement. AHL does not anticipate making any capital infusions in Athene London pursuant to the capital maintenance agreement.

4. Dividends, Return of Capital and Capital Contributions

During the years ended December 31, 2020, 2019 and 2018, AHL received $0 million, $3 million and $50 million, respectively, of dividends from subsidiaries. During the years ended December 31, 2020, 2019 and 2018, AHL contributed $920 million, $70 million and $898 million, respectively, to subsidiaries. See *Note 13 – Statutory Requirements* to the consolidated financial statements for additional information on subsidiary dividend restrictions.

5. Income Taxes

AHL is a tax resident of the United Kingdom (UK). See *Note 12 – Income Taxes* to the consolidated financial statements for additional information on UK income taxes.

ATHENE HOLDING LTD.
Schedule III — Supplementary Insurance Information

(In millions)	DAC, DSI and VOBA	Future policy benefits, losses, claims and loss expenses[1]	Other policy claims and benefits	Premiums	Net investment income	Benefits, claims, losses and settlement expenses[2]	Amortization of DAC and VOBA	Policy and other operating expenses
2020								
Retirement Services	$ 4,906	$ 173,824	$ 130	$ 5,963	$ 4,619	$ 11,182	$ 521	$ 705
Corporate and other	—	—	—	—	266	—	—	150
Total	$ 4,906	$ 173,824	$ 130	$ 5,963	$ 4,885	$ 11,182	$ 521	$ 855
2019								
Retirement Services	$ 5,008	$ 126,075	$ 138	$ 6,382	$ 4,479	$ 12,254	$ 958	$ 599
Corporate and other	—	—	—	—	117	—	—	145
Total	$ 5,008	$ 126,075	$ 138	$ 6,382	$ 4,596	$ 12,254	$ 958	$ 744
2018								
Retirement Services	$ 5,907	$ 113,314	$ 142	$ 3,462	$ 4,016	$ 4,662	$ 174	$ 496
Corporate and other	—	—	—	—	44	—	—	130
Total	$ 5,907	$ 113,314	$ 142	$ 3,462	$ 4,060	$ 4,662	$ 174	$ 626

[1] *Represents interest sensitive contract liabilities and future policy benefits on the consolidated balance sheets.*

[2] *Represents interest sensitive contract benefits, amortization of deferred sales inducements, future policy and other policy benefits, and dividends to policyholders on the consolidated statements of income.*

ATHENE HOLDING LTD.
Schedule IV — Reinsurance

(In millions, except for percentages)	Gross amount	Ceded to other companies	Assumed from other companies	Net amount	Percentage of amount assumed to net
Year ended December 31, 2020					
Life insurance in force at end of year	$ 29,527	$ 35,088	$ 6,863	$ 1,302	527.1 %
Premiums	5,691	141	413	5,963	6.9 %
Year ended December 31, 2019					
Life insurance in force at end of year	33,221	39,145	7,317	1,393	525.3 %
Premiums	5,449	159	1,092	6,382	17.1 %
Year ended December 31, 2018					
Life insurance in force at end of year	39,941	45,957	7,857	1,841	426.8 %
Premiums	2,813	417	1,066	3,462	30.8 %

ATHENE HOLDING LTD.
Schedule V — Valuation and Qualifying Accounts

(In millions)		Additions			
Description	**Balance at beginning of year**	**Charged to costs and expenses**	**Assumed through acquisitions**	**Deductions**	**Balance at end of year**
Reserves deducted from assets to which they apply					
Year ended December 31, 2020					
Valuation allowance on deferred tax assets	$ 63	$ 11	$ —	$ —	$ 74
Year ended December 31, 2019					
Valuation allowance on deferred tax assets	52	31	—	(20)	63
Year ended December 31, 2018					
Valuation allowance on deferred tax assets	96	9	—	(53)	52

EXHIBIT INDEX

Exhibit No.	Description
3.1	Certificate of Incorporation of Athene Holding Ltd. (incorporated by reference to Exhibit 3.1 to the Form S-1 filed on May 9, 2016).
3.2.1	Memorandum of Association of Athene Holding Ltd. (incorporated by reference to Exhibit 3.2 to the Form S-1 filed on May 9, 2016).
3.2.2	Form of Certificate of Deposit of Memorandum of Increase of Share Capital (incorporated by reference to Exhibit 3.2.1 to the Form S-1 filed on November 10, 2016).
3.3	Thirteenth Amended and Restated Bye-laws of Athene Holding Ltd., effective February 28, 2020 (incorporated by reference to Exhibit 3.1 to the Form 8-K filed on March 2, 2020).
4.1	Form of Athene Holding Ltd. Class A common share certificate (incorporated by reference to Exhibit 4.1 to the Form S-1 filed on November 10, 2016).
4.2.1	Third Amended and Restated Registration Rights Agreement, dated as of April 4, 2014, among Athene Holding Ltd. and the shareholders party thereto (incorporated by reference to Exhibit 4.2 to the Form S-1 filed on October 25, 2016).
4.2.2	First Amendment to Third Amended and Restated Registration Rights Agreement, dated as of October 6, 2015, among Athene Holding Ltd. and the shareholders party thereto (incorporated by reference to Exhibit 4.3 to the Form S-1 filed on October 25, 2016).
4.2.3	Second Amendment to Third Amended and Restated Registration Rights Agreement, dated as of November 22, 2016, among Athene Holding Ltd. and the shareholders party thereto (incorporated by reference to Exhibit 4.4 to the Form 10-K filed on March 16, 2017).
4.3	Registration Rights Agreement, dated as of February 28, 2020, between Athene Holding Ltd. and Apollo Global Management, Inc. (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed on May 8 2020).
4.4.1	Indenture for Debt Securities, dated as of January 12, 2018, by and between Athene Holding Ltd. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Form 8-K filed on January 12, 2018).
4.4.2	First Supplemental Indenture, dated January 12, 2018, by and between Athene Holding Ltd. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Form 8-K filed on January 12, 2018).
4.4.3	Second Supplemental Indenture, dated April 3, 2020, between Athene Holding Ltd. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 to the Form 8-K filed on April 6, 2020).
4.4.4	Third Supplemental Indenture, dated October 8, 2020, by and between Athene Holding Ltd. and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.2 of the Form 8-K filed on October 8, 2020).
4.5.1	Certificate of Designations of 6.35% Fixed-to-Floating Rate Perpetual Non-Cumulative Preference Shares, Series A (incorporated by reference to Exhibit 4.1 to the Form 8-K filed on June 10, 2019 dated June 5, 2019).
4.5.2	Form of Share Certificate evidencing 6.35% Fixed-to-Floating Rate Perpetual Non-Cumulative Preference Shares, Series A (incorporated by reference to Exhibit 4.2 to the Form 8-K filed on June 10, 2019 dated June 5, 2019).
4.5.3	Deposit Agreement, dated June 10, 2019, between Athene Holding Ltd. and Computershare Inc. and Computershare Trust Company, N.A., collectively, and the holders from time to time of the Depositary Receipts (incorporated by reference to Exhibit 4.3 to the Form 8-K filed on June 10, 2019 dated June 5, 2019).
4.5.4	Form of Depositary Receipt (included in Exhibit 4.5.3).
4.6.1	Certificate of Designations of 5.625% Fixed Rate Perpetual Non-Cumulative Preference Shares, Series B (incorporated by reference to Exhibit 4.1 to the Form 8-K filed on September 19, 2019).
4.6.2	Form of Share Certificate evidencing 5.625% Fixed Rate Perpetual Non-Cumulative Preference Shares, Series B (incorporated by reference to Exhibit 4.2 to the Form 8-K filed on September 19, 2019).
4.6.3	Deposit Agreement, dated September 19, 2019, between Athene Holding Ltd. and Computershare Inc. and Computershare Trust Company, N.A., collectively, and the holders from time to time of the Depositary Receipts (incorporated by reference to Exhibit 4.3 to the Form 8-K filed on September 19, 2019).
4.6.4	Form of Depositary Receipt (included in Exhibit 4.6.3).
4.7.1	Certificate of Designations of 6.375% Fixed-Rate Reset Perpetual Non-Cumulative Preference Shares, Series C (incorporated by reference to Exhibit 4.1 to the Form 8-K filed on June 11, 2020).
4.7.2	Form of Share Certificate evidencing 6.375% Fixed-Rate Reset Perpetual Non-Cumulative Preference Share, Series C (incorporated by reference to Exhibit 4.2 to the Form 8-K filed on June 11, 2020).
4.7.3	Deposit Agreement, dated June 11, 2020, between the Company and Computershare Inc. and Computershare Trust Company, N.A., collectively, and the holders from time to time of the Depositary Receipts (incorporated by reference to Exhibit 4.3 to the Form 8-K filed on June 11, 2020).
4.7.4	Form of Depositary Receipt (included in Exhibit 4.7.3).
4.8.1	Certificate of Designations of 4.875% Fixed-Rate Perpetual Non-Cumulative Preference Shares, Series D (incorporated by reference to Exhibit 4.1 to the Form 8-K filed on December 18, 2020).
4.8.2	Form of Share Certificate evidencing 4.875% Fixed-Rate Perpetual Non-Cumulative Preference Share, Series D (incorporated by reference to Exhibit 4.2 to the Form 8-K filed on December 18, 2020).
4.8.3	Deposit Agreement, dated December 18, 2020, between the Company and Computershare Inc. and Computershare Trust Company, N.A., collectively, and the holders from time to time of the Depositary Receipts (incorporated by reference to Exhibit 4.3 to the Form 8-K filed on December 18, 2020).

Exhibit No.	Description
4.8.4	Form of Depositary Receipt (included in Exhibit 4.8.3).
4.9	Form of Warrant (incorporated by reference to Exhibit 4.2 to the Form S-3ASR filed on March 17, 2020).
4.10	Description of Securities.
10.1	Credit Agreement, dated as of December 3, 2019, among Athene Holding Ltd., Athene Life Re Ltd., Athene USA Corporation and Athene Annuity Re Ltd., as Borrowers, the lenders from time to time party thereto, and Citibank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on December 3, 2019).
10.2	Guaranty, dated as of December 3, 2019, among Athene Holding Ltd., Athene Life Re Ltd., Athene USA Corporation and Athene Annuity Re Ltd., as Guarantors, and Citibank, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on December 3, 2019).
10.3.1	Seventh Amended and Restated Fee Agreement, dated as of June 10, 2019, between Athene Asset Management, LLC and Athene Holding Ltd. (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on June 10, 2019 dated June 4, 2019).
10.3.2	Applicable 2016 Liability Fee Discount, effective as of September 30, 2016, between Athene Asset Management, L.P. and Athene Holding Ltd. (incorporated by reference to Exhibit 10.7.2 to the Form S-1 filed on October 25, 2016).
10.4	Amended and Restated Coinsurance Agreement, dated as of July 31, 2015, between Athene Life Insurance Company of New York and First Allmerica Financial Life Insurance Company (regarding certain term and universal life policies) (incorporated by reference to Exhibit 10.9 to the Form S-1 filed on October 25, 2016).
10.5	Coinsurance and Assumption Agreement, dated as of October 1, 2013, between Aviva Life and Annuity Company (now known as Athene Annuity and Life Company) and Presidential Life Insurance Company - USA (now known as Accordia Life and Annuity Insurance Company) (incorporated by reference to Exhibit 10.10 to the Form S-1 filed on October 25, 2016).
10.6.1	Amended and Restated Coinsurance and Assumption Agreement, dated as of July 31, 2015, between Athene Life Insurance Company of New York and First Allmerica Financial Life Insurance Company (regarding certain policies described therein) (incorporated by reference to Exhibit 10.11 to the Form S-1 filed on October 25, 2016).
10.6.2	First Amendment to Amended and Restated Coinsurance and Assumption Agreement, effective as of September 1, 2020, between Athene Life Insurance Company of New York and First Allmerica Financial Life Insurance Company.
10.7	Amended and Restated Coinsurance Agreement, dated as of December 28, 2015, between Athene Annuity and Life Company and Accordia Life and Annuity Company (formerly known as Presidential Life Insurance Company-USA) (regarding the ILICO closed block) (incorporated by reference to Exhibit 10.12 to the Form S-1 filed on October 25, 2016).
10.8	Funds Withheld Coinsurance Agreement, dated as of October 1, 2013, between Aviva Life and Annuity Company of New York (now known as Athene Life Insurance Company of New York) and First Allmerica Financial Life Insurance Company (regarding certain term and universal life policies) (incorporated by reference to Exhibit 10.13 to the Form S-1 filed on October 25, 2016).
10.9	Coinsurance Agreement, dated as of April 29, 2011, between Liberty Life Insurance Company (now known as Athene Annuity & Life Assurance Company) and Protective Life Insurance Company (incorporated by reference to Exhibit 10.14 to the Form S-1 filed on October 25, 2016).
10.10.1	Employment Agreement, dated as of February 27, 2013, between Athene Holding Ltd. and James R. Belardi (incorporated by reference to Exhibit 10.15.1 to the Form S-1 filed on October 25, 2016).
10.10.2	Employment Agreement, dated as of September 7, 2015, between Athene Holding Ltd. and William J. Wheeler (incorporated by reference to Exhibit 10.15.2 to the Form S-1 filed on October 25, 2016).
10.10.3	Employment Agreement, dated as of October 12, 2015, between Athene Holding Ltd. and Martin P. Klein (incorporated by reference to Exhibit 10.15.3 to the Form S-1 filed on October 25, 2016).
10.11.1	Athene Holding Ltd. 2014 Share Incentive Plan (incorporated by reference to Exhibit 10.16.3 to the Form S-1 filed on October 25, 2016).
10.11.2	Amendment No. 1 to 2014 Share Incentive Plan (incorporated by reference to Exhibit 10.16.4 to the Form S-1 filed on October 25, 2016).
10.11.3	Athene Holding Ltd. 2016 Share Incentive Plan (incorporated by reference to Exhibit 10.16.5 to the Form S-1 filed on October 25, 2016).
10.11.4	Athene Holding Ltd. 2019 Share Incentive Plan (incorporated by reference to Exhibit 10.2 to the Form 8-K filed on June 10, 2019 dated June 4, 2019).
10.12.1	Form of Amended and Restated Class A Share Award Agreement (Class A common shares issued at $13.46 per share) (incorporated by reference to Exhibit 10.24.1 to the Form S-1 filed on November 10, 2016).
10.12.2	Form of Amendment Letter to the Amended and Restated Class A Share Award Agreement (Class A common shares issued at $13.46 per share) (incorporated by reference to Exhibit 10.24.2 to the Form S-1 filed on November 10, 2016).
10.13.1	Form of Restricted Share Award Agreement (Class A common shares) (incorporated by reference to Exhibit 10.25.1 to the Form S-1 filed on November 10, 2016).
10.13.2	Form of Amendment Letter to the Restricted Share Award Agreement (Class A common shares) (incorporated by reference to Exhibit 10.25.2 to the Form S-1 filed on November 10, 2016).
10.14.1	Form of Class A Share Award Agreement (Class A common shares issued at fair market value) (incorporated by reference to Exhibit 10.26.1 to the Form S-1 filed on November 10, 2016).
10.14.2	Form of Amendment Letter to Class A Share Award Agreement (Class A common shares issued at fair market value) (incorporated by reference to Exhibit 10.26.2 to the Form S-1 filed on November 10, 2016).

Exhibit No.	Description
10.15.1	Form of 2014 Share Incentive Plan Nonqualified Stock Option Award Notice and Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.27 to the Form S-1 filed on October 25, 2016).
10.15.2	Form of 2016 Share Incentive Plan Nonqualified Stock Option Award Notice and Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.26.2 to the Form 10-K filed on February 26, 2018).
10.15.3	Form of 2019 Share Incentive Plan Nonqualified Stock Option Award Notice and Nonqualified Stock Option Agreement (incorporated by reference to Exhibit 10.22.3 to the Form 10-K filed on February 20, 2020).
10.16.1	Form of 2014 Share Incentive Plan Restricted Share Unit Award Notice (Performance-Based Vesting) and Restricted Share Unit Award Agreement (incorporated by reference to Exhibit 10.28 to the Form S-1 filed on October 25, 2016).
10.16.2	Form of 2016 Share Incentive Plan Restricted Share Unit Award Notice (Performance-Based Vesting) and Restricted Share Unit Award Agreement (incorporated by reference to Exhibit 10.27.2 to the Form 10-K filed on February 26, 2018).
10.16.3	Form of 2019 Share Incentive Plan Restricted Share Unit Award Notice (Performance-Based Vesting) and Restricted Share Unit Award Agreement (incorporated by reference to the Form 10-K filed on February 20, 2020).
10.17.1	Form of 2014 Share Incentive Plan Restricted Share Unit Award Notice (Time-Based Vesting) and Restricted Share Unit Award Agreement (incorporated by reference to Exhibit 10.29 to the Form S-1 filed on October 25, 2016).
10.17.2	Form of 2016 Share Incentive Plan Restricted Share Unit Award Notice (Time-Based Vesting) and Restricted Share Unit Award Agreement (incorporated by reference to Exhibit 10.28.2 to the Form 10-K filed on February 26, 2018).
10.17.3	Form of 2019 Share Incentive Plan Restricted Share Unit Award Notice (Time-Based Vesting) and Restricted Share Unit Award Agreement (incorporated by reference to Exhibit 10.24.3 to the Form 10-K filed on February 20, 2020).
10.18.1	Form of Amended and Restated Restricted Share Award Agreement (2014 awards to certain non-employee directors) (incorporated by reference to Exhibit 10.30 to the Form S-1 filed on November 10, 2016).
10.18.2	Form of Restricted Share Award Agreement (2015 awards to certain non-employee directors) (incorporated by reference to Exhibit 10.31 to the Form S-1 filed on November 10, 2016).
10.18.3	Form of Restricted Share Award Notice and Restricted Share Award Agreement (2019 awards to certain non-employee directors) (incorporated by reference to Exhibit 10.25.3 to the Form 10-K filed on February 20, 2020).
10.19.1	Form of 2016 Share Incentive Plan Restricted Share Award Notice and Restricted Share Award Agreement (incorporated by reference to Exhibit 10.31 to the Form 10-K filed on February 26, 2018).
10.19.2	Form of 2019 Share Incentive Plan Restricted Share Award Notice and Restricted Share Award Agreement (incorporated by reference to Exhibit 10.26.2 to the Form 10-K filed on February 20, 2020).
10.20.1	Form of 2016 Share Incentive Plan Restricted Share Award Notice (Performance-Based Vesting) and Restricted Share Award Agreement (incorporated by reference to Exhibit 10.32 to the Form 10-K filed on February 26, 2018).
10.20.2	Form of 2019 Share Incentive Plan Restricted Share Award Notice (Performance-Based Vesting) and Restricted Share Award Agreement (incorporated by reference to Exhibit 10.27.2 to the Form 10-K filed on February 20, 2020).
10.21	Form of Director Retention Letter (incorporated by reference to Exhibit 10.3 to the Form 10-Q filed on August 5, 2019).
10.22	Supplemental Executive Retirement Plan (incorporated by reference to Exhibit 10.33 to the Form S-1 filed on October 25, 2016).
10.23.1	Second Amended and Restated Master Sub-Advisory Agreement, effective as of October 1, 2019, among Athene Asset Management LLC, Apollo Capital Management, L.P., Apollo Global Real Estate Management, L.P., ARM Manager LLC, Apollo Longevity, LLC and Apollo Emerging Markets, LLC (incorporated by reference to Exhibit 10.30.1 to the Form 10-K filed on February 20, 2020).
10.23.2	Third Amended and Restated Master Sub-Advisory Agreement, effective as of October 1, 2019, among Athene Asset Management LLC, Apollo Capital Management, L.P., Apollo Global Real Estate Management, L.P., ARM Manager LLC, Apollo Longevity, LLC, Apollo Royalties Management, LLC and Apollo Emerging Markets, LLC (incorporated by reference to Exhibit 10.30.2 to the Form 10-K filed on February 20, 2020).
10.23.3	Third Amended and Restated Master Sub-Advisory Agreement, effective as of October 1, 2019, among Athene Asset Management LLC, Apollo Capital Management, L.P., Apollo Global Real Estate Management, L.P., ARM Manager LLC, Apollo Longevity, LLC and Apollo Emerging Markets, LLC (incorporated by reference to Exhibit 10.30.3 to the Form 10-K filed on February 20, 2020).
10.24.1	Cooperation Agreement, dated as of January 1, 2018, between AGER Bermuda Holding Ltd. and Athene Holding Ltd. (incorporated by reference to Exhibit 10.1 to the Form 8-K filed on January 2, 2018).
10.24.2	Amendment No. 1 to the Cooperation Agreement, dated as of January 7, 2020, between Athora Holding Ltd. and Athene Holding Ltd. (incorporated by reference to Exhibit 10.31.2 to the Form 10-K filed on February 20, 2020).
10.25.1	Reinsurance agreement (FA Business), effective as of June 1, 2018, between Athene Annuity & Life Assurance Company and Voya Insurance and Annuity Company (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed on August 3, 2018).
10.25.2	First Amendment to Reinsurance Agreement (FA Business), effective as of July 1, 2018, between Athene Annuity & Life Assurance Company and Voya Insurance and Annuity Company (incorporated by reference to Exhibit 10.32.2 to the Form 10-K filed on February 20, 2020).
10.26.1	Modified coinsurance agreement (Separate Account FA Business), effective as of June 1, 2018, between Athene Annuity & Life Assurance Company and Voya Insurance and Annuity Company (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed on August 3, 2018).

Exhibit No.	Description
10.26.2	First Amendment to Modified Coinsurance Agreement (Separate Account FA Business), effective as of June 1, 2018, between Athene Annuity & Life Assurance Company and Voya Insurance and Annuity Company (incorporated by reference to Exhibit 10.33.2 to the form 10-K filed on February 20, 2020).
10.27	Modified coinsurance agreement (FA Business), effective as of December 31, 2019, between Athene Annuity Re Ltd. and Venerable Insurance and Annuity Company (incorporated by reference to Exhibit 10.34 to the form 10-K filed on February 20, 2020).
10.28	Master Framework Agreement, dated as of September 11, 2019, by and between Athene Co-Invest Reinsurance Affiliate 1A Ltd. and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed on November 5, 2019).
10.29.1	Shareholders Agreement, dated as of October 1, 2019, by and among Athene Co-Invest Reinsurance Affiliate 1A Ltd., ADIP Holdings (A), L.P., ADIP Holdings (B), L.P., ADIP Holdings (C), L.P., ADIP Holdings (D), L.P., ADIP Holdings (E), L.P., ADIP Holdings (Lux), L.P. and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.36.1 to the Form 10-K filed on February 20, 2020).
10.29.2	First Amendment to Shareholders Agreement, effective as of October 25, 2019, by and among Athene Co-Invest Reinsurance Affiliate 1A Ltd., ADIP Holdings (A), L.P., ADIP Holdings (B), L.P., ADIP Holdings (C), L.P., ADIP Holdings (D), L.P., ADIP Holdings (E), L.P., ADIP Holdings (Lux), L.P. and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.36.2 to the Form 10-K filed on February 20, 2020).
10.29.3	Second Amendment to Shareholders Agreement, effective as of December 4, 2019, by and among Athene Co-Invest Reinsurance Affiliate 1A Ltd., ADIP Holdings (A), L.P., ADIP Holdings (B), L.P., ADIP Holdings (C), L.P., ADIP Holdings (D), L.P., ADIP Holdings (E), L.P., ADIP Holdings (Lux), L.P. and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.36.3 to the Form 10-K filed on February 20, 2020).
10.29.4	Third Amendment to Shareholders Agreement, effective as of February 13, 2020, by and among Athene Co-Invest Reinsurance Affiliate 1A Ltd., ADIP Holdings (A), L.P., ADIP Holdings (B), L.P., ADIP Holdings (C), L.P., ADIP Holdings (D), L.P., ADIP Holdings (E), L.P., ADIP Holdings (Lux), L.P. and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.4 to the Form 10-Q filed on May 8, 2020).
10.30	Transaction Agreement, dated as of October 27, 2019, by and among Athene Holding Ltd., Apollo Global Management, Inc. and each Person identified on the signature page thereto as a member of the Apollo Operating Group (incorporated by reference to Exhibit 10.37 to the Form 10-K filed on February 20, 2020).
10.31	Voting Agreement, dated as of October 27, 2019, by and among Apollo Management Holdings, L.P. and each Person identified on the signature pages thereto as an Other Shareholder (incorporated by reference to Exhibit 10.38 to the Form 10-K filed on February 20, 2020).
10.32	Shareholders Agreement, dated as of February 28, 2020, among Athene Holding Ltd. and each person identified on the signature pages thereto as an Apollo Shareholder (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed on May 8 2020).
10.33	Liquidity Agreement, dated as of February 28, 2020, between Apollo Global Management, Inc. and Athene Holding Ltd. (incorporated by reference to Exhibit 10.3 to the Form 10-Q filed on May 8 2020).
10.34.1	Coinsurance Agreement, dated as of June 18, 2020, between Jackson National Life Insurance Company and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed on August 5, 2020).
10.34.2	Amendment No. 1 to Coinsurance Agreement, dated September 30, 2020, between Jackson National Life Insurance Company and Athene Life Re Ltd. (incorporated by reference to Exhibit 10.2 to the Form 10-Q filed on November 3, 2020).
10.35	Form of ADIP (Athene) Carry Plan, L.P. Award Letter (incorporated by reference to Exhibit 10.1 to the Form 10-Q filed on November 3, 2020).
21.1	Subsidiaries of the Registrant.
23.1	Consent of PricewaterhouseCoopers LLP regarding Athene Holding Ltd. financial statements.
24.1	Power of Attorney (included on the signature page hereto)
31.1	Principal Executive Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Principal Financial Officer Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Principal Executive Officer Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Principal Financial Officer Certification 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.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase.
101.LAB	XBRL Taxonomy Extension Label Linkbase.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase.
101.DEF	XBRL Taxonomy Extension Definition Linkbase.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

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

ATHENE HOLDING LTD.

Date: February 19, 2021

/s/ Martin P. Klein
Martin P. Klein
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints James R. Belardi, Martin P. Klein and John A. Sondej as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign this Annual Report on Form 10-K, and all amendments thereto, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant in the capacities indicated below:

Signatures	Title	Date
/s/ James R. Belardi James R. Belardi	Chairman and Chief Executive Officer (Principal Executive Officer)	February 19, 2021
/s/ Martin P. Klein Martin P. Klein	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 19, 2021
/s/ John A. Sondej John A. Sondej	Senior Vice President and Controller (Principal Accounting Officer)	February 19, 2021
Marc Beilinson	Director	February 19, 2021
/s/ Robert Borden Robert Borden	Director	February 19, 2021
/s/ Mitra Hormozi Mitra Hormozi	Director	February 19, 2021
/s/ Scott Kleinman Scott Kleinman	Director	February 19, 2021
/s/ Brian Leach Brian Leach	Director	February 19, 2021
/s/ Gernot Lohr Gernot Lohr	Director	February 19, 2021
/s/ H. Carl McCall H. Carl McCall	Director	February 19, 2021

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Signatures	Title	Date
/s/ Matthew R. Michelini Matthew R. Michelini	Director	February 19, 2021
/s/ Dr. Manfred Puffer Dr. Manfred Puffer	Director	February 19, 2021
/s/ Marc Rowan Marc Rowan	Director	February 19, 2021
/s/ Lawrence J. Ruisi Lawrence J. Ruisi	Director	February 19, 2021
/s/ Lynn Swann Lynn Swann	Director	February 19, 2021
/s/ Hope Schefler Taitz Hope Schefler Taitz	Director	February 19, 2021
/s/ Arthur Wrubel Arthur Wrubel	Director	February 19, 2021
/s/ Fehmi Zeko Fehmi Zeko	Director	February 19, 2021

Exhibit 4.10

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

As of January 31, 2021, Athene Holding Ltd. ("we," "us," "our" or "the Company") has five classes of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"): (1) our Class A common shares, par value $0.001 per Class A common share (our "Class A Common Shares"); (2) our depositary shares, each representing a 1/1,000th interest in a 6.35% fixed-to-floating rate perpetual non-cumulative preference share, series A, par value $1.00 and liquidation preference $25,000 per series A preference share (our "Series A Preference Shares"); (3) our depositary shares, each representing a 1/1,000th interest in a 5.625% fixed rate perpetual non-cumulative preference share, series B, par value $1.00 and liquidation preference $25,000 per series A preference share (our "Series B Preference Shares"); (4) our depositary shares, each representing a 1/1,000th interest in a 6.375% fixed rate reset perpetual non-cumulative preference share, series C, par value $1.00 and liquidation preference $25,000 per series C preference share (our "Series C Preference Shares"); and (5) our depositary shares, each representing a 1/1,000th interest in a 4.875% fixed rate perpetual non-cumulative preference share, series D, par value $1.00 and liquidation preference $25,000 per series D preference share (our "Series D Preference Shares" and together with our Series A Preference Shares, our Series B Preference Shares, and our Series C Preference Shares, our "Preference Shares").

As of January 31, 2021, our authorized share capital was $927,109.56 in aggregate par value, consisting of 425,000,000 Class A Common Shares, par value $0.001 per Class A Common Share ($425,000 in aggregate par value), of which 191,613,948 Class A Common Shares were outstanding and held of record by 196 shareholders, 34,500 Series A Preference Shares ($34,500 in aggregate par value), all of which were outstanding and held of record by one shareholder (a nominee of The Depository Trust Company ("DTC")), 13,800 Series B Preference Shares ($13,800 in aggregate par value), all of which were outstanding and held of record by one shareholder (a nominee of DTC), 24,000 Series C Preference Shares ($24,000 in aggregate par value), all of which were outstanding and held of record by one shareholder (a nominee of DTC), 23,000 Series D Preference Shares ($23,000 in aggregate par value), all of which were outstanding and held of record by one shareholder (a nominee of DTC), and $406,809.56 aggregate par value of undesignated shares (equivalent to 406,809,560 shares if designated as Class A Common Shares), none of which were outstanding.

Description of Our Class A Common Shares

The following description of our Class A Common Shares is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Memorandum of Association and Thirteenth Amended and Restated Bye-laws, effective February 28, 2020 (our "Bye-laws"), each of which is incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.10 is a part, to applicable Bermuda law and to the listing rules of the New York Stock Exchange (the "NYSE").

General

Pursuant to our Bye-laws, subject to the applicable listing rules of the NYSE and to any resolution of the shareholders to the contrary, our board of directors is authorized to issue any of our authorized but unissued Class A Common Shares. Our Class A Common Shares have no pre-emptive rights or other rights to subscribe for additional shares, and no rights of redemption, conversion or exchange. All outstanding Class A Common Shares are fully paid and non-assessable.

Dividends

Our board of directors may, subject to Bermuda law and our Bye-laws, declare a dividend to be paid (in cash or wholly or partly in kind) to shareholders of record on a record date set by our board of directors. No unpaid dividend will bear any interest. Notwithstanding the foregoing, so long as any Preference Shares remain outstanding, no dividend may be paid or declared on our Common Shares, other than a dividend payable solely in our Common Shares, unless the full dividend for the last completed dividend period on all outstanding Preference Shares have been declared and paid (or declared and a sum sufficient for the payment thereof has been set aside).

We do not currently pay dividends on our Class A Common Shares and we currently intend to retain all available funds and any future earnings attributable to our Class A Common Shares for use in the operation of our business. We may, however, pay cash dividends on our Class A Common Shares in the future. Any future determination to pay dividends will be made at the discretion of our board of directors and will depend upon many factors, including our financial condition, earnings, legal and regulatory requirements, restrictions in our debt agreements and other factors our board of directors deems relevant. Our board of directors may declare and pay a dividend on our Preference Shares or any preference shares issued in the future without paying a corresponding dividend on our Class A Common Shares. Our ability to pay dividends on our Class A Common Shares is limited by the terms of our existing indebtedness and our Preference Shares and may be restricted by the terms of any future credit agreement or any future debt or preferred securities of ours or of our subsidiaries.

Furthermore, we are a holding company and have no direct operations. All of our business operations are conducted through our subsidiaries. Any dividends we pay will depend upon our funds legally available for distribution, including dividends from our subsidiaries. Our U.S. insurance subsidiaries are highly regulated and are required to comply with various conditions before they are able to pay dividends or make distributions to us.

Voting Rights

The total voting power of our common shares, as referred to in our Bye-laws, means the total votes attributable to all of our shares issued and outstanding.

Our Bye-laws restrict all holders of all classes of our shares from owning, directly or indirectly, an amount of our outstanding capital stock such that any one holder that is a “United States person” (as defined in Section 957(c) of the Code) would possess 50% or more of either the total voting power or total value of our shares outstanding, including any securities exchangeable for our capital stock and all options, warrants, contractual and other rights to purchase our capital stock (“Equity Securities”). In the event any holder of our shares or Equity Securities is in violation of this restriction, our board of directors may require such holder to sell or allow us to repurchase some or all of such holder’s shares or Equity Securities at fair market value, as the board of directors and such holder agree in good faith, or to take any reasonable action that the board of directors deems appropriate.

The Bye-laws generally provide that shareholders are entitled to vote, on a non-cumulative basis, at all annual general and special meetings of shareholders with respect to matters on which Class A Common Shares are eligible to vote. The Class A Common Shares collectively represent 100% of the total votes attributable to all shares of the Company issued and outstanding, and subject to certain voting adjustments described below, each Class A Common Share is entitled to one vote.

In general, the Bye-laws provide that the board of directors may determine that certain shares shall carry no voting rights or shall have reduced voting rights as it determines appropriate (i) to avoid any person (together with its affiliates) from beneficially owning (within the meaning of Section 13(d)(3) of the Exchange Act and the rules and regulations promulgated thereunder) Class A Common Shares possessing more than 9.9% of the total voting power of our shares without approval from the board of directors or (ii) upon the request of a shareholder, to avoid adverse tax, legal or regulatory consequences for such shareholder or any of its affiliates or direct or indirect owners. In addition, the board of directors has the authority under the Bye-laws to request information from any shareholder for the purpose of determining whether a shareholder's voting rights are to be adjusted pursuant to the Bye-laws.

Adjustments to Voting Rights

Under our Bye-laws, the voting power of the Class A Common Shares will, with certain exceptions, be adjusted so that the aggregate voting power attributable to the Class A Common Shares owned by any person (together with its affiliates) beneficially within the meaning of Section 13(d)(3) of the Exchange Act and the rules and regulations promulgated thereunder does not exceed 9.9% (the "9.9% Voting Cutback").

If the 9.9% Voting Cutback is applicable to any person, each Class A Common Share that is treated (for purposes of Section 954(d)(3) of the United States Internal Revenue Code of 1986, as amended (the "Code"), as applicable for purposes of Section 953(c) of the Code) as owned (in whole or in part) by any person (other than a member of the Apollo Group (without regard to clause (v) of the definition of "Apollo Group")) who is treated (for purposes of Section 954(d)(3) of the Code, as applicable for purposes of Section 953(c) of the Code) as owning any stock of Apollo will have its vote reduced to zero. "Apollo Group" means (i) Apollo Global Management, Inc. ("AGM"), (ii) AAA Guarantor – Athene, L.P., (iii) any investment fund or other collective investment vehicle whose general partner or managing member is owned, directly or indirectly, by AGM or by one or more of AGM's subsidiaries, (iv) BRH Holdings GP, Ltd. and its shareholders, (v) any executive officer or employee of AGM or its subsidiaries, (vi) any shareholder that has granted to AGM or any of its affiliates a valid proxy with respect to all of such shareholder's Class A Common Shares pursuant to Bye-law 34 and (vii) any affiliate of a person described in clauses (i), (ii), (iii), (iv), (v) or (vi) above; provided, none of the Company or its subsidiaries shall be deemed to be a member of the Apollo Group.

Any voting power that is reallocated away from Class A Common Shares pursuant to the foregoing voting adjustments generally is reallocated to all other Class A Common Shares, proportionately to their existing voting power. However, the voting power reallocated to any Class A Common Shares will be limited to the extent necessary to avoid (i) causing any person to become subject to the 9.9% Voting Cutback and (ii) causing any U.S. person who owns (within the meaning of Section 958(a) of the Code) any stock of the Company, or any person or persons who control such U.S. person, from being treated (for purposes of Section 954(d)(3) of the Code, as applicable for purposes of Section 953(c) of the Code) as owning more than 49.9% of the total voting power of all classes of stock entitled to vote of the Company or any subsidiary of the Company, but not more than 50% of the total value of the stock of the Company or such subsidiary, respectively.

The 9.9% Voting Cutback and other voting adjustments described above will be inoperative and of no further force or effect following any date identified as the "Restriction Termination Date" for purposes of our Bye-laws by at least 70% of the board of directors (or, after March 31, 2021, 75% of the board of directors). The board of directors is also granted authority to eliminate the 9.9% Voting Cutback, as authorized by (i) until March 31, 2021, 70% of the board of directors and (ii) after March 31, 2021, 75%, of the board of directors. In connection with such amendments, the board of directors has (i) resolved to exempt shares beneficially owned by the Apollo Group from the 9.9% Voting Cutback and (ii) delegated authority to the Company's independent directors to eliminate the applicability of the 9.9% Voting Cutback altogether in the event that they determine that it is the sole impediment to the Class A Common Shares being listed on the Standard & Poor's 500 Stock Index (or, if Standard & Poor's then maintains any index with broader representation in terms of market capitalization and number of companies represented, such other index).The foregoing adjustments are likely to result in certain Class A Common Shares having voting rights in excess of their *pro rata* share of the voting power of our Class A Common Shares. Therefore, a shareholder's voting rights may increase above 5% of the aggregate voting power of the outstanding Class A Common Shares, thereby possibly resulting in the shareholder becoming a reporting person subject to Schedule 13D or 13G filing requirements under the Exchange Act.

Rights upon Liquidation

In the event of our liquidation, dissolution or winding up, holders of Class A Common Shares are entitled to the assets remaining after payment of liabilities and the liquidation preferences of any outstanding preference shares.

Certain Bye-law Provisions

Certain provisions of our Bye-laws may have an anti-takeover effect and may delay, defer or prevent a tender offer or takeover attempt that holders of our Class A Common Shares might consider in their best interest, including an attempt that might result in such holders' receipt of a premium over the market price of their shares. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which could result in an improvement of such persons' terms. See "—Voting Rights."

Classified Board of Directors

In accordance with the terms of our Bye-laws, our board of directors is classified into three classes of directors, with directors of each class serving staggered three-year terms. Directors have been apportioned to each class so as to maintain the number of directors in each class as nearly equal as possible.

Our Class A Common Shares do not have cumulative voting rights.

Removal of Directors

Our Bye-laws provide that a director may only be removed for cause by a majority of our board of directors or shareholders holding a majority of the total voting power of our Class A Common Shares at any general meeting.

Shareholder Action by Written Consent

Our Bye-laws include procedural requirements applicable to any shareholder seeking to have the shareholders authorize or take action by written resolution, which has the effect of extending the timing needed to complete actions by shareholder written resolution. Under our Bye-laws, any shareholder is permitted to request that our board of directors fix a record date for any action such shareholder seeks to have the shareholders authorize or take by written resolution, provided that such shareholder provides written notice to the Secretary of the Company signed by shareholders holding at least 25% of the total voting power of the Company. Our board of directors may require the shareholder submitting such request furnish other information in order to determine the validity of the request and to determine whether such request to action may be effected by written resolution of the shareholders.

After receipt of such request, our board of directors must determine the validity of such request within 20 days after the date on which such request is received, or 5 days after the delivery of any information requested by our board of directors to determine the validity of such request and whether such request relates to action that may be authorized or taken by written resolution. If the request is valid, our board of directors will fix the record date for such purpose. In the event that a record date is fixed, a written resolution will be effective to take the action referred to therein if, within 60 days after the earliest date the written resolution is received, a valid written resolution signed by a sufficient number of shareholders to take such action is delivered to the Company. A written resolution is passed when it is signed by shareholders representing more than 55% of the total voting power of the Company.

Shareholder Advance Notice Procedures

Our Bye-laws establish advance notice procedures for shareholders to bring business before or to nominate directors at an annual meeting of our shareholders. Our Bye-laws provide that any shareholder wishing to bring such business before or to nominate directors at an annual meeting must be a shareholder of record (1) meeting the minimum requirements set forth for eligible shareholders to submit shareholder proposals under Rule 14a-8 of the Exchange Act (a "minimum shareholder"), at the time of giving of notice and at the time of the meeting, (2) entitled to vote at the meeting and (3) who complies with the notice procedures set forth below. These requirements may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed. In addition, we expect that these provisions, insofar as they relate to the nomination of directors, may also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of the Company.

To be timely, the shareholder's notice to bring business before or to nominate directors at an annual meeting must be delivered to or mailed and received by us not less than 90 days nor more than 120 days before the anniversary date of the preceding annual meeting, except that if the annual meeting is set for a date that is not within 30 days before or after such anniversary date, we must receive the notice not later than the later of (1) the close of business 90 days prior to the date of such annual meeting or (2) if the first public announcement of the date of such advanced or delayed annual meeting is less than 100 days prior to such date, 10 days following the date of the first public announcement of the general meeting.

The notice must include the following information:

- the name and address of the shareholder who intends to make the nomination and either the name and address of the person or persons to be nominated or the nature of the business to be proposed;
- the class and number of equity securities directly or indirectly owned by such shareholder or its affiliates and a description of any agreement, arrangement or understanding to which such shareholder is a party as of the date of such notice with respect to any equity securities or that has the effect or intent of mitigating loss to, managing the potential risk or benefit of share price changes for, or increasing or decreasing the voting power of such shareholder or its affiliates with respect to such equity securities;
- a representation that the shareholder is a shareholder of record of our share capital entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to nominate the person or persons or to introduce the business specified in the notice;

- if applicable, a description of all arrangements or understandings between the shareholder and each nominee and any other person or persons, naming such person or persons, pursuant to which the nomination is to be made or business is to be proposed by the shareholder;
- a representation whether the shareholder intends, or is part of a "group" (as defined in Rule 13d-5 of the Exchange Act) that intends, to deliver a proxy statement and/or form of proxy statement to holders of at least the percentage of Class A Common Shares required to approve or adopt the proposal and/or to otherwise solicit proxies from other shareholders in support of such proposal;
- such other information regarding each nominee or each matter of business to be proposed by such shareholder as would be required to be included in a proxy statement filed under the U.S. Security and Exchange Commission's proxy rules if the nominee had been nominated or intended to be nominated, or the matter that had been proposed, or intended to be proposed by the board of directors;
- if applicable, the consent of each nominee to serve as a director if elected; and
- such other information that the board of directors may request in its discretion.

Notwithstanding anything to the contrary, with respect to shareholder proposals, the notice requirements set forth in our Bye-laws will be deemed satisfied by a shareholder if such shareholder has submitted a proposal to us in compliance with Rule 14a-8 of the Exchange Act and such proposal has been included in a proxy statement that has been prepared by us (provided that the shareholder has provided the information specified above). In addition, no business may be brought by a shareholder except in accordance with the above, and unless otherwise required by the rules of the NYSE, if a shareholder intending to bring business before a general meeting does not provide the timely notifications contemplated above or appear in person or by proxy, such business will not be transacted.

Meetings of Shareholders

Our annual general meeting will be held each year at such place, date and time as determined by the board of directors. A special general meeting may be called upon the request of the Chairman, the Chief Executive Officer or a majority of the board of directors. Bermuda's Companies Act 1981 (the "Companies Act") requires that shareholders be given at least five business days' notice of a meeting, excluding the date the notice is given and the date of the meeting. In addition, upon receiving a requisition from holders of at least 10% of total voting power of our Class A Common Shares, the board of directors is required to convene a special general meeting. The presence in person or by proxy of holders of our Class A Common Shares holding a majority of the voting power of the Company at such meeting constitutes a quorum for the transaction of business at a general meeting. Unless otherwise set forth in our Bye-laws, any matter before the shareholders shall be decided by the affirmative votes of a majority of the total voting power cast in accordance with our Bye-laws.

Market Listing

Our Class A Common Shares are listed on the NYSE under the symbol "ATH."

Transfer Agent and Registrar

The transfer agent and registrar for our Class A Common Shares is Computershare Limited.

Description of The Depositary Shares

The following description of the depositary shares representing an interest in the Series A Preference Shares (the "Series A Depositary Shares"), the depositary shares representing an interest in the Series B

Preference Shares (the "Series B Depositary Shares"), the depositary shares representing an interest in the Series C Preference Shares (the "Series C Depositary Shares") and the depositary shares representing an interest in the Series D Preference Shares (the "Series D Depositary Shares," and together with the Series A Depositary Shares, the Series B Depositary Shares and the Series C Depositary Shares, the "Depositary Shares") is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the terms and provisions of the Deposit Agreements (as defined below), the forms of depositary receipts, which contain the terms and provisions of the Depositary Shares, the pertinent sections of our Bye-laws and the pertinent sections of the Certificates of Designations, each of which is incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.10 is a part, and to applicable Bermuda law.

General

Each Depositary Share represents a 1/1,000th interest in a Preference Share and is evidenced by a depositary receipt. The underlying Preference Shares are deposited with the depositary pursuant to deposit agreements among us, Computershare Inc. and Computershare Trust Company, N.A., collectively, acting as depositary, and the holders from time to time of the depositary receipts (such agreements, the "Deposit Agreements"). Subject to the terms of the Deposit Agreements, each holder of a Depositary Share is entitled, through the depositary, in proportion to the applicable fraction of a Preference Share represented by such Depositary Share, to all the rights and preferences of the Preference Shares represented thereby (including any dividend, liquidation, redemption and voting rights). If the Preference Shares are exchanged for new securities pursuant to the provisions described under "Description of the Preference Shares—Substitution or Variation," each Depositary Share will represent the same percentage interest in such new security, and will be evidenced by a depositary receipt.

Dividends and Other Distributions

Any dividend or other distribution (including upon our voluntary or involuntary liquidation, dissolution or winding-up) paid in respect of a Depositary Share will be in an amount equal to 1/1,000th of the dividend declared or distribution payable, as the case may be, on the underlying Preference Share. The depositary will distribute any cash dividends or other cash distributions received on each series of Preference Shares, including any additional amounts as described under "Description of the Preference Shares—Dividends—Payment of Additional Amounts," to the record holders of the respective series of Depositary Shares in proportion to the number of Depositary Shares of such series held by each holder on the relevant record date. If we make a distribution on any series of Preference Shares other than in cash, the depositary will distribute any property received by it to the record holders of the respective series of Depositary Shares in proportion to the number of Depositary Shares of such series held by each holder, unless it determines that the distribution cannot be made proportionally among those holders or that it is not feasible to make a distribution. In that event, the depositary may, with our approval, adopt a method of distribution that it deems practicable, including the sale of the property and distribution of the net proceeds from the sale to the holders of the relevant series of Depositary Shares.

Record dates for the payment of dividends and other matters relating to the Depositary Shares will be the same as the corresponding record dates for the Preference Shares.

Subject to any obligation to pay additional amounts as described in "Description of the Preference Shares—Dividends—Payment of Additional Amounts," the amount paid as dividends or otherwise distributable by the depositary with respect to the Depositary Shares or the underlying Preference Shares will be reduced by any amounts required to be withheld by us or the depositary on account of taxes or other governmental charges. The depositary may refuse to make any payment or distribution, or any transfer, exchange or withdrawal of any Depositary Shares or the Preference Shares until such taxes or other governmental charges are paid.

Withdrawal of Preference Shares

Unless the related Depositary Shares have been previously called for redemption, a holder of Depositary Shares may surrender his or her depositary receipts at the corporate trust office of the depositary, pay any taxes, charges and fees provided for in the applicable Deposit Agreement and comply with any other requirements of the applicable Deposit Agreement for the number of whole Preference Shares and any money or other property represented by such holder's depositary receipts. A holder of Depositary Shares who exchanges such depositary receipts for Preference Shares will be entitled to receive whole Preference Shares on the basis set forth herein; partial Preference Shares will not be issued.

However, holders of whole Preference Shares will not be entitled to deposit those shares under the respective Deposit Agreement or to receive Depositary Shares for those shares after the withdrawal. If the Depositary Shares surrendered by the holder in connection with the withdrawal exceed the number of Depositary Shares that represent the number of whole Preference Shares to be withdrawn, the depositary will deliver to the holder at the same time new Depositary Shares evidencing the excess number of Depositary Shares.

Redemption of Depositary Shares

If the Preference Shares underlying the Depositary Shares are redeemed, in whole or in part, a corresponding number of the applicable series of Depositary Shares will be redeemed with the proceeds received by the depositary from the redemption of the related Preference Shares held by the depositary. The redemption price per Depositary Share will be equal to 1/1,000th of the applicable per share redemption price payable in respect of such Preference Shares.

Whenever we redeem Preference Shares of any series held by the depositary, the depositary will redeem, as of the same redemption date, the number of Depositary Shares representing an interest in the Preference Shares of such series so redeemed. If less than all of the outstanding Depositary Shares of a particular series are to be redeemed, the depositary will select the Depositary Shares of that series to be redeemed by lot or pro rata or in such other manner as may be determined by the depositary to be fair and equitable and provided that such methodology is consistent with any applicable stock exchange rules. The depositary will mail (or otherwise transmit by an authorized method) notice of redemption to holders of the depositary receipts not less than 30 days (with respect to Series A Depositary Shares) and 15 days (with respect to Series B Depositary Shares, Series C Depositary Shares and Series D Depositary Shares) and not more than 60 days prior to the date fixed for redemption of the Depositary Shares representing an interest in our Preference Shares.

Voting Rights

Holders of the Depositary Shares representing an interest in the Preference Shares will not have any voting rights, except for the limited voting rights described under "Description of the Preference Shares—Voting Rights."

Because each Depositary Share represents a 1/1,000th interest in a Preference Share, holders of depositary receipts will be entitled to 1/1,000th of a vote per Preference Share under those limited circumstances in which holders of the Preference Shares are entitled to vote. Holders of the Depositary Shares must act through the depositary to exercise any voting rights in respect of the Preference Shares. Although each

Depositary Share is entitled to 1/1,000th of a vote, the depositary can vote only whole Preference Shares. While the depositary will aggregate the fractional voting interests of individual holders of depository receipts to vote the maximum number of whole Preference Shares in accordance with the instructions it receives, any remaining votes of holders of Depositary Shares not representing a whole Preference Share will not be voted.

When the depositary receives notice of any meeting at which the holders of the Preference Shares are entitled to vote, the depositary will mail (or otherwise transmit by an authorized method) the information contained in the notice of meeting to the record holders of the Depositary Shares relating to the applicable Preference Shares. Each record holder of the Depositary Shares on the record date, which will be the same date as the record date for the Preference Shares, may instruct the depositary to vote the number of Preference Share votes represented by the holder's Depositary Shares. To the extent practicable, the depositary will vote the number of Preference Share votes represented by Depositary Shares in accordance with the instructions it receives.

We will agree to take all reasonable actions that the depositary determines are necessary to enable the depositary to vote as instructed. To the extent that the depositary does not receive specific instructions from the holders of any Depositary Shares representing an interest in the applicable Preference Shares, it will not vote the number of the Preference Share votes represented by such Depositary Shares.

Preemptive and Conversion Rights

The holders of the Depositary Shares will not have any preemptive right to subscribe to any additional issue of our shares of any class or series or to any of our securities convertible into such shares and will not have the right to convert Depositary Shares representing an interest in Preference Shares into, or exchange Depositary Shares representing an interest in Preference Shares for, any of our other securities or property.

Amendment and Termination of the Deposit Agreement

The forms of depositary receipt evidencing the Depositary Shares and any provision of the Deposit Agreements may be amended by agreement between us and the depositary. However, any amendment that materially and adversely alters the rights of the existing holders of Depositary Shares or would be materially and adversely inconsistent with the rights of holders of Preference Shares will not be effective unless such amendment has been approved by the record holders of Depositary Shares representing at least the amount of the Depositary Shares then outstanding necessary to approve any amendment that would alter or abrogate the special rights of the applicable series of Preference Shares. We may terminate a Deposit Agreement with the consent of holders of a majority of then outstanding Depositary Shares of the applicable series. A Deposit Agreement will automatically terminate if all outstanding Depositary Shares of the applicable series have been redeemed or if there has been made a final distribution in respect of the applicable series of Preference Shares in connection with our liquidation, dissolution or winding-up, and such distribution has been made to the holders of the Depositary Shares of the applicable series.

Fees, Charges and Expenses of Depositary

We will pay all transfer and other taxes, assessments, and governmental charges arising solely from the existence of the depositary arrangements. Holders of depositary receipts will pay transfer and other taxes, assessments, and governmental charges and any other charges as are expressly provided in the applicable Deposit Agreement to be for their accounts. The depositary may refuse to effect any transfer of a depositary receipt or any withdrawals of Preference Shares evidenced by a depositary receipt until all taxes, assessments, and governmental charges with respect to the depositary receipt or Preference Shares are paid by their holders.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us notice of its election to do so, and we may at any time remove the depositary, with any resignation or removal to take effect upon the appointment of a successor depositary and its acceptance of such appointment. The successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least $50 million. If a successor is not appointed within 60 days, the outgoing depositary may petition a court to appoint a successor.

Miscellaneous

The depositary will forward to the holders of Depositary Shares all of our reports and communications which are delivered to the depositary and which we are required to furnish to the holders of Preference Shares.

Neither we nor the depositary will be liable if we are prevented or delayed by law or any circumstance beyond our control in performing our obligations under the applicable Deposit Agreement. All of our obligations as well as the depositary's obligations under the respective Deposit Agreement are limited to performance in good faith of our respective duties set forth in the applicable Deposit Agreement, and neither of us will be obligated to prosecute or defend any legal proceeding relating to any Depositary Shares or Preference Shares unless provided with satisfactory indemnity. We, and the depositary, may rely upon written advice of counsel or accountants, or information provided by persons presenting Preference Shares for deposit, holders of Depositary Shares, or other persons believed to be competent and on documents believed to be genuine.

Listing of the Depositary Shares

Our Series A Depositary Shares are listed on the NYSE under the symbol "ATHPrA."

Our Series B Depositary Shares are listed on the NYSE under the symbol "ATHPrB."

Our Series C Depositary Shares are listed on the NYSE under the symbol "ATHPrC."

Our Series D Depositary Shares are listed on the NYSE under the symbol "ATHPrD."

Transfer Agent, Registrar, Dividend Disbursing Agent and Redemption Agent

Computershare Trust Company, N.A. is the transfer agent and registrar and Computershare Inc. is the dividend disbursing agent and redemption agent, for the Depositary Shares representing an interest in the Preference Shares.

Book-Entry; Delivery and Form

The Depositary Shares will be represented by one or more global securities that will be deposited with and registered in the name of DTC or its nominee. This means that we will not issue certificates to holders of the Depositary Shares except in limited circumstances. The global securities will be issued to DTC, the depository for the Depositary Shares, who will keep a computerized record of its participants (for example, a holder's broker) whose clients have purchased the Depositary Shares. Each participant will then keep a record of its clients. Unless exchanged in whole or in part for a certificated security, a global security may not be transferred. However, DTC, its nominees, and their successors may transfer a global security as a whole to one another. Beneficial interests in the global securities will be shown on, and transfers of the global securities will be made only through, records maintained by DTC and its participants.

We will wire dividend payments to DTC's nominee and we will treat DTC's nominee as the owner of the global securities for all purposes. Accordingly, we will have no direct responsibility or liability to pay amounts due on the global securities to any holder or any other beneficial owners in the global securities.

Any redemption notices will be sent by us directly to DTC, who will in turn inform the direct participants, who will then contact beneficial holders.

It is DTC's current practice, upon receipt of any payment of dividends or liquidation amount, to credit direct participants' accounts on the payment date based on their holdings of beneficial interests in the global securities as shown on DTC's records. In addition, it is DTC's current practice to assign any consenting or voting rights to direct participants whose accounts are credited with Preference Shares on a record date, by using an omnibus proxy. Payments by participants to owners of beneficial interests in the global securities, and voting by participants, will be based on the customary practices between the participants and owners of beneficial interests, as is the case with the Preference Shares held for the account of customers registered in "street name." However, payments will be the responsibility of the participants and not of DTC or us.

Depositary Shares represented by global securities will be exchangeable for certificated securities with the same terms in authorized denominations only if:

- DTC is unwilling or unable to continue as depositary or if DTC ceases to be a clearing agency registered under applicable law and a successor depositary is not appointed by us within 90 days; or
- we determine not to require all of the Depositary Shares to be represented by global securities.

If the book-entry-only system is discontinued, the transfer agent will keep the registration books for the Depositary Shares at its corporate office.

Description of The Preference Shares

The following description of our Preference Shares is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the pertinent sections of our Bye-laws and the Certificates of Designations creating the respective series of Preference Shares, each of which is incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.10 is a part, and to applicable Bermuda law.

General

The Certificates of Designations set forth the specific rights, preferences, limitations and other terms of the Preference Shares. Each series of Preference Shares constitutes a series of our authorized preference shares. There is no issued class or series of share capital that ranks senior to the Preference Shares, and each series of Preference Shares ranks equally with the other with respect to the payment of dividends and the distribution of assets on any liquidation, dissolution or winding-up of the Company. See "—Ranking" below.

We will generally be able to pay dividends and distributions upon liquidation, dissolution or winding-up only out of lawfully available funds for such payment (i.e., after taking account of all indebtedness and other non-equity claims). The Preference Shares are fully paid and nonassessable. Holders of the Preference Shares do not have preemptive or subscription rights to acquire more of our capital shares.

The Preference Shares are not convertible into, or exchangeable for, shares of any other class or series of shares or other securities of ours, except under the circumstances set forth under "—Substitution or Variation" below. The Preference Shares have no stated maturity and will not be subject to any sinking fund, retirement fund or purchase fund or other obligation of the Company to redeem, repurchase or retire the Preference Shares.

The depositary is the sole holder of Preference Shares. The holders of Depositary Shares are required to exercise their proportional rights in the Preference Shares through the depositary, as described in "Description of the Depositary Shares."

Ranking

Each series of Preference Shares:

- will rank senior to our junior shares (as defined below);
- will rank junior to our senior shares (as defined below) and any existing and future indebtedness of the Company and any of our subsidiaries;
- will rank equally with our parity shares (as defined below), including the other series of Preference Shares;
- will not represent an interest in any of our subsidiaries; and
- will be structurally subordinated in right of payment to all obligations of our subsidiaries. Under Bermuda law, in a winding-up of any of our subsidiaries, the Preference Shares will be subordinated to all existing and future policyholders' obligations of our subsidiaries.

As used herein, "junior shares" means shares of any class or series that ranks junior to the Preference Shares either as to the payment of dividends or as to the distribution of assets upon any liquidation, dissolution or winding-up of the Company. As of January 31, 2021, our junior shares outstanding consisted solely of our Class A Common Shares.

As used herein, "senior shares" means shares of any class or series that ranks senior to the Preference Shares either as to the payment of dividends or as to the distribution of assets upon any liquidation, dissolution or winding-up of the Company. As of January 31, 2021, we had no senior shares outstanding.

As used herein, "parity shares" means shares of any class or series that ranks equally with the Preference Shares as to the payment of dividends and the distribution of assets on any liquidation, dissolution or winding-up of the Company. As of January 31, 2021, the four series of Preference Shares were our only parity shares outstanding.

Unless our shareholders otherwise provide, our board of directors may from time to time create and issue additional preference shares of other classes and series and fix their relative rights, preferences and limitations. Any such preference shares could be senior shares or parity shares.

Dividends

Dividends on the Preference Shares are non-cumulative. Consequently, if our board of directors or a duly authorized committee of our board of directors does not authorize and declare a dividend for any dividend period, holders of the Preference Shares will not be entitled to receive a dividend for such period, and such undeclared dividend will not accumulate and will not be payable. We will have no obligation to pay dividends for a dividend period after the dividend payment date for such period if our board of directors or a duly authorized committee of our board of directors has not declared such dividend before the related dividend payment date, whether or not dividends are declared for any subsequent dividend period with respect to the Preference Shares.

Holders of Preference Shares will be entitled to receive non-cumulative cash dividends, only when, as and if declared by our board of directors or a duly authorized committee of our board of directors, out of funds legally available for the payment of dividends, from and including the original issue date, quarterly in arrears on the 30th day of March, June, September and December of each year.

To the extent declared, to but excluding June 30, 2029, which we refer to as the “fixed rate period,” dividends on our Series A Preference Shares will be payable in an amount per share equal to 6.35% of the liquidation preference per annum (equivalent to $1,587.50 per share and $1.5875 per Series A Depositary Share per annum). Commencing on June 30, 2029, which is the commencement date of the “floating rate period,” dividends on our Series A Preference Shares will be payable on a non-cumulative basis, when, as and if declared by our board of directors or a duly authorized committee of the board of directors out of funds legally available for the payment of dividends in an amount per share equal to a floating annual rate, reset quarterly, of three-month LIBOR plus 4.253% of the liquidation preference per annum.

To the extent declared, dividends on our Series B Preference Shares will be payable in an amount per share equal to 5.625% of the liquidation preference per annum (equivalent to $1,406.25 per share and $1.40625 per Series B Depositary Share per annum).

To the extent declared, to but excluding September 30, 2025 (the “First Reset Date”), dividends on our Series C Preference Shares will be payable on a non-cumulative basis, with respect to each dividend period, in an amount per share equal to 6.375% of the liquidation preference per annum (equivalent to $1,593.75 per share and $1.59375 per Series C Depositary Share per annum). Commencing on the First Reset Date, dividends on the Series C Preference Shares will be payable, on a non-cumulative basis, with respect to each dividend period, only when, as and if declared by our board of directors or a duly authorized committee thereof, during each reset period (as described below), at a rate per annum equal to the Five-year U.S. Treasury Rate as of the most recent reset dividend determination date (as described below) plus 5.97% of the liquidation preference per annum. A “reset date” means the First Reset Date and each date falling on the fifth anniversary of the preceding reset date. Reset dates, including the First Reset Date, will not be adjusted for business days. A “reset period” means the period from, and including, the First Reset Date to, but excluding, the next following reset date and thereafter each period from, and including, each reset date to, but excluding, the next following reset date. A “reset dividend determination date” means, in respect of any reset period, the day falling three business days prior to the beginning of such reset period. The “Five-year U.S. Treasury Rate” means, as of any reset dividend determination date, as applicable, (i) an interest rate (expressed as a decimal) determined to be the per annum rate equal to the average of the yields to maturity for the five business days immediately prior to such reset dividend determination date for U.S. Treasury securities with a maturity of five years from the next reset date and trading in the public securities markets or (ii) if there is no such published U.S. Treasury security with a maturity of five years from the next reset date and trading in the public securities markets, then the rate will be determined by interpolation between the average of the yields to maturity for the five business days immediately prior to such reset dividend determination date for two series of U.S. Treasury securities trading in the public securities market, (A) one maturing as close as possible to, but earlier than, the reset date following the next succeeding reset dividend determination date, and (B) the other maturity as close as possible to, but later than, the reset date following the next succeeding reset dividend determination date, in each case as published in the most recent H.15 under the caption "Treasury constant maturities." The Five-year U.S. Treasury Rate will be determined by the calculation agent on the applicable reset dividend determination date. If the Five-year U.S. Treasury Rate cannot be determined pursuant to the methods described in clauses (i) or (ii) above, then the Five-year U.S. Treasury Rate will be the same interest rate determined for the prior reset dividend determination date. "H.15" means the statistical release designated as "H.15 Daily Update," or any successor publication, published by the Board of Governors of the U.S. Federal Reserve System, and "most recent H.15" means the H.15 published closest in time, but at or prior, to the close of business on the reset dividend determination date. With respect to Series C Preference Shares, "Calculation agent" means the calculation agent appointed by us prior to the First Reset Date, which may be a person or entity affiliated with us.

To the extent declared, dividends on our Series D Preference Shares will be payable in an amount per share equal to 4.875% of the liquidation preference per annum (equivalent to $1,218.75 per share and $1.21875 per Series D Depositary Share per annum).

Dividends, if so declared, will be payable to holders of record of the Preference Shares as they appear on our books on our register of members at 5:00 p.m. (New York City time) on the applicable record date, which shall be the 15th calendar day before that dividend payment date or such other record date fixed by our board of directors (or a duly authorized committee of the board of directors) that is not more than 60 nor less than 10 days prior to such dividend payment date (each, a "dividend record date"). These dividend record dates will apply regardless of whether a particular dividend record date is a business day and a Bermuda business day. As used herein, "business day" means a day that is a Monday, Tuesday, Wednesday, Thursday or Friday and is not a day on which banking institutions in New York City generally are authorized or obligated by law or executive order to close. As used herein, "Bermuda business day" means any day other than a day on which commercial banks in Bermuda are authorized or obligated by law, executive order or regulation to close.

A dividend period is the period from and including a dividend payment date to, but excluding, the next dividend payment date. During the fixed rate period with respect to Series A Preference Shares and at all times with respect to the Series B Preference Shares, the Series C Preference Shares and the Series D Preference Shares, if any dividend payment date falls on a day that is not a business day and a Bermuda business day, the payment of dividends will be made on the first business day that is also a Bermuda business day following such dividend payment date, without accrual to the actual payment date.

With respect to Series A Preference Shares, during the floating rate period, if any dividend payment date other than a redemption date falls on a day that is not a business day and a Bermuda business day, the dividend payment date will be postponed to the next day that is a business day and is a Bermuda business day and, as a result, the corresponding dividend period shall be extended. If a redemption date falls on a day that is not a business day and a Bermuda business day, the payment of dividends and redemption price will be made on the first business day that is also a Bermuda business day following such redemption date, without accrual to the actual payment date.

During the fixed rate period, with respect to Series A Preference Shares, and at all times, with respect to Series B Preference Shares, the Series C Preference Shares and the Series D Preference Shares, dividends payable will be computed on the basis of a 360-day year consisting of twelve 30-day months with respect to a full dividend period, and on the basis of the actual number of days elapsed during the period with respect to a dividend period other than a full dividend period.

With respect to the Series A Preference Shares, during the floating rate period, dividends payable will be computed by multiplying the dividend rate for that dividend period by a fraction, the numerator of which will be the actual number of days elapsed during that dividend period (including the first day of the dividend period and excluding the last day, which is the dividend payment date), and the denominator of which will be 360, and by multiplying the result by the liquidation preference of the Series A Preference Shares.

So long as any Preference Shares of a particular series remain outstanding, unless the full dividend for the last completed dividend period on all outstanding Preference Shares of such series and all outstanding parity shares have been declared and paid (or declared and a sum sufficient for the payment thereof has been set aside):

- no dividend shall be paid or declared on our Class A Common Shares or any other junior securities or any parity shares (except, in the case of the parity shares, on a pro rata basis with each other series of outstanding Preference Shares as described below), other than a dividend payable solely in our Class A Common Shares, other junior securities or (solely in the case of parity shares) other parity shares, as applicable; and

- no Class A Common Shares, other junior securities or parity shares shall be purchased, redeemed or otherwise acquired for consideration by us, directly or indirectly (other than (i) as a result of a reclassification of junior shares for or into other junior securities, or a reclassification of parity shares for or into other parity shares, or the exchange or conversion of one junior share for or into another junior security or the exchange or conversion of one parity share for or into another parity share, (ii) through the use of the proceeds of a substantially contemporaneous sale of junior shares or (solely in the case of parity shares) other parity shares, as applicable, or (iii) as required by or necessary to fulfill the terms of any employment contract, benefit plan or similar arrangement with or for the benefit of one or more employees, directors or consultants).

When dividends are not paid (or declared and a sum sufficient for the payment thereof has been set aside) in full on any dividend payment date (or, in the case of parity shares having dividend payment dates different from the dividend payment dates pertaining to the Preference Shares, on a dividend payment date falling within the related dividend period for the Preference Shares) on the Preference Shares and any parity shares, all dividends declared by our board of directors or a duly authorized committee of the board of directors on the Preference Shares and all such parity shares and payable on such dividend payment date (or, in the case of parity shares having dividend payment dates different from the dividend payment dates pertaining to the Preference Shares, on a dividend payment date falling within the related dividend period for the Preference Shares) shall be declared by the board of directors or such committee of the board of directors pro rata in accordance with the respective aggregate liquidation preferences of the Preference Shares and any parity shares so that the respective amounts of such dividends shall bear the same ratio to each other as all declared but unpaid dividends per Preference Share and all parity shares payable on such dividend payment date (or, in the case of parity shares having dividend payment dates different from the dividend payment dates pertaining to the Preference Shares, on a dividend payment date falling within the related dividend period for the Preference Shares) bear to each other.

Dividends on the Preference Shares will not be declared, paid or set aside for payment if we fail to comply, or if such act would cause us to fail to comply, with applicable laws, rules and regulations (including any applicable capital adequacy guidelines established by the "capital regulator").

Determination of Floating Rate

Beginning on June 30, 2029, dividends on the Series A Preference Shares will be payable on a non-cumulative basis, only when, as and if declared, at a floating annual rate, which is reset quarterly, equal to three-month LIBOR plus 4.253% of the liquidation preference per annum.

The floating rate will be reset quarterly on the first day of each dividend period (each, a "LIBOR reset date"). During the floating rate period, if any LIBOR reset date falls on a day that is not a business day and a Bermuda business day, the LIBOR reset date will be postponed to the next day that is a business day and a Bermuda business day, which will also be the dividend payment date for the preceding dividend period.

"Three-month LIBOR" means, with respect to any LIBOR determination date:

(a) the rate for three-month deposits in U.S. dollars as that rate appears on the Reuters Page LIBOR01 (as described below) as of 11:00 a.m. (London time) on the LIBOR determination date for that floating rate period, unless fewer than two such offered rates so appear;

(b) if fewer than two offered rates appear, or no rate appears, as the case may be, on the LIBOR determination date for that floating rate period on the Reuters Page LIBOR01, the rate calculated by the calculation agent based on two offered quotations after requesting the principal London offices of each of four major reference banks (which will not include our affiliates) in the London interbank market, as selected and identified by us, to provide the calculation agent with offered quotations for deposits in U.S. dollars for the period of three months, commencing on the first day of that floating rate period, to prime banks in the London interbank markets at approximately 11:00 a.m. (London time) on that date and in a principal amount that is representative for a single transaction in U.S. dollars in that market at that time;

(c) if fewer than two offered quotations referred to in clause (b) are provided as requested, the rate calculated by the calculation agent as the arithmetic mean of the rates quoted at approximately 11:00 a.m. (New York City time) on the LIBOR determination date for that floating rate period by three major banks (which will not include our affiliates) in New York City selected and identified by us for loans in U.S. dollars to leading European banks having a three-month maturity and in a principal amount that is representative for a single transaction in U.S. dollars in that market at that time; or

(d) if the banks so selected by the calculation agent are not quoting as mentioned in clause (c), the calculation agent, after consulting such sources as it deems comparable to any of the foregoing quotations or to Reuters Page LIBOR01, or any such source as it deems reasonable from which to estimate three-month LIBOR or any of the foregoing lending rates, shall determine three-month LIBOR for the applicable dividend period in its sole discretion.

Notwithstanding the foregoing clauses (a)—(d), if we or the calculation agent determine that LIBOR has been permanently discontinued, the calculation agent will use, as a substitute for LIBOR and for each future LIBOR determination date, the alternative reference rate (the "Alternative Rate") selected by a central bank, reserve bank, monetary authority or any similar institution (including any committee or working group thereof) that is consistent with accepted market practice. As part of such substitution, the calculation agent will, after consultation with us, make such adjustments ("Adjustments") to the

Alternative Rate or the spread thereon, as well as the business day convention, LIBOR determination dates and related provisions and definitions, in each case that are consistent with accepted market practice for the use of such Alternative Rate for debt obligations or preferred stock obligations such as the Series A Preference Shares. If the calculation agent determines, in consultation with us, that there is no clear market consensus as to whether any rate has replaced LIBOR in customary market usage, (i) the calculation agent shall have the right to resign as calculation agent and (ii) we will appoint, in our sole discretion, a new calculation agent to replace the calculation agent, to determine the Alternative Rate and make any Adjustments thereon, and whose determinations will be binding on us and the holders of the Series A Preference Shares. If, however, the calculation agent determines that LIBOR has been discontinued, but for any reason an Alternative Rate has not been determined, three-month LIBOR determined as of a LIBOR determination date shall be three-month LIBOR in effect on such LIBOR determination date; *provided, however*, that if this sentence is applicable with respect to the first LIBOR determination date related to the floating rate period, the dividend rate, business day convention and manner of calculating dividends applicable during the fixed rate period will remain in effect during the floating rate period. Note that there can be no assurance that the Alternative Rate and fallbacks described above will be effective at preventing or mitigating disruption as a result of the transition from LIBOR. Please see the section entitled "Risk Factors" located in the Annual Report on Form 10-K of which this Exhibit 4.6 is a part for additional details.

With respect to the Series A Preference Shares, "calculation agent" means the calculation agent appointed by us prior to June 30, 2029, which may be a person or entity affiliated with us.

"LIBOR determination date" means the second London banking day immediately preceding the applicable LIBOR reset date.

"London banking day" means a day on which commercial banks are open for business, including dealings in deposits in U.S. dollars, in London.

"Reuters Page LIBOR01" means the display so designated on Reuters 3000 Xtra (or any successor service) (or any other page as may replace such page on such service) or such other service as may be nominated by us as the information vendor for the purpose of displaying the London interbank offer rates of major banks for U.S. dollars deposits.

Certain Restrictions on Payment of Dividends

The Companies Act limits our ability to pay dividends and distributions to shareholders. Under Bermuda law, we may not lawfully declare or pay a dividend if we have reasonable grounds for believing that we are, or would after payment of the dividend be, unable to pay our liabilities as they become due, or that the realizable value of our assets would, after payment of the dividend, be less than the aggregate value of our liabilities.

Because we are a holding company and substantially all of our operations are conducted by our main operating subsidiaries, our ability to meet any ongoing cash requirements and to pay dividends will depend on our ability to obtain cash dividends or other cash payments or obtain loans from these subsidiaries.

Payment of Additional Amounts

We will make all payments on the Preference Shares free and clear of and without withholding or deduction at source for, or on account of, any present or future taxes, fees, duties, assessments or governmental charges of whatever nature imposed or levied by or on behalf of any relevant taxing jurisdiction (as defined under "—Optional Redemption—Change in Tax Law"), unless such taxes, fees, duties, assessments or governmental charges are required to be withheld or deducted by (i) the laws (or any regulations or rulings promulgated thereunder) of any relevant taxing jurisdiction or (ii) an official position regarding the application, administration, interpretation or enforcement of any such laws, regulations or rulings (including, without limitation, a holding by a court of competent jurisdiction or by a taxing authority in any relevant taxing jurisdiction). If a withholding or deduction at source is required, we will, subject to certain limitations and exceptions described below, pay to the holders of the Preference Shares such additional amounts (the "additional amounts") as dividends as may be necessary so that every net payment, after such withholding or deduction (including any such withholding or deduction from such additional amounts), will be equal to the amounts we would otherwise have been required to pay had no such withholding or deduction been required.

We will not be required to pay any additional amounts for or on account of:

(a) any tax, fee, duty, assessment or governmental charge of whatever nature that would not have been imposed but for the fact that such holder was a resident, domiciliary or national of, or engaged in business or maintained a permanent establishment or was physically present in, the relevant taxing jurisdiction or any political subdivision thereof or otherwise had some connection with the relevant taxing jurisdiction other than by reason of the mere ownership of, or receipt of payment under, the Preference Shares or any Preference Shares presented for payment (where presentation is required for payment) more than 30 days after the Relevant Date (except to the extent that the holder would have been entitled to such amounts if it had presented such shares for payment on any day within such 30 day period). The "Relevant Date" means, in respect of any payment, the date on which such payment first becomes due and payable, but if the full amount of the moneys payable has not been received by the dividend disbursing agent on or prior to such due date, it means the first date on which the full amount of such moneys having been so received and being available for payment to holders and notice to that effect shall have been duly given to the holders of the Preference Shares;

(b) any estate, inheritance, gift, sale, transfer, personal property or similar tax, assessment or other governmental charge or any tax, assessment or other governmental charge that is payable otherwise than by withholding or deduction from payment of the liquidation preference or of any dividends on the Preference Shares;

(c) any tax, fee, duty, assessment or other governmental charge that is imposed or withheld by reason of the failure by the holder of such Preference Shares to comply with any reasonable request by us addressed to the holder within 90 days of such request (i) to provide information concerning the nationality, residence or identity of the holder or (ii) to make any declaration or other similar claim or satisfy any information or reporting requirement that is required or imposed by statute, treaty, regulation or administrative practice of the relevant taxing jurisdiction as a precondition to exemption from all or part of such tax, fee, duty, assessment or other governmental charge;

(d) any tax, fee, duty, assessment or governmental charge required to be withheld or deducted under Sections 1471 through 1474 of the Code (or any Treasury Regulations or other administrative guidance thereunder); or

(e) any combination of items (a), (b), (c), and (d).

In addition, we will not pay additional amounts with respect to any payment on the Preference Shares to any holder that is a fiduciary, partnership, limited liability company or other pass-through entity other than the sole beneficial owner of such Preference Shares if such payment would be required by the laws of the relevant taxing jurisdiction to be included in the income for tax purposes of a beneficiary or partner or settlor with respect to such fiduciary or a member of such partnership, limited liability company or other pass-through entity or a beneficial owner to the extent such beneficiary, partner or settlor would not have been entitled to such additional amounts had it been the holder of the Preference Shares.

If there is a substantial probability that we or any entity formed by a consolidation, merger or amalgamation (or similar transaction) involving us or the entity to which we convey, transfer or lease substantially all of our properties and assets (a "successor company") would become obligated to pay any additional amounts as a result of a change in tax law, we will also have the option to redeem the Preference Shares as described in "—Optional Redemption—Change in Tax Law."

Liquidation Rights

Upon any voluntary or involuntary liquidation, dissolution or winding-up of the Company, holders of the Preference Shares are entitled to receive out of our assets available for distribution to shareholders, after satisfaction of liabilities to creditors and senior securities, if any, but before any distribution of assets is made to holders of our Class A Common Shares or any other junior securities, a liquidating distribution in the amount of $25,000 per Preference Share (equivalent to $25.00 per Depositary Share) plus declared and unpaid dividends, if any, to the date fixed for distribution.

After payment of the full amount of the distributions to which they are entitled, holders of the Preference Shares will have no right or claim to any of our remaining assets. In any such distribution, if our assets are not sufficient to pay the liquidation preferences in full to all holders of Preference Shares and to the holders of any parity shares, the holders of Preference Shares and all holders of any parity shares will be paid pro rata in accordance with the respective aggregate liquidation preferences of those holders, but only to the extent we have assets available after satisfaction of all liabilities to creditors and holders of senior securities. In any such distribution, the "liquidation preference" of any holder of preference shares means the amount payable to such holder in such distribution (assuming no limitation on assets available for distribution), including any declared but unpaid dividends (and any unpaid, accrued cumulative dividends, whether or not declared, in the case of any holder of shares on which dividends accrue on a cumulative basis). If the liquidation preference has been paid in full to all holders of the Preference Shares and any holders of parity shares, the holders of our junior securities shall be entitled to receive all of our remaining assets according to their respective rights and preferences.

For purposes of this section, a consolidation, amalgamation, merger, arrangement, reincorporation, de-registration, reconstruction, reorganization or other similar transaction involving the Company or the sale or transfer of all or substantially all of our shares, property or business will not be deemed to constitute a liquidation, dissolution or winding-up.

Mandatory Redemption

The Preference Shares are not subject to any mandatory redemption, sinking fund, retirement fund, purchase fund or other similar provisions. Holders of the Preference Shares will have no right to require the redemption or repurchase of the Preference Shares.

Optional Redemption

On or After the Applicable Redemption Commencement Date (as Defined Below)

Except as described below under this “Optional Redemption” section, the Series A Preference Shares are not redeemable prior to June 30, 2029, the Series B Preference Shares are not redeemable prior to September 30, 2024 and the Series D Preference Shares are not redeemable prior to December 30, 2025 (each date, as the context requires, the “Applicable Redemption Commencement Date”). On and after the Applicable Redemption Commencement Date, the respective series of Preference Shares will be redeemable at our option, for cash, in whole or from time to time in part, upon not less than 30 days’ (in the case of Series A Preference Shares) and 15 days’ (in the case of Series B Preference Shares and Series D Preference Shares) nor more than 60 days’ prior written notice, at a redemption price equal to $25,000 per Preference Share (equivalent to $25.00 per Depositary Share), plus declared and unpaid dividends, if any, to, but excluding, the date of redemption, without interest on such unpaid dividends.

Par Call Redemption

We may redeem the Series C Preference Shares at our option, in whole or in part, from time to time, during any par call period, at a redemption price equal to $25,000 per share (equivalent to $25.00 per Depositary Share), plus the amount of declared and unpaid dividends, if any, without interest on such unpaid dividends. In the event the applicable reset date that is the redemption date is not a business day, the redemption price will be paid on the next business day without any adjustment to the amount of the redemption price paid.

“Par call period” means the period from and including June 30 of each year in which there is a reset date (which is three months prior to the reset date in such year) to and including such reset date.

Voting Event

Each series of Preference Shares is redeemable at our option in whole, but not in part, at any time (i) prior to the Applicable Redemption Commencement Date (in the case of Series A Preference Shares, Series B Preference Shares and Series D Preference Shares) or (ii) outside of a par call period (in the case of Series C Preference Shares) upon the time of notice to the common shareholders of a proposal for an amalgamation or any proposal for any other matter that requires, as a result of any changes in Bermuda law, an affirmative vote of the holders of the Preference Shares at the time outstanding, whether voting as a separate series or together with any other series of Preference Shares as a single class, at a redemption price of $26,000 per Preference Share (equivalent to $26.00 per Depositary Share), plus declared and unpaid dividends, if any, to, but excluding, the date of redemption, without accumulation of any undeclared dividend, and without interest.

Capital Disqualification Event

The Preference Shares are redeemable at our option at any time in whole, but not in part, upon not less than 30 days’ (in the case of Series A Preference Shares) or 15 days’ (in the case of Series B Preference Shares, Series C Preference Shares and Series D Preference Shares) nor more than 60 days’ prior written notice, at a redemption price of $25,000 per share (equivalent to $25.00 per Depositary Share) plus declared and unpaid dividends, if any, to, but excluding, the date of redemption, without interest on such unpaid dividends, at any time within 90 days following the occurrence of the date on which we have reasonably determined that, as a result of (i) any amendment to, or change in, the laws or regulations of the jurisdiction of our “capital regulator” that is enacted or becomes effective after the initial issuance of the Preference Shares; (ii) any proposed amendment to, or change in, those laws or regulations that is announced or becomes effective after the initial issuance of the Preference Shares; or (iii) any official administrative decision or judicial decision or administrative action or other official pronouncement interpreting or applying those laws or regulations that is announced after the initial issuance of the Preference Shares, a "capital disqualification event" (as defined below) has occurred.

As used herein, "capital adequacy regulations" means the solvency margin, capital adequacy regulations or any other regulatory capital rules applicable to us from time to time on an individual or group basis pursuant to the laws of any applicable jurisdiction and which set out the requirements to be satisfied by financial instruments to qualify as solvency margin or additional solvency margin or regulatory capital (or any equivalent terminology employed by the then applicable capital adequacy regulations).

As used herein, a "capital disqualification event" has occurred if the Preference Shares do not qualify, as "Tier 1 Capital" (or a substantially similar concept) for purposes of the capital adequacy rules or regulatory standards of any "capital regulator" to which we are or will be subject; *provided* that the proposal or adoption of any criterion that is substantially the same as the corresponding criterion in the capital adequacy rules of the Federal Reserve Board applicable to bank holding companies as of the date of the initial issuance of the Preference Shares will not constitute a regulatory capital event.

As used herein, "capital regulator" means any governmental agency, instrumentality or standard-setting organization as may then have group-wide oversight of our regulatory capital.

Change in Tax Law

The Preference Shares are redeemable at our option at any time, in whole, but not in part, upon not less than 30 days' (in the case of Series A Preference Shares) or 15 days' (in the case of Series B Preference Shares, Series C Preference Shares and Series D Preference Shares) nor more than 60 days' prior written notice, at a redemption price of $25,000 per share (equivalent to $25.00 per Depositary Share) plus declared and unpaid dividends, if any, to, but excluding, the date of redemption, without interest on such unpaid dividends, if as a result of a change in tax law (as defined below) there is, in our reasonable determination, a substantial probability that we or any successor company would be required to pay any additional amounts on the next succeeding dividend payment date with respect to the Preference Shares and the payment of those additional amounts cannot be avoided by the use of any reasonable measures available to us or any successor company (a "tax event").

A "change in tax law" that would trigger the provisions of the preceding paragraph would be (i) a change in or amendment to laws, regulations or rulings of any relevant taxing jurisdiction (as defined below), (ii) a change in the official application or interpretation of those laws, regulations or rulings, (iii) any execution of or amendment to any treaty affecting taxation to which any relevant taxing jurisdiction is party or (iv) a decision rendered by a court of competent jurisdiction in any relevant taxing jurisdiction, whether or not such decision was rendered with respect to us, in each case described in (i)-(iv) above occurring after the date of issuance of the applicable series of Preference Shares; provided that in the case of a relevant taxing jurisdiction other than Bermuda in which a successor company is organized, such change in tax law must occur after the date on which we consolidate, merge or amalgamate (or engage in a similar transaction) with the successor company, or convey, transfer or lease substantially all of our properties and assets to the successor company, as applicable.

As used herein, a "relevant taxing jurisdiction" is (i) Bermuda or any political subdivision or governmental authority of or in Bermuda with the power to tax, (ii) any jurisdiction from or through which we or our dividend disbursing agent are making payments on the Preference Shares or any political subdivision or governmental authority of or in that jurisdiction with the power to tax or (iii) any other jurisdiction in which we or a successor company is organized or generally subject to taxation or any political subdivision or governmental authority of or in that jurisdiction with the power to tax.

Prior to any redemption upon a tax event, we will be required to deliver to the transfer agent for the Preference Shares a certificate signed by one of our officers confirming that a tax event has occurred and is continuing (as reasonably determined by us).

Rating Agency Event

The Preference Shares are redeemable at our option at any time, in whole, but not in part, upon not less than 30 days' (in the case of Series A Preference Shares) or 15 days' (in the case of Series B Preference Shares, Series C Preference Shares and Series D Preference Shares) nor more than 60 days' prior written notice, at a redemption price of $25,500 per share (equivalent to $25.50 per Depositary Share) plus declared and unpaid dividends, if any, to, but excluding, the date of redemption, without interest on such unpaid dividends, within 90 days after the occurrence of a rating agency event (as defined below).

As used herein, a "rating agency event" has occurred if any nationally recognized statistical rating organization, as defined in Section 3(a)(62) of the Exchange Act, that then publishes a rating for us (a "rating agency") amends, clarifies or changes the criteria it uses to assign equity credit to securities such as the Preference Shares, which amendment, clarification or change results in:

- the shortening of the length of time the Preference Shares are assigned a particular level of equity credit by that rating agency as compared to the length of time they would have been assigned that level of equity credit by that rating agency or its predecessor on the initial issuance of the Preference Shares; or
- the lowering of the equity credit (including up to a lesser amount) assigned to the Preference Shares by that rating agency as compared to the equity credit assigned by that rating agency or its predecessor on the initial issuance of the Preference Shares.

Procedures for Redemption

The redemption price for any Preference Shares shall be payable on the redemption date to the holders of such shares against book-entry transfer or surrender of the certificate(s) evidencing such shares to us or our agent. Any declared but unpaid dividends payable on a redemption date that occurs subsequent to the dividend record date for a dividend period shall not be paid to the holder entitled to receive the redemption price on the redemption date, but rather shall be paid to the holder of record of the redeemed shares on such dividend record date relating to the dividend payment date provided in "—Dividends" above.

Prior to delivering any notice of redemption as provided below, we will file with our corporate records a certificate signed by one of our officers affirming our compliance with the redemption provisions under the Companies Act relating to the Preference Shares, and stating that there are reasonable grounds for believing that we are and after the redemption will be, able to pay our liabilities as they become due and that the redemption will not cause us to breach any provision of applicable Bermuda law or regulation.

If any Preference Shares are to be redeemed, the notice of redemption shall be given by first class mail to the holders of record of the Preference Shares to be redeemed, mailed not less than 30 days (in the case of the Series A Preference Shares) or 15 days (in the case of Series B Preference Shares, Series C Preference Shares and Series D Preference Shares) nor more than 60 days prior to the date fixed for redemption thereof (provided that, if the Preference Shares are held in book-entry form through DTC, we may give such notice in any manner permitted by DTC). Each notice of redemption will include a statement setting forth:

- the redemption date;
- the number of Preference Shares to be redeemed and, if less than all of the applicable series of Preference Shares are to be redeemed, the number of such Preference Shares to be redeemed from such holder;
- the redemption price; and
- that the shares should be delivered via book-entry transfer or the place or places where holders may surrender certificates evidencing the Preference Shares for payment of the redemption price.

If notice of redemption of any Preference Shares has been given and if the funds necessary for such redemption have been set aside by us for the benefit of the holders of any Preference Shares so called for redemption, then, from and after the redemption date, no further dividends will be declared on such Preference Shares, such Preference Shares shall no longer be deemed outstanding and all rights of the holders of such Preference Shares will terminate, except the right to receive the redemption price, without interest.

In case of any redemption of only part of a particular series Preference Shares at the time outstanding, the Preference Shares to be redeemed shall be selected either pro rata or by lot.

In addition, if the Preference Shares are treated as "Tier 1 capital" (or a substantially similar concept) under the capital guidelines of a "capital regulator," any redemption of the Preference Shares may be subject to our receipt of any required prior approval from the "capital regulator" and to the satisfaction of any conditions to our redemption of the Preference Shares set forth in those capital guidelines or any other applicable regulations of the "capital regulator."

Substitution or Variation

At any time following a tax event or at any time following a capital disqualification event, we may, without the consent of any holders of the applicable series of Preference Shares, vary the terms of such series of Preference Shares such that they remain securities, or exchange such Preference Shares with new securities, which (i) in the case of a tax event, would eliminate the substantial probability that we or any successor company would be required to pay any additional amounts with respect to the applicable series of Preference Shares as a result of a change in tax law or (ii) in the case of a capital disqualification event, for purposes of determining the solvency margin, capital adequacy ratios or any other comparable ratios, regulatory capital resource or level of the Company or any member thereof, where subdivided into tiers, qualify as "Tier 1 capital" (or a substantially similar concept) under the capital guidelines of our "capital regulator." In either case, the terms of the varied securities or new securities considered in the aggregate cannot be less favorable to holders than the terms of the applicable series of Preference Shares prior to being varied or exchanged; provided that no such variation of terms or securities received in exchange shall change the specified denominations of, dividend payable on, the redemption dates (other than any extension of the period during which an optional redemption may not be exercised by us) or currency of, the applicable series of Preference Shares, reduce the liquidation preference thereof, lower the ranking in right of payment with respect to the payment of dividends or the distribution of assets upon liquidation, dissolution or winding-up of the applicable series of Preference Shares, or change the foregoing list of items that may not be so amended as part of such substitution or variation. Further, no such variation of terms or securities received in exchange shall impair the right of a holder of the securities to institute suit for the payment of any amounts due (as provided under the Certificates of Designations), but unpaid with respect to such holder's securities.

Prior to any substitution or variation, we will be required to receive an opinion of independent legal advisers of recognized standing to the effect that holders and beneficial owners (including holders and beneficial owners of Depositary Shares) of the applicable series of Preference Shares (including as holders and beneficial owners of the varied or exchanged securities) will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such substitution or variation and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case had such substitution or variation not occurred.

Any substitution or variation of the Preference Shares described above will be made after notice is given to the holders of the applicable series of Preference Shares not less than 30 days (in the case of the Series A Preference Shares) or 15 days (in the case of Series B Preference Shares, Series C Preference Shares and Series D Preference Shares) nor more than 60 days prior to the date fixed for substitution or variation, as applicable.

Voting Rights

Except as provided below or as otherwise from time to time required by law, the holders of the Preference Shares will have no voting rights.

Whenever dividends in respect of any series of Preference Shares shall have not been declared and paid for the equivalent of six or more dividend periods, whether or not for consecutive dividend periods (a "nonpayment event"), the holders of such series of Preference Shares, voting together as a single class with holders of any and all other series of voting preference shares (as defined below) then outstanding, will be entitled to vote for the election of a total of two additional members of the board of directors of the Company (the "preference shares directors"), provided that the election of any such directors shall not cause us to violate the corporate governance requirements of the SEC or the NYSE (or any other exchange on which our securities may be listed or quoted) that listed or quoted companies must have a majority of independent directors. In such case, we will use our best efforts to increase the number of directors constituting the board of directors to the extent necessary to effectuate such right and, if necessary, to amend our Bye-laws. Each preference share director will be added to an already existing class of directors.

As used herein, "voting preference shares" means any other class or series of our preference shares ranking equally with the applicable Preference Shares as to dividends and the distribution of assets upon liquidation, dissolution or winding-up of the Company and upon which like voting rights have been conferred and are exercisable, which, as of January 31, 2021 consisted solely of the other class of Preference Shares.

If and when dividends for at least four consecutive dividend periods following a nonpayment event have been paid in full (or declared and a sum sufficient for such payment shall have been set aside), the holders of the applicable series of Preference Shares shall be divested of the foregoing voting rights (subject to revesting in the event of each subsequent nonpayment event) and, if such voting rights for all other holders of voting preference shares have terminated, the term of office of each preference shares director so elected shall terminate and the number of directors on the board of directors of the Company shall automatically decrease by two. In determining whether dividends have been paid for four consecutive dividend periods following a nonpayment event, we may take account of any dividend we elect to pay for such a dividend period after the regular dividend payment date for that period has passed.

Any preference shares director may be removed at any time without cause by the holders of record of a majority of the aggregate voting power, as determined under our Bye-laws, of the applicable series of Preference Shares and any other shares of voting preference shares then outstanding (voting together as a single class) when they have the voting rights described above. So long as a nonpayment event shall continue, any vacancy in the office of a preference shares director (other than prior to the initial election after a nonpayment event) may be filled by the written consent of the preference shares director remaining in office, or if none remain in office, by a vote of the holders of record of a majority of the outstanding applicable series of Preference Shares and any other shares of voting preference shares then outstanding (voting together as a single class) when they have the voting rights described above. Any vote of holders of voting preference shares to remove, or to fill a vacancy in the office of, a preference shares director may be taken only at a special general meeting of such holders, called as provided above for an initial election of preference shares director after a nonpayment event (unless such request is received less than 90 days before the date fixed for the next annual or special meeting of the shareholders of the Company, in which event such election shall be held at such next annual or special general meeting of shareholders). The preference shares directors shall each be entitled to one vote per director on any matter. Each preference shares director elected at any special general meeting of shareholders or by written consent of the other preference shares director shall hold office until the next annual general meeting of the shareholders of the Company if such office shall not have previously terminated as above provided. Holders of the Depositary Shares must act through the depositary to exercise any voting rights in respect of the Preference Shares.

The Companies Act provides the right to vote in respect of an amalgamation or merger for all shares of a Bermuda incorporated company whether or not such shares otherwise carry the right to vote. As a result, the Preference Shares, along with our Class A Common Shares and any other class or series of share capital, would have the right to vote together on an amalgamation or merger if a vote in connection with such a transaction is required under the Companies Act.

All or any of the special rights of the applicable series of Preference Shares may be altered or abrogated with the consent in writing of the holders of not less than three-quarters of the issued Preference Shares of that series or with the sanction of a special resolution approved by at least a majority of the votes cast by the holders of such series of Preference Shares at a separate general meeting in accordance with Section 47(7) of the Companies Act. The necessary quorum requirements for the separate general meeting are two or more persons holding or representing by proxy more than fifty percent (50%) of the aggregate voting power of the applicable series of Preference Shares. Our Bye-laws provide that rights conferred upon the holders of the capital shares of any class (including the Preference Shares) issued with preferred or other rights shall not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied by the creation or issue of further shares ranking *pari passu* therewith. The Companies Act provides that in certain circumstances, non-voting shares have the right to vote (for example without limitation, converting a limited liability company to unlimited liability company, discontinuance of a company from Bermuda, or a merger or amalgamation pursuant to the Companies Act or conversion of preference shares into redeemable preference shares).

On any item on which the holders of the applicable series of Preference Shares are entitled to vote, such holders will be entitled to one vote for each Preference Share of that series held, subject to the voting cutbacks described in our bye-laws.

Without the consent of the holders of the applicable series of Preference Shares, so long as such action does not materially and adversely affect the special rights, preferences, privileges and voting powers of such Preference Shares, taken as a whole, our board of directors may, by resolution, amend, alter, supplement or repeal any terms of a particular series of Preference Shares:

- to cure any ambiguity, or to cure, correct or supplement any provision contained in the Certificate of Designations for the applicable series of Preference Shares that may be defective or inconsistent; or
- to make any provision with respect to matters or questions arising with respect to the applicable series of Preference Shares that is not inconsistent with the provisions of the Certificate of Designations;

provided that any such amendment, alteration, supplement or repeal of any terms of such Preference Shares effected in order to conform the terms thereof to the description of the terms of such Preference Shares set forth under "Description of Series A Preference Shares," "Description of Series B Preference Shares," "Description of the Series C Preference Shares" or "Description of the Series D Preference Shares" in the applicable prospectus supplement distributed in connection with the offering of the respective Preference Shares shall be deemed not to materially and adversely affect the special rights, preferences, privileges and voting powers of the respective Preference Shares, taken as a whole.

The foregoing voting provisions will not apply with respect to a particular series of Preference Shares if, at or prior to the time when the act with respect to which such vote would otherwise be required shall be effected, all outstanding Preference Shares of such series shall have been redeemed or called for redemption upon proper notice and sufficient funds shall have been set aside by us for the benefit of the holders of such series of Preference Shares to effect such redemption.

Conversion

The Preference Shares are not convertible into or exchangeable for any other securities or property of the Company, except under the circumstances set forth under "—Substitution or Variation" above.

Listing of the Preference Shares

We do not intend to list the Preference Shares on any exchange or expect that there will be any separate public trading market for the Preference Shares except as represented by the Depositary Shares, which Depositary Shares are listed on the NYSE under the symbols "ATHPrA" (with respect to the Series A Depositary Shares), "ATHPrB" (with respect to the Series B Depositary Shares), "ATHPrC" (with respect to the Series C Depositary Shares) and "ATHPrD" (with respect to the Series D Depositary Shares).

FIRST AMENDMENT TO AMENDED AND RESTATED
COINSURANCE AND ASSUMPTION AGREEMENT

This FIRST AMENDMENT TO AMENDED AND RESTATED COINSURANCE AND ASSUMPTION AGREEMENT (this "Amendment"), effective as of September 1, 2020 (the "Amendment Effective Date"), is made by and between ATHENE LIFE INSURANCE COMPANY OF NEW YORK, an insurance company organized under the laws of the State of New York (the "Company"), and FIRST ALLMERICA FINANCIAL LIFE INSURANCE COMPANY, an insurance company organized under the laws of the State of Massachusetts (the "Reinsurer").

WITNESSETH:

WHEREAS, the Company and the Reinsurer are parties to that certain Amended and Restated Coinsurance and Assumption Agreement, dated as of July 31, 2015 (the "Reinsurance Agreement");

WHEREAS, the Company and the Reinsurer desire to amend the Reinsurance Agreement as provided herein; and

WHEREAS, pursuant to Section 15.13 of the Reinsurance Agreement, the Reinsurance Agreement may be amended by a written instrument duly executed by the proper officers of both parties to the Reinsurance Agreement.

NOW, THEREFORE, in consideration of the covenants and agreements contained herein, the Company and the Reinsurer hereby agree as follows:

1. Definitions. Capitalized terms used but not otherwise defined in this Amendment shall have the respective meanings ascribed to such terms in the Reinsurance Agreement.

2. Amendment. On and after the Amendment Effective Date, the Reinsurance Agreement is hereby amended and modified as follows:

(a) Section 1.1 of the Reinsurance Agreement is hereby amended by deleting the definition of "Portfolio Yield" in Section 1.1 therefrom;

(b) Section 2.13 of the Reinsurance Agreement is hereby amended and replaced in its entirety with "Reserved"; and

(c) Annex G of the Reinsurance Agreement is hereby amended and replaced in its entirety with the form attached hereto as Exhibit A.

3. Miscellaneous.

(a) Full Force and Effect. Except as expressly modified by this Amendment, all of the terms, covenants, agreements, conditions and other provisions of the Reinsurance Agreement shall remain in full force and effect in accordance with their respective terms and are hereby ratified or confirmed. This Amendment shall not constitute an amendment or waiver of any provision of the Reinsurance Agreement except as expressly set forth herein. Upon the execution and delivery hereof, the Reinsurance Agreement shall thereupon be deemed to be amended and supplemented as hereinabove set forth as fully and with the same effect as if the amendments and supplements made hereby were originally set forth in the Reinsurance Agreement, and this Amendment and the Reinsurance Agreement shall henceforth be read, taken and construed as one and the same instrument, but such amendments and supplements shall not operate so as to render invalid or improper any action heretofore taken under the Reinsurance Agreement. As used in the Reinsurance Agreement, the terms "this Agreement," "herein," "hereinafter," "hereto," and words of similar import shall mean and refer to, from and after the Amendment Effective Date, unless the context requires otherwise, the Reinsurance Agreement as amended by this Amendment.

(b) Counterparts. This Amendment may be executed in any number of counterparts, all of which taken together shall constitute one agreement, and any of the parties hereto may execute this Amendment by signing any such counterpart. Delivery of an electronic copy of an executed counterpart of a signature page to this Amendment by email or facsimile shall be as effective as delivery of a manually executed counterpart of this Amendment.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be executed effective as of the Amendment Effective Date.

ATHENE LIFE INSURANCE COMPANY OF NEW YORK

By: /s/ Blaine T. Doerrfeld

Title: SVP & Senior Counsel, Secretary

Date: August 27, 2020

FIRST ALLMERICA FINANCIAL LIFE INSURANCE COMPANY

By: /s/ Jonathan Hecht

Title: Managing Director

Date: August 27, 2020

Exhibit A

Annex G

Post-Amendment Date Net Settlement

[See Attached]

NY Non-NLG
Monthly Accounting Report
For the Monthly Accounting Period ending on: MM/DD/YYYY

Section 1: Policy cash flows to/(from) Reinsurer (gross)

First Year Premium (net of returns and refunds of premiums)
Renewal Premium (net of returns and refunds of premiums, including dividends) Premium on Supplemental Contracts w/ life (net of returns and refunds of premiums) Premium on Supplemental Contracts w/o life (net of returns and refunds of premiums)

A TOTAL Reinsurance Premiums
Full / Partial Surrenders, net of surrender charges
Death Claims
Benefit Payments Supplemental Contracts w/ life (after 2 year exclusion period)
Benefit Payments Supplemental Contracts w/o life (after 2 year exclusion period)
Dividend Expense
Matured Endowments
Waiver of Premium
B TOTAL Claims
Dividend Accumulations Change in Liability
Dividend Accumulations Interest Credited
Dividend Accumulations (Withdrawals)/Deposits
Premium Deposit Funds Change in Liability
Premium Deposit Funds Interest Credited
Premium Deposit Funds (Withdrawals)/Deposits
C TOTAL Dividend Accumulations and Premium Deposit Funds
Premiums paid/received on third party reinsurance
Less: Claims (received)/paid on third party reinsurance
Less: Commissions / expense allowances on third party reinsurance
Other Benefits paid/received on third party reinsurance
D Net third party reinsurance
E Policy Loans
Policy Loans Change in Asset

Policy Loans Interest Income
Policy Loans (Issued)/Principal Repayments

Section 2: Policy cash flows due to/(owed from) Reinsurer

F Net Policy Cash Flows (A - B + C + D - E)
x Quota Share 100%
G Reinsurer Share of Net Policy Cash Flows

H Net Settlement Amounts paid to/(by) Reinsurer during Period

MM/DD/YYYY ________________

I Policy Cash Flows due to/(from) Reinsurer (G - H) $ ________________

Section 3: Policy Expenses owed from Reinsurer Premiums Received
x 18% 180%
Premium Tax Allowance due (from) Reinsurer:

− Premium Tax Allowance Prior Year True up due to/(from) Reinsurer Guaranty Fund Assessments

due (from) Reinsurer
GSAM Management Fees

J Monthly Expenses due to/(from) Reinsurer

Section 4: Monthly Net Settlement Amount owed to/(from) Reinsurer

K Policy Cash Flows / Policy Expenses Settlement Amount (I + J)

Miscellaneous

a First Year Commissions
b Renewal Commissions
c Agent Loan Payments, Net of Interest and Issuances
d Agent Debt
e Agent Advances

L Total Miscellaneous

M Monthly Net Settlement Amount due to/(from) Reinsurer (K + L)

Section 5: Net Settlement Amount due to/(from) Reinsurer

N Hedge proceeds less hedge costs[1]

O Direct Payments made by/(received by) Reinsurer

XX/XX/XXXX ______________

P Change in EI hedge balance (ending - beginning)

Q Net Settlement due to/(from) Reinsurer (M + N + O + P)

$ ______________

R Receivables / Payables on third party reinsurance ceded at inception due to / (from) reinsurer

S Net settlement due to / (from) after third party reinsurance receiveble / payable

$ ______________

1 Hedge settlements in “N” and “P” are no longer applicable following the Hedge Termination Date (as defined in the Amended and Restated Coinsurance and Assumption Agreement).

Subsidiaries of the Registrant

Subsidiary	Jurisdiction of incorporation
Athene Life Re Ltd.	Bermuda
Athene Life Re International Ltd.	Bermuda
Athene USA Corporation	Iowa
Athene Annuity Re Ltd.	Bermuda
Athene HD Investor, L.P.	Cayman Islands
Athene Employee Services, LLC	Iowa
Athene London Assignment Corporation	Delaware
Athene Assignment Corporation	Delaware
A-A Onshore Fund, LLC	Delaware
Apollo Asia Real Estate AAC Fund, L.P.	Delaware
Athene Noctua, LLC	Delaware
Athene Annuity & Life Assurance Company	Delaware
ACM Trademarks, L.L.C	Iowa
ARPH (Headquarters Building), LLC	Iowa
Athene Annuity and Life Company	Iowa
P.L. Assigned Services, Inc.	New York
Athene Annuity & Life Assurance Company of New York	New York
Structured Annuity Reinsurance Company	Iowa
Athene Securities, LLC	Iowa
Centralife Annuities Service, Inc.	Arizona
Athene Re USA IV, Inc.	Vermont
Athene Life Insurance Company of New York	New York
AADE RML, LLC	Iowa
AAIA RML, LLC	Iowa
AAIA RML 3526 Massey Ford, LLC	Iowa
Athene Bermuda Employee Company Ltd.	Bermuda
Athene IP Holding Ltd.	Bermuda
Athene IP Development Limited	United Kingdom
Athene North Employment Service Corporation	Canada
Athene Co-Invest Reinsurance Affiliate 1A Ltd.	Bermuda
Athene Co-Invest Reinsurance Affiliate 1B Ltd.	Bermuda
Athene Co-Invest Reinsurance Affiliate LP	Delaware
Athene Co-Invest Reinsurance Affiliate International Ltd.	Bermuda
Athene Risk Aggregator, LLC	Delaware
Athene AOG Holding I Ltd.	Bermuda
Athene AOG Holding II LLC	Bermuda
ADIP (Athene) Carry Plan, L.P.	Bermuda
AA Pencil Offshore Holdings, L.P.	Cayman Islands
Athene Re Services, LLC	New York
Rosencrantz Depositor, LLC	Delaware
NNN AGP Opportunities GP, LLC	Delaware
AARE Structured Holdings, LLC	Delaware

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-232182, 333-219352 and 333-215031) and Form S-3 (Nos. 333-251884 and 333-237242) of Athene Holding Ltd. of our report dated February 19, 2021 relating to the financial statements and financial statement schedules and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Des Moines, Iowa
February 19, 2021

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY OF 2002

I, James R. Belardi, certify that:

1. I have reviewed this Annual Report on Form 10-K of Athene Holding Ltd.;

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 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 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 19, 2021

/s/ James R. Belardi

James R. Belardi
Chairman, Chief Executive Officer and Chief Investment Officer
(principal executive officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY OF 2002

I, Martin P. Klein, certify that:

1. I have reviewed this Annual Report on Form 10-K of Athene Holding Ltd.;

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 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 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 19, 2021

/s/ Martin P. Klein

Martin P. Klein
Executive Vice President and Chief Financial Officer
(principal financial officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY OF 2002

I, James R. Belardi, certify that Athene Holding Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2020 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Athene Holding Ltd.

Date: February 19, 2021	/s/ James R. Belardi
	James R. Belardi Chairman, Chief Executive Officer and Chief Investment Officer (principal executive officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.

Exhibit 32.2

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY OF 2002

I, Martin P. Klein, certify that Athene Holding Ltd.'s Annual Report on Form 10-K for the year ended December 31, 2020 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Athene Holding Ltd.

Date: February 19, 2021

/s/ Martin P. Klein

Martin P. Klein

Executive Vice President and Chief Financial Officer

(principal financial officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and is not being filed as part of the Report or as a separate disclosure document.