UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

☑ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 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)

96 Pitts Bay Road
Pembroke, HM 08, 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 Symbol	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

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of October 31, 2020, 191,463,918 of our Class A common shares were outstanding.

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As used in this Quarterly Report on Form 10-Q (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 *Part II–Item 1A. Risk Factors* included in this report and *Part I–Item 1A. Risk Factors* included in our Annual Report on Form 10-K for the year ended December 31, 2019 (2019 Annual Report). 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 regulations affecting, among other things, 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;
- the 2020 presidential and congressional elections in the US resulting in changes in the US political environment that are unfavorable to us;
- increases in our tax liability resulting from the Base Erosion and Anti-Abuse Tax (BEAT);
- 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;
- our being subject to US withholding tax under the Foreign Account Tax Compliance Act (FATCA);

- changes in our ability to pay dividends or make distributions;
- our failure to recognize the benefits expected to be derived from the share exchange transaction with Apollo;
- 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 in *Part II–Item 1A. Risk Factors* included in this report, *Part I—Item 1A. Risk Factors* included in our 2019 Annual Report and those discussed elsewhere in this report and in our 2019 Annual 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.

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 Investor	AAA Guarantor – Athene, L.P.
AAIA	Athene Annuity and Life Company
AARe	Athene Annuity Re Ltd., a Bermuda reinsurance subsidiary
ACRA	Athene Co-Invest Reinsurance Affiliate 1A Ltd., together with its subsidiaries
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
AOG	Apollo Operating Group
Apollo	Apollo Global Management, Inc., together with its subsidiaries
Apollo Group	(1) Apollo, (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 Apollo or one or more of Apollo's subsidiaries, (4) BRH Holdings GP, Ltd. and its shareholders, (5) any executive officer or employee of AGM or its 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)
Athene USA	Athene USA Corporation
Athora	Athora Holding Ltd.
BMA	Bermuda Monetary Authority
CoInvest VI	AAA Investments (Co-Invest VI), L.P.
CoInvest VII	AAA Investments (Co-Invest VII), L.P.
ISG	Apollo Insurance Solutions Group LP, formerly known as Athene Asset Management LLC
Jackson	Jackson National Life Insurance Company
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
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 Bermuda capital and applying NAIC risk-based capital factors to the statutory financial statements of AHL'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
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
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

Term or Acronym	Definition
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
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
OTTI	Other-than-temporary impairment
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
VIE	Variable interest entity
VOBA	Value of business acquired

Item 1. Financial Statements

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ATHENE HOLDING LTD.
Condensed Consolidated Balance Sheets *(Unaudited)*

(In millions)	September 30, 2020	December 31, 2019
Assets		
Investments		
Available-for-sale securities, at fair value (amortized cost: 2020 – $69,160 and 2019 – $67,479; allowance for credit losses: 2020 – $140)	$ 73,988	$ 71,374
Trading securities, at fair value (consolidated variable interest entities: 2020 – $0 and 2019 – $16)	2,069	2,070
Equity securities (portion at fair value: 2020 – $265 and 2019 – $247)	697	247
Mortgage loans (allowance for credit losses: 2020 – $313 and 2019 – $11; portion at fair value: 2020 – $19 and 2019 – $27; consolidated variable interest entities: 2020 – $1,879 and 2019 – $0)	14,591	14,306
Investment funds (portion at fair value: 2020 – $156 and 2019 – $154; consolidated variable interest entities: 2020 – $0 and 2019 – $19)	723	750
Policy loans	387	417
Funds withheld at interest (portion at fair value: 2020 – $1,259 and 2019 – $801)	48,593	15,181
Derivative assets	2,771	2,888
Short-term investments (portion at fair value: 2020 – $165 and 2019 – $406)	165	596
Other investments (allowance for credit losses: 2020 – $8; portion at fair value: 2020 – $109 and 2019 – $93)	949	158
Total investments	144,933	107,987
Cash and cash equivalents (consolidated variable interest entities: 2020 – $0 and 2019 – $3)	7,548	4,240
Restricted cash	1,226	402
Investments in related parties		
Available-for-sale securities, at fair value (amortized cost: 2020 – $4,861 and 2019 – $3,783; allowance for credit losses: 2020 – $2)	4,857	3,804
Trading securities, at fair value	1,397	785
Equity securities, at fair value (consolidated variable interest entities: 2020 – $0 and 2019 – $6)	50	64
Mortgage loans (allowance for credit losses: 2020 – $15 and 2019 – $0)	640	653
Investment funds (portion at fair value: 2020 – $1,850 and 2019 – $819; consolidated variable interest entities: 2020 – $0 and 2019 – $664)	4,808	3,550
Funds withheld at interest (portion at fair value: 2020 – $721 and 2019 – $594)	13,053	13,220
Other investments (allowance for credit losses: 2020 – $5)	467	487
Accrued investment income (related party: 2020 – $38 and 2019 – $27)	796	807
Reinsurance recoverable (portion at fair value: 2020 – $2,155 and 2019 – $1,821)	5,104	4,863
Deferred acquisition costs, deferred sales inducements and value of business acquired	5,165	5,008
Other assets (consolidated variable interest entities: 2020 – $1 and 2019 – $20)	1,044	1,005
Total assets	$ 191,088	$ 146,875

(Continued)

See accompanying notes to the unaudited condensed consolidated financial statements

ATHENE HOLDING LTD.
Condensed Consolidated Balance Sheets *(Unaudited)*

(In millions, except per share data)	September 30, 2020	December 31, 2019
Liabilities and Equity		
Liabilities		
Interest sensitive contract liabilities (related party: 2020 – $14,352 and 2019 – $15,285; portion at fair value: 2020 – $13,104 and 2019 – $11,992)	$ 141,207	$ 102,745
Future policy benefits (related party: 2020 – $1,527 and 2019 – $1,302; portion at fair value: 2020 – $2,354 and 2019 – $2,301)	24,823	23,330
Other policy claims and benefits (related party: 2020 – $2 and 2019 – $13)	118	138
Dividends payable to policyholders	110	113
Short-term debt	—	475
Long-term debt	1,487	992
Derivative liabilities	147	97
Payables for collateral on derivatives and securities to repurchase	3,742	3,255
Funds withheld liability (portion at fair value: 2020 – $50 and 2019 – $31)	440	408
Other liabilities (related party: 2020 – $92 and 2019 – $79; consolidated variable interest entities: 2020 – $134 and 2019 – $0)	1,897	1,181
Total liabilities	173,971	132,734
Commitments and Contingencies (Note 12)		
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	—	—
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	6,045	4,171
Retained earnings	7,010	6,939
Accumulated other comprehensive income (related party: 2020 – $(19) and 2019 – $17)	2,888	2,281
Total Athene Holding Ltd. shareholders' equity	15,943	13,391
Noncontrolling interests	1,174	750
Total equity	17,117	14,141
Total liabilities and equity	$ 191,088	$ 146,875

(Concluded)

See accompanying notes to the unaudited condensed consolidated financial statements

ATHENE HOLDING LTD.
Condensed Consolidated Statements of Income *(Unaudited)*

(In millions, except per share data)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Revenues				
Premiums (related party of $71 and $51 for the three months ended and $234 and $173 for the nine months ended September 30, 2020 and 2019, respectively)	$ 112	$ 2,688	$ 1,607	$ 5,475
Product charges (related party of $13 and $14 for the three months ended and $41 and $42 for the nine months ended September 30, 2020 and 2019, respectively)	144	135	425	392
Net investment income (related party investment income of $239 and $175 for the three months ended and $515 and $528 for the nine months ended September 30, 2020 and 2019, respectively; consolidated variable interest entities of $18 and $20 for the three months ended and $34 and $57 for the nine months ended September 30, 2020 and 2019, respectively; and related party investment expense of $111 and $127 for the three months ended and $362 and $313 for the nine months ended September 30, 2020 and 2019, respectively)	1,209	1,090	3,290	3,354
Investment related gains (losses) (related party of $299 and $273 for the three months ended and $429 and $1,025 for the nine months ended September 30, 2020 and 2019, respectively; and consolidated variable interest entities of $26 and $2 for the three months ended and $20 and $10 for the nine months ended September 30, 2020 and 2019, respectively)	1,797	665	773	3,754
Other revenues	13	6	29	27
Total revenues	3,275	4,584	6,124	13,002
Benefits and expenses				
Interest sensitive contract benefits (related party of $43 and $97 for the three months ended and $143 and $394 for the nine months ended September 30, 2020 and 2019, respectively)	1,225	801	1,982	3,411
Amortization of deferred sales inducements	48	20	37	38
Future policy and other policy benefits (related party of $106 and $70 for the three months ended and $298 and $267 for the nine months ended September 30, 2020 and 2019, respectively)	439	2,955	2,469	6,395
Amortization of deferred acquisition costs and value of business acquired	299	323	247	815
Dividends to policyholders	9	12	29	30
Policy and other operating expenses (related party of $14 and $10 for the three months ended and $41 and $30 for the nine months ended September 30, 2020 and 2019, respectively)	231	194	637	544
Total benefits and expenses	2,251	4,305	5,401	11,233
Income before income taxes	1,024	279	723	1,769
Income tax expense (benefit)	140	(14)	124	48
Net income	884	293	599	1,721
Less: Net income attributable to noncontrolling interests	232	—	151	—
Net income attributable to Athene Holding Ltd. shareholders	652	293	448	1,721
Less: Preferred stock dividends	30	17	67	17
Net income available to Athene Holding Ltd. common shareholders	$ 622	$ 276	$ 381	$ 1,704
Earnings (loss) per share				
Basic – Class A	$ 3.22	$ 1.50	$ 2.78	$ 8.97
Basic – Classes B, M-1, M-2, M-3 and M-4	*N/A*	1.50	(3.87)	8.97
Diluted – Class A	3.16	1.50	2.73	8.95
Diluted – Class B	*N/A*	1.50	(3.87)	8.97
Diluted – Class M-1	*N/A*	1.50	(3.87)	8.97
Diluted – Class M-2	*N/A*	1.50	(3.87)	8.97
Diluted – Class M-3	*N/A*	1.50	(3.87)	8.97
Diluted – Class M-4	*N/A*	1.29	(3.87)	7.77

N/A – Not applicable. See Notes 9 – Earnings Per Share and 10 – Equity for further information.

See accompanying notes to the unaudited condensed consolidated financial statements

ATHENE HOLDING LTD.

Condensed Consolidated Statements of Comprehensive Income *(Unaudited)*

(In millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Net income	$ 884	$ 293	$ 599	$ 1,721
Other comprehensive income (loss), before tax				
Unrealized investment gains (losses) on available-for-sale securities, net of offsets	1,043	735	710	3,473
Unrealized gains (losses) on hedging instruments	(178)	124	140	171
Foreign currency translation and other adjustments	10	(1)	9	(2)
Other comprehensive income, before tax	875	858	859	3,642
Income tax expense related to other comprehensive income	157	176	165	728
Other comprehensive income	718	682	694	2,914
Comprehensive income	1,602	975	1,293	4,635
Less: Comprehensive income attributable to noncontrolling interests	246	—	232	—
Comprehensive income attributable to Athene Holding Ltd. shareholders	$ 1,356	$ 975	$ 1,061	$ 4,635

See accompanying notes to the unaudited condensed consolidated financial statements

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ATHENE HOLDING LTD.
Condensed Consolidated Statements of Equity *(Unaudited)*

	Three months ended							
(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 shareholders' equity
Balance at June 30, 2020	$ —	$ —	$ 6,090	$ 6,437	$ 2,184	$ 14,711	$ 928	$ 15,639
Net income	—	—	—	652	—	652	232	884
Other comprehensive income	—	—	—	—	704	704	14	718
Stock-based compensation	—	—	3	—	—	3	—	3
Retirement or repurchase of shares	—	—	(48)	(49)	—	(97)	—	(97)
Preferred stock dividends	—	—	—	(30)	—	(30)	—	(30)
Balance at September 30, 2020	$ —	$ —	$ 6,045	$ 7,010	$ 2,888	$ 15,943	$ 1,174	$ 17,117
Balance at June 30, 2019	$ —	$ —	$ 4,144	$ 6,461	$ 1,760	$ 12,365	$ —	$ 12,365
Net income	—	—	—	293	—	293	—	293
Other comprehensive income	—	—	—	—	682	682	—	682
Issuance of preferred shares, net of expenses	—	—	333	—	—	333	—	333
Issuance of common shares, net of expenses	—	—	2	—	—	2	—	2
Stock-based compensation	—	—	8	—	—	8	—	8
Retirement or repurchase of shares	—	—	(52)	(69)	—	(121)	—	(121)
Preferred stock dividends	—	—	—	(17)	—	(17)	—	(17)
Balance at September 30, 2019	$ —	$ —	$ 4,435	$ 6,668	$ 2,442	$ 13,545	$ —	$ 13,545

	Nine months ended							
(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 shareholders' equity
Balance at December 31, 2019	$ —	$ —	$ 4,171	$ 6,939	$ 2,281	$ 13,391	$ 750	$ 14,141
Adoption of accounting standard	—	—	—	(117)	(6)	(123)	(2)	(125)
Net income	—	—	—	448	—	448	151	599
Other comprehensive income	—	—	—	—	613	613	81	694
Issuance of preferred shares, net of expenses	—	—	583	—	—	583	—	583
Issuance of common shares, net of expenses	—	—	1,509	—	—	1,509	—	1,509
Stock-based compensation	—	—	14	—	—	14	—	14
Retirement or repurchase of shares	—	—	(232)	(193)	—	(425)	—	(425)
Preferred stock dividends	—	—	—	(67)	—	(67)	—	(67)
Contributions from noncontrolling interests	—	—	—	—	—	—	240	240
Distributions to noncontrolling interests	—	—	—	—	—	—	(46)	(46)
Balance at September 30, 2020	$ —	$ —	$ 6,045	$ 7,010	$ 2,888	$ 15,943	$ 1,174	$ 17,117
Balance at December 31, 2018	$ —	$ —	$ 3,462	$ 5,286	$ (472)	$ 8,276	$ —	$ 8,276
Net income	—	—	—	1,721	—	1,721	—	1,721
Other comprehensive income	—	—	—	—	2,914	2,914	—	2,914
Issuance of preferred shares, net of expenses	—	—	1,172	—	—	1,172	—	1,172
Issuance of common shares, net of expenses	—	—	4	—	—	4	—	4
Stock-based compensation	—	—	23	—	—	23	—	23
Retirement or repurchase of shares	—	—	(226)	(322)	—	(548)	—	(548)
Preferred stock dividends	—	—	—	(17)	—	(17)	—	(17)
Balance at September 30, 2019	$ —	$ —	$ 4,435	$ 6,668	$ 2,442	$ 13,545	$ —	$ 13,545

See accompanying notes to the unaudited condensed consolidated financial statements

ATHENE HOLDING LTD.
Condensed Consolidated Statements of Cash Flows *(Unaudited)*

	Nine months ended September 30,	
(In millions)	2020	2019
Cash flows from operating activities		
Net income	$ 599	$ 1,721
Adjustments to reconcile net income to net cash provided by operating activities:		
Amortization of deferred acquisition costs and value of business acquired	247	815
Amortization of deferred sales inducements	37	38
Accretion of net investment premiums, discounts and other	(139)	(60)
Payment at recapture of reinsurance agreement	(723)	—
Net investment income (related party: 2020 – $(72) and 2019 – $(95); consolidated variable interest entities: 2020 – $(24), 2019 – $0)	(90)	(94)
Net recognized (gains) losses on investments and derivatives (related party: 2020 – $15 and 2019 – $(26); consolidated variable interest entities: 2020 – $6 and 2019 – $(10))	462	(1,682)
Policy acquisition costs deferred	(470)	(521)
Changes in operating assets and liabilities:		
Accrued investment income (related party: 2020 – $(18) and 2019 – $(3))	(27)	(99)
Interest sensitive contract liabilities (related party: 2020 – $135 and 2019 – $338)	1,691	3,086
Future policy benefits, other policy claims and benefits, dividends payable to policyholders and reinsurance recoverable (related party: 2020 – $209 and 2019 – $223)	338	973
Funds withheld assets and liabilities (related party: 2020 – $(644) and 2019 – $(1,261))	(856)	(2,488)
Other assets and liabilities	(144)	296
Net cash provided by operating activities	925	1,985
Cash flows from investing activities		
Sales, maturities and repayments of:		
Available-for-sale securities (related party: 2020 – $238 and 2019 – $101)	8,850	8,344
Trading securities (related party: 2020 – $31 and 2019 – $65; consolidated variable interest entities: 2020 – $10 and 2019 – $33)	133	195
Equity securities (related party: 2020 – $4 and 2019 – $51; consolidated variable interest entities: 2020 – $0 and 2019 – $51)	6	120
Mortgage loans (related party: 2020 – $0 and 2019 – $4)	1,593	1,513
Investment funds (related party: 2020 – $408 and 2019 – $196; consolidated variable interest entities: 2020 – $20 and 2019 – $8)	465	309
Derivative instruments and other invested assets	1,331	1,008
Short-term investments (related party: 2020 – $28 and 2019 – $0)	766	274
Purchases of:		
Available-for-sale securities (related party: 2020 – $(1,526) and 2019 – $(1,065))	(14,071)	(11,413)
Trading securities (related party: 2020 – $(150) and 2019 – $(6))	(188)	(425)
Equity securities (related party: 2020 – $(3) and 2019 – $(243))	(481)	(421)
Mortgage loans (related party: 2020 – $(17) and 2019 – $(366))	(2,971)	(5,013)
Investment funds (related party: 2020 – $(914) and 2019 – $(637); consolidated variable interest entities: 2020 – $0 and 2019 – $(27))	(970)	(765)
Derivative instruments and other invested assets	(1,451)	(853)
Short-term investments (related party: 2020 – $(28) and 2019 – $0)	(449)	(653)
Deconsolidation of previously consolidated variable interest entities	(3)	—
Other investing activities, net	341	521
Net cash used in investing activities	(7,099)	(7,259)

(Continued)

See accompanying notes to the unaudited condensed consolidated financial statements

ATHENE HOLDING LTD.
Condensed Consolidated Statements of Cash Flows *(Unaudited)*

	Nine months ended September 30,	
(In millions)	2020	2019
Cash flows from financing activities		
Issuance of common stock	$ 350	$ —
Repayment of short-term debt	(75)	—
Proceeds from long-term debt	499	—
Deposits on investment-type policies and contracts (related party: 2020 – $63 and 2019 – $130)	13,994	8,879
Withdrawals on investment-type policies and contracts (related party: 2020 – $(292) and 2019 – $(332))	(5,320)	(4,846)
Payments for coinsurance agreements on investment-type contracts, net	(17)	(39)
Capital contributions from noncontrolling interests	240	—
Capital distributions to noncontrolling interests	(46)	—
Net change in cash collateral posted for derivative transactions and securities to repurchase	487	1,354
Issuance of preferred stock, net of expenses	583	1,172
Preferred stock dividends	(67)	(17)
Repurchase of common stock	(425)	(548)
Other financing activities, net	131	(51)
Net cash provided by financing activities	10,334	5,904
Effect of exchange rate changes on cash and cash equivalents	(28)	—
Net increase in cash and cash equivalents	4,132	630
Cash and cash equivalents at beginning of year[1]	4,642	3,405
Cash and cash equivalents at end of period[1]	$ 8,774	$ 4,035
Supplementary information		
Non-cash transactions		
Deposits on investment-type policies and contracts through reinsurance agreements (related party: 2020 – $252 and 2019 – $159)	$ 29,876	$ 619
Withdrawals on investment-type policies and contracts through reinsurance agreements (related party: 2020 – $1,063 and 2019 – $1,351)	3,313	2,764
Investments received from settlements on reinsurance agreements	53	56
Investments received from settlements on related party reinsurance agreements	—	97
Investments received from pension risk transfer premiums	829	4,506
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	—
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 the unaudited condensed 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. (ALReI); and
- Athene USA Corporation, an Iowa corporation (together with its subsidiaries, Athene USA).

In addition, we consolidate certain variable interest entities (VIEs) for which we have determined we are the primary beneficiary. See *Note 4 – Variable Interest Entities* for further information on VIEs.

Consolidation and Basis of Presentation—We have prepared the accompanying condensed consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information and the United States Securities and Exchange Commission's rules and regulations for Form 10-Q and Article 10 of Regulation S-X. The accompanying condensed consolidated financial statements are unaudited and reflect all adjustments, consisting only of normal recurring items, considered necessary for fair statement of the results for the interim periods presented. All intercompany accounts and transactions have been eliminated. Interim operating results are not necessarily indicative of the results expected for the entire year, particularly in light of the 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.

For entities that are consolidated, but not 100% 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.

The condensed consolidated balance sheet as of December 31, 2019 has been derived from the audited financial statements, but does not include all of the information and footnotes required by GAAP for complete financial statements. Therefore, these condensed consolidated financial statements should be read in conjunction with our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019. The preparation of financial statements requires the use of management estimates. 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 results may differ from estimates used in preparing the condensed consolidated financial statements.

Summary of Significant Accounting Policies

The following accounting policies have been updated for the adoption of Accounting Standards Update (ASU) 2016-13 and related ASUs, and apply for reporting periods beginning January 1, 2020.

Investments

Purchased Credit Deteriorated (PCD) Investments – We purchase certain structured securities, primarily residential mortgage backed securities (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.

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 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.

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 condensed consolidated statements of income. Credit loss expense for reinsurance assets held at amortized cost is recorded through policy and other operating expenses on the condensed 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 condensed 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 condensed 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 condensed consolidated statements of income.

We also have certain off-balance sheet credit exposures for which we establish a liability for expected future 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 condensed 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 condensed consolidated statements of income.

Credit Losses – Available-for-Sale Securities – We evaluate available-for-sale (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 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 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 condensed 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 condensed consolidated statements of income.

We have elected to present accrued interest receivable separately in accrued investment income on the condensed 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 condensed 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 condensed consolidated statements of income.

Adopted Accounting Pronouncements

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. 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 of 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. The adoption of 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. The adoption of 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. The adoption of this update did not have a material effect on our consolidated financial statements.

Recently Issued Accounting Pronouncements

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 are currently evaluating the impact of this guidance on our consolidated financial statements.

Insurance – Targeted Improvements to the Accounting for Long-Duration Contracts (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 guaranteed lifetime withdrawal benefits (GLWB) and guaranteed minimum death benefit (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.

While we are currently required to adopt these updates on January 1, 2022, the Financial Accounting Standards Board has proposed a deferral to the adoption date, which, if codified, would require adoption 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.

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—Our AFS investment portfolio includes bonds, collateralized loan obligations (CLO), asset-backed securities (ABS), commercial mortgage-backed securities (CMBS), RMBS and redeemable preferred stock. Our AFS investment portfolio includes related party investments that are primarily comprised of investments over which Apollo can exercise significant influence. These investments are presented as investments in related parties on the condensed consolidated balance sheets, and are separately disclosed below.

The following table represents the amortized cost, allowance for credit losses, gross unrealized gains and losses and fair value of our AFS investments by asset type:

	September 30, 2020				
(In millions)	Amortized Cost	Allowance for Credit Losses	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS securities					
US government and agencies	$ 71	$ —	$ 2	$ —	$ 73
US state, municipal and political subdivisions	765	—	163	(1)	927
Foreign governments	311	—	29	—	340
Corporate	46,424	(30)	5,094	(359)	51,129
CLO	8,621	(1)	68	(318)	8,370
ABS	4,255	(3)	136	(188)	4,200
CMBS	2,279	(19)	68	(89)	2,239
RMBS	6,434	(87)	397	(34)	6,710
Total AFS securities	69,160	(140)	5,957	(989)	73,988
AFS securities – related party					
Corporate	780	—	4	—	784
CLO	1,365	(2)	11	(30)	1,344
ABS	2,716	—	62	(49)	2,729
Total AFS securities – related party	4,861	(2)	77	(79)	4,857
Total AFS securities including related party	$ 74,021	$ (142)	$ 6,034	$ (1,068)	$ 78,845

The following table represents the amortized cost, gross unrealized gains and losses, fair value and other than temporary impairments (OTTI) in accumulated other comprehensive income (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

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The amortized cost and fair value of AFS securities, including related party, are shown by contractual maturity below:

	September 30, 2020	
(In millions)	Amortized Cost	Fair Value
AFS securities		
Due in one year or less	$ 876	$ 885
Due after one year through five years	7,209	7,636
Due after five years through ten years	11,799	12,771
Due after ten years	27,687	31,177
CLO, ABS, CMBS and RMBS	21,589	21,519
Total AFS securities	69,160	73,988
AFS securities – related party		
Due after one year through five years	34	36
Due after ten years	746	748
CLO and ABS	4,081	4,073
Total AFS securities – related party	4,861	4,857
Total AFS securities including related party	$ 74,021	$ 78,845

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:

	September 30, 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	$ 9	$ —	$ —	$ —	$ 9	$ —
US state, municipal and political subdivisions	50	—	8	(1)	58	(1)
Foreign governments	4	—	—	—	4	—
Corporate	5,899	(248)	414	(57)	6,313	(305)
CLO	2,475	(73)	3,118	(232)	5,593	(305)
ABS	1,238	(130)	82	(26)	1,320	(156)
CMBS	685	(60)	23	(20)	708	(80)
RMBS	540	(16)	25	(1)	565	(17)
Total AFS securities	10,900	(527)	3,670	(337)	14,570	(864)
AFS securities – related party						
CLO	766	(15)	232	(15)	998	(30)
ABS	1,534	(49)	—	—	1,534	(49)
Total AFS securities – related party	2,300	(64)	232	(15)	2,532	(79)
Total AFS securities including related party	$ 13,200	$ (591)	$ 3,902	$ (352)	$ 17,102	$ (943)

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)

As of September 30, 2020, we held 1,748 AFS securities that were in an unrealized loss position. Of this total, 353 were in an unrealized loss position 12 months or more. As of September 30, 2020, we held 60 related party AFS securities that were in an unrealized loss position. Of this total, nine were in an unrealized loss position 12 months or more. 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:

	Three months ended September 30, 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	$ 31	$ 1	$ —	$ (2)	$ —	$ 30
CLO	1	—	—	—	—	1
ABS	2	—	—	—	1	3
CMBS	10	12	—	(1)	(2)	19
RMBS	129	2	—	(12)	(32)	87
Total AFS securities	173	15	—	(15)	(33)	140
AFS securities – related party						
CLO	2	1	—	(1)	—	2
Total AFS securities – related party	2	1	—	(1)	—	2
Total AFS securities including related party	$ 175	$ 16	$ —	$ (16)	$ (33)	$ 142

	Nine months ended September 30, 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	$ —	$ 32	$ —	$ (2)	$ —	$ 30
CLO	—	1	—	—	—	1
ABS	—	5	—	—	(2)	3
CMBS	—	21	—	(1)	(1)	19
RMBS	17	50	61	(14)	(27)	87
Total AFS securities	17	109	61	(17)	(30)	140
AFS securities – related party						
CLO	—	2	—	(1)	1	2
Total AFS securities – related party	—	2	—	(1)	1	2
Total AFS securities including related party	$ 17	$ 111	$ 61	$ (18)	$ (29)	$ 142

Net Investment Income—Net investment income by asset class consists of the following:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
AFS securities	$ 776	$ 760	$ 2,403	$ 2,276
Trading securities	47	48	137	139
Equity securities	4	4	10	11
Mortgage loans	184	173	545	483
Investment funds	148	96	242	245
Funds withheld at interest	81	106	165	403
Other	83	32	158	116
Investment revenue	1,323	1,219	3,660	3,673
Investment expenses	(114)	(129)	(370)	(319)
Net investment income	$ 1,209	$ 1,090	$ 3,290	$ 3,354

Investment Related Gains (Losses)—Investment related gains (losses) by asset class consists of the following:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
AFS securities				
Gross realized gains on investment activity	$ 192	$ 47	$ 424	$ 120
Gross realized losses on investment activity	(178)	(21)	(378)	(38)
Net realized investment gains on AFS securities	14	26	46	82
Net recognized investment gains (losses) on trading securities	24	48	(8)	183
Net recognized investment gains (losses) on equity securities	12	(4)	(8)	15
Derivative gains	1,648	620	959	3,493
Provision for credit losses	84	—	(205)	—
Other gains (losses)	15	(25)	(11)	(19)
Investment related gains (losses)	$ 1,797	$ 665	$ 773	$ 3,754

Proceeds from sales of AFS securities were $3,940 million and $852 million for the three months ended September 30, 2020 and 2019, respectively, and $7,525 million and $4,063 million for the nine months ended September 30, 2020 and 2019, respectively.

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The following table summarizes the change in unrealized gains (losses) on trading and equity securities we held as of the respective period end:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Trading securities	$ 19	$ 46	$ 81	$ 215
Trading securities – related party	1	4	(42)	(11)
Equity securities	11	—	(9)	20
Equity securities – related party	—	—	—	(2)

Purchased Financial Assets with Credit Deterioration—The following table summarizes our PCD investment purchases with the following amounts at the time of purchase:

	Three months ended September 30, 2020		Nine months ended September 30, 2020	
(In millions)	Fixed maturity securities	Mortgage loans	Fixed maturity securities	Mortgage loans
Purchase price	$ —	$ 142	$ 239	$ 142
Allowance for credit losses at acquisition	—	3	61	3
Discount (premiums) attributable to other factors	—	—	34	—
Par value	$ —	$ 145	$ 334	$ 145

Repurchase Agreements—The following table summarizes the maturities of our repurchase agreements:

	September 30, 2020					
	Remaining Contractual Maturity					
(In millions)	Overnight and continuous	Less than 30 days	30-90 days	91 days – 1 year	Greater than 1 year	Total
Payables for repurchase agreements[1]	$ —	$ 500	$ —	$ —	$ 598	$ 1,098

[1] *Included in payables for collateral on derivatives and securities to repurchase on the condensed consolidated balance sheets.*

	December 31, 2019					
	Remaining Contractual Maturity					
(In millions)	Overnight and continuous	Less than 30 days	30-90 days	91 days – 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 condensed consolidated balance sheets.*

The following table summarizes the securities pledged as collateral for repurchase agreements:

	September 30, 2020		December 31, 2019	
(In millions)	Amortized Cost	Fair Value	Amortized Cost	Fair Value
AFS securities – Corporate	$ 1,085	$ 1,249	$ 498	$ 534

Reverse Repurchase Agreements—Reverse repurchase agreements represent the purchase of investments from a seller with the agreement that the investments will be repurchased by the seller at a specified price and date or within a specified period of time. The investments purchased, which represent collateral on a secured lending arrangement, are not reflected in our condensed consolidated balance sheets; however, the secured lending arrangement is recorded as a short-term investment for the principal amount loaned under the agreement. As of September 30, 2020 and December 31, 2019, amounts loaned under reverse repurchase agreements were $0 million and $190 million, respectively, and collateral backing the agreement was $0 million and $630 million, respectively.

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 allowance for 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 day 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.

Mortgage Loans, including related party—Mortgage loans, net of allowances, consists of the following:

(In millions)	September 30, 2020	December 31, 2019
Commercial mortgage loans	$ 11,194	$ 10,422
Commercial mortgage loans under development	196	93
Total commercial mortgage loans	11,390	10,515
Allowance for credit losses on commercial mortgage loans	(232)	(10)
Commercial mortgage loans, net of allowances	11,158	10,505
Residential mortgage loans	4,169	4,455
Allowance for credit losses on residential mortgage loans	(96)	(1)
Residential mortgage loans, net of allowances	4,073	4,454
Mortgage loans, net of allowances	$ 15,231	$ 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.

The distribution of commercial mortgage loans, including those under development, net of allowances, by property type and geographic region, is as follows:

	September 30, 2020		December 31, 2019	
(In millions, except for percentages)	Net Carrying Value	Percentage of Total	Net Carrying Value	Percentage of Total
Property type				
Office building	$ 3,526	31.6 %	$ 2,899	27.6 %
Retail	2,029	18.2 %	2,182	20.8 %
Apartment	2,335	20.9 %	2,142	20.4 %
Hotels	1,182	10.6 %	1,104	10.5 %
Industrial	1,407	12.6 %	1,448	13.8 %
Other commercial	679	6.1 %	730	6.9 %
Total commercial mortgage loans	$ 11,158	100.0 %	$ 10,505	100.0 %
US Region				
East North Central	$ 1,176	10.5 %	$ 1,036	9.9 %
East South Central	404	3.6 %	428	4.1 %
Middle Atlantic	3,058	27.4 %	2,580	24.6 %
Mountain	482	4.3 %	528	5.0 %
New England	330	3.0 %	340	3.2 %
Pacific	2,577	23.1 %	2,502	23.8 %
South Atlantic	1,848	16.6 %	1,920	18.3 %
West North Central	147	1.3 %	146	1.4 %
West South Central	642	5.8 %	791	7.5 %
Total US Region	10,664	95.6 %	10,271	97.8 %
International Region	494	4.4 %	234	2.2 %
Total commercial mortgage loans	$ 11,158	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:

	September 30, 2020	December 31, 2019
US States		
California	25.8 %	27.0 %
Florida	13.2 %	12.7 %
Texas	4.8 %	6.2 %
New York	5.2 %	3.3 %
Other[1]	36.5 %	38.4 %
Total US residential mortgage loan percentage	85.5 %	87.6 %
International – Ireland	13.9 %	12.4 %
International – Other[2]	0.6 %	— %
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:

	Three months ended September 30, 2020				Nine months ended September 30, 2020			
(In millions)	Commercial Mortgage	Residential Mortgage	Other Investments	Total	Commercial Mortgage	Residential Mortgage	Other Investments	Total
Beginning balance	$ 294	$ 85	$ 20	$ 399	$ 10	$ 1	$ —	$ 11
Adoption of accounting standard	—	—	—	—	167	43	11	221
Provision (reversal) for expected credit losses	(62)	8	(7)	(61)	55	50	2	107
Initial credit losses on PCD loans	—	3	—	3	—	3	—	3
Loans charged-off	—	—	—	—	—	(1)	—	(1)
Ending balance	$ 232	$ 96	$ 13	$ 341	$ 232	$ 96	$ 13	$ 341

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 September 30, 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.

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 September 30, 2020, our reasonable and supportable forecast period ranged from one year to two years, after which, we revert to the 30-year or greater historical average over a period of up to eight years.

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 11 – 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:

	September 30, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Current (less than 30 days past due)	$ 384	$ 1,016	$ 1,852	$ 507	$ 144	$ 7	$ 3,910
30 to 59 days past due	23	20	35	39	8	—	125
60 to 89 days past due	6	11	21	9	6	—	53
Over 90 days past due	1	12	21	32	13	2	81
Total residential mortgages	$ 414	$ 1,059	$ 1,929	$ 587	$ 171	$ 9	$ 4,169

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)	September 30, 2020
Beginning amortized cost of residential mortgage loans in non-accrual status	$ 67
Ending amortized cost of residential mortgage loans in non-accrual status	81
Amortized cost of residential mortgage loans in non-accrual status without a related allowance for credit losses	8

During the three months and nine months ended September 30, 2020, we recognized $2 million and $3 million, respectively, 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:

	September 30, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Current (less than 30 days past due)	$ 1,398	$ 4,399	$ 2,750	$ 1,047	$ 131	$ 1,546	$ 11,271
30 to 59 days past due	98	—	—	—	—	—	98
60 to 89 days past due	—	—	—	—	—	21	21
Total commercial mortgages	$ 1,496	$ 4,399	$ 2,750	$ 1,047	$ 131	$ 1,567	$ 11,390

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)	September 30, 2020
Beginning amortized cost of commercial mortgage loans in non-accrual status	$ —
Ending amortized cost of commercial mortgage loans in non-accrual status	39
Amortized cost of commercial mortgage loans in non-accrual status without a related allowance for credit losses	—

During the three months and nine months ended September 30, 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.

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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:

	September 30, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Less than 50%	$ 282	$ 611	$ 207	$ 200	$ 45	$ 1,250	$ 2,595
50% to 60%	249	1,215	733	277	40	162	2,676
61% to 70%	539	1,978	1,430	475	46	71	4,539
71% to 80%	331	574	287	95	—	45	1,332
81% to 100%	13	—	—	—	—	—	13
Greater than 100%	—	—	—	—	—	39	39
Commercial mortgage loans	$ 1,414	$ 4,378	$ 2,657	$ 1,047	$ 131	$ 1,567	$ 11,194

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 60%	2,486
61% to 70%	4,093
71% to 80%	1,162
81% to 100%	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:

	September 30, 2020						
(In millions)	2020	2019	2018	2017	2016	Prior	Total
Greater than 1.20x	$ 1,039	$ 3,413	$ 2,657	$ 993	$ 130	$ 1,494	$ 9,726
1.00x – 1.20x	375	965	—	31	1	66	1,438
Less than 1.00x	—	—	—	23	—	7	30
Commercial mortgage loans	$ 1,414	$ 4,378	$ 2,657	$ 1,047	$ 131	$ 1,567	$ 11,194

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

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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. Our investment funds do not specify timing of distributions on the funds' underlying assets.

The following summarizes our investment funds, including related party:

	September 30, 2020		December 31, 2019	
(In millions, except for percentages)	Carrying value	Percent of total	Carrying value	Percent of total
Investment funds				
Real estate	$ 290	40.2 %	$ 277	36.9 %
Credit funds	110	15.2 %	153	20.4 %
Private equity	257	35.5 %	236	31.5 %
Real assets	66	9.1 %	83	11.1 %
Natural resources	—	— %	1	0.1 %
Total investment funds	723	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]	666	13.9 %	487	13.7 %
Catalina Holdings Ltd. (Catalina)	317	6.6 %	271	7.6 %
Athora Holding Ltd. (Athora)[1]	572	11.9 %	132	3.7 %
Venerable Holdings, Inc. (Venerable)[1]	108	2.2 %	99	2.8 %
Other	272	5.7 %	222	6.3 %
Total differentiated investments	1,935	40.3 %	1,758	49.5 %
Real estate	686	14.3 %	853	24.0 %
Credit funds	373	7.7 %	370	10.4 %
Private equity	257	5.3 %	105	3.0 %
Real assets	196	4.1 %	182	5.1 %
Natural resources	101	2.1 %	163	4.6 %
Public equities	62	1.3 %	119	3.4 %
Investment in Apollo[1]	1,198	24.9 %	—	— %
Total investment funds – related parties	4,808	100.0 %	3,550	100.0 %
Total investment funds including related party	$ 5,531		$ 4,300	

[1] *See further discussion on MidCap, Athora, Venerable and our investment in Apollo in Note 11 – 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 11 – Related Parties.*

Summarized Ownership of A-A Mortgage—The following is the summarized income statement information of our equity method investee, A-A Mortgage:

	Nine months ended September 30,	
(In millions)	2020	2019
Net income	$ 334	$ 88

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:

	September 30, 2020		December 31, 2019	
(In millions)	Carrying Value	Maximum Loss Exposure	Carrying Value	Maximum Loss Exposure
Investment funds	$ 723	$ 1,183	$ 750	$ 1,265
Investment in related parties – investment funds	4,808	7,256	3,550	5,955
Investment in fixed maturity securities	21,930	22,000	22,694	22,170
Investment in related parties – fixed maturity securities	6,218	6,586	4,570	4,878
Investment in related parties – equity securities	50	50	58	58
Total non-consolidated investments	$ 33,729	$ 37,075	$ 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 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:

	September 30, 2020			December 31, 2019		
		Fair Value			Fair Value	
(In millions)	Notional Amount	Assets	Liabilities	Notional Amount	Assets	Liabilities
Derivatives designated as hedges						
Foreign currency swaps	3,268	$ 243	$ 45	3,158	$ 113	$ 56
Foreign currency forwards	1,736	15	1	717	1	9
Foreign currency forwards on net investments	136	—	1	139	—	2
Total derivatives designated as hedges		258	47		114	67
Derivatives not designated as hedges						
Equity options	53,997	2,401	26	49,549	2,746	5
Futures	16	48	4	8	10	1
Total return swaps	72	1	—	106	6	—
Foreign currency swaps	1,510	25	8	35	2	1
Interest rate swaps	911	11	41	776	3	4
Credit default swaps	10	—	5	10	—	3
Foreign currency forwards	2,963	27	16	1,924	7	16
Embedded derivatives						
Funds withheld including related party		1,980	50		1,395	31
Interest sensitive contract liabilities		—	11,741		—	10,942
Total derivatives not designated as hedges		4,493	11,891		4,169	11,003
Total derivatives		$ 4,751	$ 11,938		$ 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 December 2050. During the three months ended September 30, 2020 and 2019, we had foreign currency swap losses of $178 million and gains of $124 million, respectively, recorded in AOCI. During the nine months ended September 30, 2020 and 2019, we had foreign currency swap gains of $140 million and $171 million, respectively, recorded in AOCI. There were no amounts reclassified to income and no amounts deemed ineffective during the nine months ended September 30, 2020 and 2019. As of September 30, 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. As of September 30, 2020 and December 31, 2019, the carrying amount of the hedged AFS securities was $1,739 million and $456 million, respectively, and the cumulative amount of fair value hedging adjustments included in the hedged AFS securities included gains of $60 million and $1 million, respectively.

The following is a summary of the gains (losses) related to the derivatives and related hedged items in fair value hedge relationships, which are included in investment related gains (losses) on the condensed consolidated statements of income:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Derivatives	$ (52)	$ 13	$ (60)	$ 13
Related AFS securities	50	(11)	59	(12)
Total gains (losses) on derivatives and related hedged items	$ (2)	$ 2	$ (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 three months and nine months ended September 30, 2020, these derivatives had gains of $3 million and $5 million, respectively, which are included in foreign currency translation and other adjustments on the condensed consolidated statements of comprehensive income. As of September 30, 2020 and December 31, 2019, the cumulative foreign currency translation recorded in AOCI related to these net investment hedges were gains of $3 million and losses of $2 million, respectively. During the three and nine months ended September 30, 2020, there were no amounts deemed ineffective.

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 a modified coinsurance (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:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Equity options	$ 606	$ 77	$ (303)	$ 1,365
Futures	50	(3)	63	(17)
Swaps	29	8	9	37
Foreign currency forwards	(114)	42	(70)	47
Embedded derivatives on funds withheld	1,077	496	1,260	2,061
Amounts recognized in investment related gains (losses)	1,648	620	959	3,493
Embedded derivatives in indexed annuity products[1]	(553)	(265)	(910)	(1,920)
Total gains (losses) on derivatives not designated as hedges	$ 1,095	$ 355	$ 49	$ 1,573

[1] *Included in interest sensitive contract benefits on the condensed 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 condensed 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
September 30, 2020						
Derivative assets	$ 2,771	$ (61)	$ (2,564)	$ 146	$ (41)	$ 105
Derivative liabilities	(147)	61	77	(9)	—	(9)
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 condensed consolidated balance sheets. As of September 30, 2020 and December 31, 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 condensed 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.*

4. Variable Interest Entities

VIE Deconsolidation—During the first quarter 2020, as a result of the Apollo Global Management, Inc. (AGM and, together with its subsidiaries, Apollo) share transaction discussed further in *Note 11 – Related Parties*, we reassessed the consolidation conclusions for the following VIEs, which are managed by Apollo affiliates:

- 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);
- Entities included under our agreement to purchase funds managed by Apollo entities (Strategic Partnership).

Following the share transaction, we determined that we are no longer the primary beneficiary of these entities, 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, as the deconsolidated VIEs accounted for their assets and liabilities at fair value. The investments remaining from the deconsolidated VIEs are included at net asset value (NAV) in related party investment funds on the condensed consolidated balance sheets after March 31, 2020.

Commercial Mortgage Loan Securitization Trust—During the second quarter of 2020, we formed Hamlet Securitization Trust 2020-CRE1 (Hamlet) to securitize a portion of our commercial mortgage loan portfolio as CMBS securities, which are held by AHL subsidiaries and third-party cedant portfolios. Securitization of these commercial mortgage loans allows us to retain 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 condensed 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 12 – Commitments and Contingencies*.

ALR Aircraft Investment Ireland Limited (ALR)—ALR was formed to invest in a joint venture that provides airplane lease financing to a major commercial airline. We were the only investor in the profit participating notes and, as substantially all of the activities of ALR were conducted on our behalf, we were the primary beneficiary and consolidated ALR. 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:

	September 30, 2020				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Assets					
AFS securities					
US government and agencies	$ 73	$ —	$ 73	$ —	$ —
US state, municipal and political subdivisions	927	—	—	893	34
Foreign governments	340	—	—	339	1
Corporate	51,129	—	—	50,229	900
CLO	8,370	—	—	8,179	191
ABS	4,200	—	—	3,221	979
CMBS	2,239	—	—	2,169	70
RMBS	6,710	—	—	6,710	—
Total AFS securities	73,988	—	73	71,740	2,175
Trading securities					
US government and agencies	11	—	8	3	—
US state, municipal and political subdivisions	115	—	—	115	—
Corporate	1,532	—	—	1,526	6
CLO	3	—	—	—	3
ABS	119	—	—	84	35
CMBS	52	—	—	52	—
RMBS	237	—	—	178	59
Total trading securities	2,069	—	8	1,958	103
Equity securities	265	—	29	220	16
Mortgage loans	19	—	—	—	19
Investment funds	156	139	—	—	17
Funds withheld at interest – embedded derivative	1,259	—	—	—	1,259
Derivative assets	2,771	—	48	2,723	—
Short-term investments	165	—	45	110	10
Other investments	109	—	—	109	—
Cash and cash equivalents	7,548	—	7,548	—	—
Restricted cash	1,226	—	1,226	—	—
Investments in related parties					
AFS securities					
Corporate	784	—	—	20	764
CLO	1,344	—	—	1,333	11
ABS	2,729	—	—	666	2,063
Total AFS securities – related party	4,857	—	—	2,019	2,838
Trading securities					
CLO	52	—	—	24	28
ABS	1,345	—	—	—	1,345
Total trading securities – related party	1,397	—	—	24	1,373
Equity securities	50	—	—	—	50
Investment funds	1,850	80	—	—	1,770
Funds withheld at interest – embedded derivative	721	—	—	—	721
Reinsurance recoverable	2,155	—	—	—	2,155
Total assets measured at fair value	$ 100,605	$ 219	$ 8,977	$ 78,903	$ 12,506

(Continued)

	September 30, 2020				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Liabilities					
Interest sensitive contract liabilities					
Embedded derivative	$ 11,741	$ —	$ —	$ —	$ 11,741
Universal life benefits	1,363	—	—	—	1,363
Future policy benefits					
AmerUs Life Insurance Company (AmerUs) Closed Block	1,577	—	—	—	1,577
Indianapolis Life Insurance Company (ILICO) Closed Block and life benefits	777	—	—	—	777
Derivative liabilities	147	—	5	137	5
Funds withheld liability – embedded derivative	50	—	—	50	—
Total liabilities measured at fair value	$ 15,655	$ —	$ 5	$ 187	$ 15,463

(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)

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	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: 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.

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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:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Trading securities	$ 24	$ 48	$ (8)	$ 183
Mortgage loans	—	—	—	1
Investment funds	(57)	3	109	3
Future policy benefits	(4)	(37)	(31)	(129)
Total gains (losses)	$ (37)	$ 14	$ 70	$ 58

Gains and losses on trading securities are recorded in investment related gains (losses) on the condensed 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 condensed consolidated statements of income. Gains and losses related to investment funds, including related party investment funds, are recorded in net investment income on the condensed consolidated statements of income. We record the change in fair value of future policy benefits to future policy and other policy benefits on the condensed consolidated statements of income.

The following summarizes information for fair value option mortgage loans:

(In millions)	September 30, 2020	December 31, 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 September 30, 2020 and December 31, 2019.

Level 3 Financial Instruments—The following tables are reconciliations for all Level 3 assets and liabilities measured at fair value on a recurring basis. All transfers in and out of Level 3 are based on changes in the availability of pricing sources, as described in the valuation methods above.

	Three months ended September 30, 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	$ —	$ (1)	$ (5)	$ —	$ 34	$ —	$ (1)
Foreign governments	—	—	—	1	—	1	—	—
Corporate	874	(26)	62	39	(49)	900	—	75
CLO	160	—	2	(7)	36	191	—	2
ABS	868	(4)	12	(44)	147	979	—	13
CMBS	49	—	5	—	16	70	—	5
RMBS	16	—	2	(2)	(16)	—	—	—
Trading securities								
Corporate	6	—	—	—	—	6	—	—
CLO	3	—	—	—	—	3	—	—
ABS	—	—	—	35	—	35	—	—
RMBS	55	(3)	—	—	7	59	—	—
Equity securities	6	—	—	10	—	16	2	—
Mortgage loans	25	—	—	(6)	—	19	—	—
Investment funds	17	—	—	—	—	17	—	—
Funds withheld at interest – embedded derivative	763	496	—	—	—	1,259	—	—
Short-term investments	114	—	—	(16)	(88)	10	—	—
Investments in related parties								
AFS securities								
Corporate	—	1	2	761	—	764	—	2
CLO	—	—	—	11	—	11	—	—
ABS	2,061	8	25	(31)	—	2,063	—	25
Trading securities								
CLO	45	3	—	—	(20)	28	3	—
ABS	824	14	—	507	—	1,345	13	—
Equity securities	52	—	—	(2)	—	50	1	—
Investment funds	1,810	(56)	—	16	—	1,770	—	—
Funds withheld at interest – embedded derivative	560	161	—	—	—	721	—	—
Reinsurance recoverable	2,099	56	—	—	—	2,155	—	—
Total Level 3 assets	$ 10,447	$ 650	$ 109	$ 1,267	$ 33	$ 12,506	$ 19	$ 121
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	$ (11,140)	$ (553)	$ —	$ (48)	$ —	$ (11,741)	$ —	$ —
Universal life benefits	(1,323)	(40)	—	—	—	(1,363)	—	—
Future policy benefits								
AmerUs Closed Block	(1,573)	(4)	—	—	—	(1,577)	—	—
ILICO Closed Block and life benefits	(761)	(16)	—	—	—	(777)	—	—
Derivative liabilities	(5)	—	—	—	—	(5)	—	—
Total Level 3 liabilities	$ (14,802)	$ (613)	$ —	$ (48)	$ —	$ (15,463)	$ —	$ —

[1] *Related to instruments held at end of period.*

	Three months ended September 30, 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	821	(3)	10	189	(70)	947	—
CLO	200	—	1	34	(104)	131	—
ABS	1,396	1	12	16	(137)	1,288	—
CMBS	206	—	3	195	(73)	331	—
Trading securities							
Corporate	6	—	—	—	(6)	—	—
CLO	7	(1)	—	—	—	6	—
ABS	6	—	—	(1)	78	83	—
RMBS	46	(5)	—	15	35	91	(2)
Equity securities	3	—	—	—	(2)	1	—
Mortgage loans	32	—	—	(4)	—	28	—
Investment funds	25	(1)	—	(2)	—	22	(1)
Funds withheld at interest – embedded derivative	704	100	—	—	—	804	—
Short-term investments	45	—	—	181	—	226	—
Investments in related parties							
AFS securities							
CLO	37	—	—	—	(37)	—	—
ABS	399	—	8	587	—	994	—
Trading securities							
CLO	95	(5)	—	(7)	(23)	60	—
ABS	218	4	—	2	—	224	5
Equity securities	350	6	—	31	—	387	—
Investment funds	141	(1)	—	—	—	140	1
Funds withheld at interest – embedded derivative	501	154	—	—	—	655	—
Reinsurance recoverable	1,834	120	—	—	—	1,954	—
Total Level 3 assets	$ 7,112	$ 369	$ 34	$ 1,236	$ (339)	$ 8,412	$ 3
Liabilities							
Interest sensitive contract liabilities							
Embedded derivative	$ (9,905)	$ (265)	$ —	$ (103)	$ —	$ (10,273)	$ —
Universal life benefits	(1,051)	(91)	—	—	—	(1,142)	—
Future policy benefits							
AmerUs Closed Block	(1,535)	(37)	—	—	—	(1,572)	—
ILICO Closed Block and life benefits	(769)	(28)	—	—	—	(797)	—
Derivative liabilities	(4)	—	—	—	—	(4)	—
Total Level 3 liabilities	$ (13,264)	$ (421)	$ —	$ (103)	$ —	$ (13,788)	$ —

[1] *Related to instruments held at end of period.*

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	Nine months ended September 30, 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 income[1]	Total gains (losses) included in OCI[1]
Assets								
AFS securities								
US state, municipal and political subdivisions	$ 40	$ —	$ —	$ (6)	$ —	$ 34	$ —	$ —
Foreign governments	—	—	—	1	—	1	—	—
Corporate	725	1	(1)	118	57	900	—	(1)
CLO	121	—	—	56	14	191	—	—
ABS	1,374	19	(71)	(301)	(42)	979	—	(69)
CMBS	46	(5)	(5)	(5)	39	70	—	(5)
Trading securities								
Corporate	—	—	—	—	6	6	—	—
CLO	6	(3)	—	—	—	3	(1)	—
ABS	16	—	—	19	—	35	—	—
RMBS	52	(4)	—	—	11	59	5	—
Equity securities	3	3	—	10	—	16	3	—
Mortgage loans	27	—	—	(8)	—	19	—	—
Investment funds	22	(5)	—	—	—	17	(4)	—
Funds withheld at interest – embedded derivative	801	458	—	—	—	1,259	—	—
Short-term investments	41	—	—	(31)	—	10	—	—
Investments in related parties								
AFS securities								
Corporate	—	1	2	761	—	764	—	2
CLO	—	—	—	11	—	11	—	—
ABS	2,324	9	(20)	(85)	(165)	2,063	—	(20)
Trading securities								
CLO	38	(11)	—	1	—	28	(11)	—
ABS	711	(13)	—	647	—	1,345	(14)	—
Equity securities	64	(5)	—	(3)	(6)	50	(5)	—
Investment funds	132	113	—	1,525	—	1,770	113	—
Funds withheld at interest – embedded derivative	594	127	—	—	—	721	—	—
Reinsurance recoverable	1,821	334	—	—	—	2,155	—	—
Total Level 3 assets	$ 8,958	$ 1,019	$ (95)	$ 2,710	$ (86)	$ 12,506	$ 86	$ (93)
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	$ (10,942)	$ (910)	$ —	$ 111	$ —	$ (11,741)	$ —	$ —
Universal life benefits	(1,050)	(313)	—	—	—	(1,363)	—	—
Future policy benefits								
AmerUs Closed Block	(1,546)	(31)	—	—	—	(1,577)	—	—
ILICO Closed Block and life benefits	(755)	(22)	—	—	—	(777)	—	—
Derivative liabilities	(3)	(2)	—	—	—	(5)	(2)	—
Total Level 3 liabilities	$ (14,296)	$ (1,278)	$ —	$ 111	$ —	$ (15,463)	$ (2)	$ —

[1] *Related to instruments held at end of period.*

	Nine months ended September 30, 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	(2)	20	164	(133)	947	—
CLO	107	—	3	60	(39)	131	—
ABS	1,615	6	43	43	(419)	1,288	—
CMBS	187	1	7	154	(18)	331	—
RMBS	56	—	4	2	(62)	—	—
Trading securities							
CLO	1	(1)	—	—	6	6	6
ABS	—	—	—	5	78	83	—
RMBS	134	(13)	—	15	(45)	91	3
Equity securities	3	—	—	—	(2)	1	—
Mortgage loans	32	1	—	(5)	—	28	1
Investment funds	29	(2)	—	(5)	—	22	(2)
Funds withheld at interest – embedded derivative	57	747	—	—	—	804	—
Short-term investments	—	—	—	226	—	226	—
Investments in related parties							
AFS securities, ABS	328	—	21	748	(103)	994	—
Trading securities							
CLO	113	(7)	—	(54)	8	60	2
ABS	149	(13)	—	(15)	103	224	(13)
Equity securities	133	15	—	239	—	387	(2)
Investment funds	120	1	—	19	—	140	3
Funds withheld at interest – embedded derivative	(110)	765	—	—	—	655	—
Reinsurance recoverable	1,676	278	—	—	—	1,954	—
Total Level 3 assets	$ 5,528	$ 1,776	$ 98	$ 1,636	$ (626)	$ 8,412	$ (2)
Liabilities							
Interest sensitive contract liabilities							
Embedded derivative	$ (7,969)	$ (1,920)	$ —	$ (384)	$ —	$ (10,273)	$ —
Universal life benefits	(932)	(210)	—	—	—	(1,142)	—
Future policy benefits							
AmerUs Closed Block	(1,443)	(129)	—	—	—	(1,572)	—
ILICO Closed Block and life benefits	(730)	(67)	—	—	—	(797)	—
Derivative liabilities	(4)	—	—	—	—	(4)	—
Total Level 3 liabilities	$ (11,078)	$ (2,326)	$ —	$ (384)	$ —	$ (13,788)	$ —

[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:

	Three months ended September 30, 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)	$ —	$ (5)	$ —	$ —	$ —
Foreign governments	1	—	—	—	1	—	—	—
Corporate	58	—	—	(19)	39	157	(206)	(49)
CLO	12	—	(18)	(1)	(7)	36	—	36
ABS	47	—	(43)	(48)	(44)	218	(71)	147
CMBS	—	—	—	—	—	39	(23)	16
RMBS	—	—	(1)	(1)	(2)	—	(16)	(16)
Trading securities								
ABS	35	—	—	—	35	—	—	—
RMBS	—	—	—	—	—	8	(1)	7
Equity securities	10	—	—	—	10	—	—	—
Mortgage loans	—	—	—	(6)	(6)	—	—	—
Short-term investments	1	—	(7)	(10)	(16)	—	(88)	(88)
Investments in related parties								
AFS securities								
Corporate	761	—	—	—	761	—	—	—
CLO	11	—	—	—	11	—	—	—
ABS	2	—	(10)	(23)	(31)	—	—	—
Trading securities								
CLO	—	—	—	—	—	4	(24)	(20)
ABS	517	—	(10)	—	507	—	—	—
Equity securities	2	—	(1)	(3)	(2)	—	—	—
Investment funds	16	—	—	—	16	—	—	—
Total Level 3 assets	$ 1,473	$ —	$ (95)	$ (111)	$ 1,267	$ 462	$ (429)	$ 33
Liabilities								
Interest sensitive contract liabilities – embedded derivative	$ —	$ (202)	$ —	$ 154	$ (48)	$ —	$ —	$ —
Total Level 3 liabilities	$ —	$ (202)	$ —	$ 154	$ (48)	$ —	$ —	$ —

	Three months ended September 30, 2019							
(In millions)	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements	Transfers in	Transfers out	Net transfers in (out)
Assets								
AFS securities								
Corporate	$ 199	$ —	$ —	$ (10)	$ 189	$ 1	$ (71)	$ (70)
CLO	37	—	—	(3)	34	—	(104)	(104)
ABS	64	—	(21)	(27)	16	—	(137)	(137)
CMBS	251	—	(4)	(52)	195	—	(73)	(73)
Trading securities								
Corporate	—	—	—	—	—	—	(6)	(6)
ABS	—	—	—	(1)	(1)	78	—	78
RMBS	15	—	—	—	15	35	—	35
Equity securities	—	—	—	—	—	—	(2)	(2)
Mortgage loans	—	—	—	(4)	(4)	—	—	—
Investment funds	—	—	(2)	—	(2)	—	—	—
Short-term investments	200	—	—	(19)	181	—	—	—
Investments in related parties								
AFS securities								
CLO	—	—	—	—	—	—	(37)	(37)
ABS	587	—	—	—	587	—	—	—
Trading securities								
CLO	—	—	(7)	—	(7)	—	(23)	(23)
ABS	2	—	—	—	2	—	—	—
Equity securities	31	—	—	—	31	—	—	—
Total Level 3 assets	$ 1,386	$ —	$ (34)	$ (116)	$ 1,236	$ 114	$ (453)	$ (339)
Liabilities								
Interest sensitive contract liabilities – embedded derivative	$ —	$ (222)	$ —	$ 119	$ (103)	$ —	$ —	$ —
Total Level 3 liabilities	$ —	$ (222)	$ —	$ 119	$ (103)	$ —	$ —	$ —

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Notes to Condensed Consolidated Financial Statements *(Unaudited)*

	Nine months ended September 30, 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	1	—	—	—	1	—	—	—
Corporate	245	—	—	(127)	118	97	(40)	57
CLO	90	—	(25)	(9)	56	36	(22)	14
ABS	95	—	(6)	(390)	(301)	64	(106)	(42)
CMBS	—	—	(4)	(1)	(5)	39	—	39
Trading securities								
Corporate	—	—	—	—	—	6	—	6
ABS	35	—	(16)	—	19	—	—	—
RMBS	—	—	—	—	—	12	(1)	11
Equity securities	10	—	—	—	10	—	—	—
Mortgage loans	—	—	—	(8)	(8)	—	—	—
Short-term investments	1	—	(7)	(25)	(31)	—	—	—
Investments in related parties								
AFS securities								
Corporate	761	—	—	—	761	—	—	—
CLO	11	—	—	—	11	—	—	—
ABS	7	—	(15)	(77)	(85)	—	(165)	(165)
Trading securities								
CLO	13	—	(12)	—	1	—	—	—
ABS	671	—	(10)	(14)	647	—	—	—
Equity securities	3	—	(2)	(4)	(3)	—	(6)	(6)
Investment funds	1,525	—	—	—	1,525	—	—	—
Total Level 3 assets	$ 3,468	$ —	$ (102)	$ (656)	$ 2,710	$ 254	$ (340)	$ (86)
Liabilities								
Interest sensitive contract liabilities – embedded derivative	$ —	$ (964)	$ —	$ 1,075	$ 111	$ —	$ —	$ —
Total Level 3 liabilities	$ —	$ (964)	$ —	$ 1,075	$ 111	$ —	$ —	$ —

	Nine months ended September 30, 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	277	—	(2)	(111)	164	1	(134)	(133)
CLO	64	—	—	(4)	60	—	(39)	(39)
ABS	260	—	(41)	(176)	43	—	(419)	(419)
CMBS	252	—	(4)	(94)	154	—	(18)	(18)
RMBS	2	—	—	—	2	—	(62)	(62)
Trading securities								
CLO	—	—	—	—	—	6	—	6
ABS	6	—	—	(1)	5	78	—	78
RMBS	15	—	—	—	15	34	(79)	(45)
Equity securities	—	—	—	—	—	—	(2)	(2)
Mortgage loans	—	—	—	(5)	(5)	—	—	—
Investment funds	—	—	(5)	—	(5)	—	—	—
Short-term investments	248	—	—	(22)	226	—	—	—
Investments in related parties								
AFS securities, ABS	757	—	—	(9)	748	—	(103)	(103)
Trading securities								
CLO	—	—	(54)	—	(54)	43	(35)	8
ABS	—	—	—	(15)	(15)	103	—	103
Equity securities	243	—	(4)	—	239	—	—	—
Investment funds	19	—	—	—	19	—	—	—
Total Level 3 assets	$ 2,183	$ —	$ (110)	$ (437)	$ 1,636	$ 265	$ (891)	$ (626)
Liabilities								
Interest sensitive contract liabilities – embedded derivative	$ —	$ (756)	$ —	$ 372	$ (384)	$ —	$ —	$ —
Total Level 3 liabilities	$ —	$ (756)	$ —	$ 372	$ (384)	$ —	$ —	$ —

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:

	September 30, 2020						
(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
AFS and trading securities	$ 5,468	Discounted cash flow	Discount	2.0 %	35.0 %	5.7 % [1]	Decrease
Interest sensitive contract liabilities – fixed indexed annuities embedded derivatives	$ 11,741	Option budget method	Nonperformance risk	0.1 %	1.5 %	0.8 % [2]	Decrease
			Option budget	0.6 %	3.6 %	1.9 % [3]	Increase
			Surrender rate	5.3 %	9.7 %	7.1 % [4]	Decrease
	December 31, 2019						
	Fair value	Valuation technique	Unobservable inputs	Minimum	Maximum	Weighted average	Impact of an increase in the input on fair value
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 $433 million with no recorded impairment as of September 30, 2020.

Fair Value of Financial Instruments Not Carried at Fair Value—The following represents our financial instruments not carried at fair value on the condensed consolidated balance sheets:

	September 30, 2020					
(In millions)	Carrying Value	Fair Value	NAV	Level 1	Level 2	Level 3
Financial assets						
Mortgage loans	$ 14,572	$ 15,114	$ —	$ —	$ —	$ 15,114
Investment funds	567	567	567	—	—	—
Policy loans	387	387	—	—	387	—
Funds withheld at interest	47,334	47,334	—	—	—	47,334
Other investments	840	852	—	—	—	852
Investments in related parties						
Mortgage loans	640	628	—	—	—	628
Investment funds	2,958	2,958	2,958	—	—	—
Funds withheld at interest	12,332	12,332	—	—	—	12,332
Other investments	467	489	—	—	—	489
Total financial assets not carried at fair value	$ 80,097	$ 80,661	$ 3,525	$ —	$ 387	$ 76,749
Financial liabilities						
Interest sensitive contract liabilities	$ 92,088	$ 96,125	$ —	$ —	$ —	$ 96,125
Long-term debt	1,487	1,099	—	—	1,099	—
Securities to repurchase	1,098	1,098	—	—	1,098	—
Funds withheld liability	390	390	—	—	390	—
Total financial liabilities not carried at fair value	$ 95,063	$ 98,712	$ —	$ —	$ 2,587	$ 96,125

	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 condensed 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.

Investment in related parties – Other investments – The fair value of related party 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

Reinsurance transactions—On June 18, 2020, we entered into a funds withheld coinsurance agreement effective June 1, 2020 with Jackson National Life Insurance Company (Jackson) to reinsure a block of fixed and fixed indexed annuities. Additionally, as part of the transaction, we made a $500 million equity investment in an indirect parent of Jackson, which closed on July 17, 2020. The following summarizes the transaction:

(In millions)	Funds Withheld
Liabilities assumed	$ 27,439
Less: Net consideration received	28,805
Unearned revenue reserve[1]	$ (1,366)

[1] *Included within interest sensitive contract liabilities on the condensed consolidated balance sheets.*

Unearned revenue reserve balances are amortized over the life of the reinsurance agreements on a basis consistent with our DAC amortization policy.

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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.

The following summarizes the effect of reinsurance on premiums and future policy and other policy benefits on the condensed consolidated statements of income:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Premiums				
Direct	$ 42	$ 2,661	$ 1,424	$ 5,405
Reinsurance assumed	101	57	284	193
Reinsurance ceded	(31)	(30)	(101)	(123)
Total premiums	$ 112	$ 2,688	$ 1,607	$ 5,475
Future policy and other policy benefits				
Direct	$ 385	$ 3,025	$ 2,404	$ 6,481
Reinsurance assumed	161	77	370	313
Reinsurance ceded	(107)	(147)	(305)	(399)
Total future policy and other policy benefits	$ 439	$ 2,955	$ 2,469	$ 6,395

7. Deferred Acquisition Costs, Deferred Sales Inducements and Value of Business Acquired

The following represents a rollforward of deferred acquisition costs (DAC), deferred sales inducements (DSI) and value of business acquired (VOBA):

(In millions)	DAC	DSI	VOBA	Total
Balance at December 31, 2019	$ 3,274	$ 820	$ 914	$ 5,008
Adoption of accounting standard	12	5	5	22
Additions	470	124	—	594
Unlocking	(36)	(13)	(11)	(60)
Amortization	(175)	(24)	(25)	(224)
Impact of unrealized investment (gains) losses	(116)	(45)	(14)	(175)
Balance at September 30, 2020	$ 3,429	$ 867	$ 869	$ 5,165

(In millions)	DAC	DSI	VOBA	Total
Balance at December 31, 2018	$ 3,921	$ 799	$ 1,187	$ 5,907
Additions	521	187	—	708
Unlocking	(117)	(9)	(24)	(150)
Amortization	(637)	(29)	(37)	(703)
Impact of unrealized investment (gains) losses	(458)	(141)	(203)	(802)
Balance at September 30, 2019	$ 3,230	$ 807	$ 923	$ 4,960

8. Debt

Short-term Borrowing—During the second quarter of 2020, we converted $400 million of short-term debt outstanding with the FHLB to funding agreements. See *Note 12 – Commitments and Contingencies* for further discussion regarding FHLB funding agreements.

Senior Notes—During the second quarter of 2020, we issued $500 million of senior unsecured notes due April 3, 2030. The senior notes have a 6.150% coupon rate, payable semi-annually. We can call the senior notes, in whole or in part, at any time prior to January 3, 2030, 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 at the Treasury Rate (as defined in the second supplemental indenture, dated April 3, 2020) plus 50 basis points, and any accrued and unpaid interest. Thereafter, we can call the notes, in whole or in part, at a price equal to 100% of the principal and any accrued and unpaid interest.

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In the fourth quarter of 2020, we issued $500 million of senior unsecured notes due January 15, 2031. The senior notes have a 3.500% coupon rate, payable semi-annually. We can call the senior notes, in whole or in part, at any time prior to October 15, 2030, 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 at the Treasury Rate (as defined in the third supplemental indenture, dated October 8, 2020) plus 45 basis points, and any accrued and unpaid interest. Thereafter, we can call the notes, in whole or in part, at a price equal to 100% of the principal and any accrued and unpaid interest.

9. Earnings Per Share

The following represents our basic and diluted earnings per share (EPS) calculations, which are calculated using unrounded amounts:

	Three months ended September 30, 2020
(In millions, except per share data)	Class A
Net income available to Athene Holding Ltd. common shareholders – basic and diluted	$ 622
Basic weighted average shares outstanding	193.1
Dilutive effect of stock compensation plans	4.0
Diluted weighted average shares outstanding	197.1
Earnings per share	
Basic	$ 3.22
Diluted	$ 3.16

	Three months ended September 30, 2019					
(In millions, except share and per share data)	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	$ 227	$ 38	$ 5	$ 1	$ 2	$ 3
Basic weighted average shares outstanding	151.6	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	152.0	25.4	3.3	0.8	1.0	2.5
Earnings per share						
Basic	$ 1.50	$ 1.50	$ 1.50	$ 1.50	$ 1.50	$ 1.50
Diluted	$ 1.50	$ 1.50	$ 1.50	$ 1.50	$ 1.50	$ 1.29

	Nine months ended September 30, 2020					
(In millions, except share and 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	$ 508	$ (98)	$ (13)	$ (3)	$ (4)	$ (9)
Basic weighted average shares outstanding	182.8	25.4	3.3	0.8	1.0	2.4
Dilutive effect of stock compensation plans	3.1	—	—	—	—	—
Diluted weighted average shares outstanding	185.9	25.4	3.3	0.8	1.0	2.4
Earnings (loss) per share						
Basic	$ 2.78	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)
Diluted	$ 2.73	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)	$ (3.87)

	Nine months ended September 30, 2019					
(In millions, except per share data)	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	$ 1,411	$ 228	$ 30	$ 7	$ 9	$ 19
Basic weighted average shares outstanding	157.2	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	157.6	25.4	3.3	0.8	1.0	2.5
Earnings per share						
Basic	$ 8.97	$ 8.97	$ 8.97	$ 8.97	$ 8.97	$ 8.97
Diluted	$ 8.95	$ 8.97	$ 8.97	$ 8.97	$ 8.97	$ 7.77

During the first quarter of 2020, as a result of the closing of the share transaction discussed further in *Note 11 – 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 nine months ended September 30, 2020 allocates all net income for the second and third 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 income 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 within the dilutive effect of stock compensation plans.

We use the two-class method for allocating net income available to Athene Holding Ltd. common shareholders to each class of our common stock. 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 2.8 million and 32.0 million shares, restricted stock units, options and warrants as of September 30, 2020 and 2019, respectively.

10. Equity

Preferred Stock—We have three 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); and 6.375% Fixed-Rate Reset Perpetual Non-Cumulative Preference Shares, Series C (Series C) as summarized below:

	Series A	Series B	Series C
Authorized, issued and outstanding	34,500	13,800	24,000
Liquidation preference per share	$ 25,000	$ 25,000	$ 25,000

The following summarizes dividends declared and paid per preferred stock share by series:

	Three months ended September 30,		Nine months ended September 30,	
(Per share)	2020	2019	2020	2019
Series A	$ 396.87	$ 485.07	$ 1,190.63	$ 485.07
Series B	351.57	—	1,054.69	—
Series C	482.55	—	482.55	—

The following summarizes dividends declared and paid in the aggregate on the preferred stock by series:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Series A	$ 14	$ 17	$ 41	$ 17
Series B	4	—	14	—
Series C	12	—	12	—
Total dividends declared and paid	$ 30	$ 17	$ 67	$ 17

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—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 Apollo. See *Note 11 – Related Parties* for further information on this transaction. On February 28, 2020, all Class B shares were converted to Class A shares on a one-to-one basis. Class M shares 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.

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.

Share Repurchase Authorization

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 authorization:

	Nine months ended September 30,	
(In millions)	2020	2019
Beginning balance	$ 640	$ 150
Additional authorization	—	717
Repurchases	(416)	(544)
Ending balance	$ 224	$ 323

The table below shows the changes in each class of shares issued and outstanding:

(In millions)	Nine months ended September 30, 2020
Class A	
Beginning balance	143.2
Issued shares	35.9
Forfeited shares	(0.1)
Repurchased shares	(13.2)
Converted from Class B shares	25.4
Converted from Class M shares	0.3
Ending balance	191.5
Class B	
Beginning balance	25.4
Converted to Class A shares	(25.4)
Ending balance	—
Class M-1	
Beginning balance	3.3
Converted to Class A shares	(0.2)
Converted to warrants	(3.1)
Ending balance	—
Class M-2	
Beginning balance	0.8
Converted to Class A shares	0.0
Converted to warrants	(0.8)
Ending balance	—
Class M-3	
Beginning balance	1.0
Converted to Class A shares	0.0
Converted to warrants	(1.0)
Ending balance	—
Class M-4	
Beginning balance	4.0
Converted to Class A shares	(0.1)
Converted to warrants	(3.6)
Repurchased shares	(0.3)
Ending balance	—

Accumulated Other Comprehensive Income (Loss)—The following provides the details of AOCI 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 June 30, 2020	$ 3,444	$ (702)	$ (873)	$ 320	$ (5)	$ 2,184
Other comprehensive income (loss) before reclassifications	646	768	(306)	(178)	10	940
Less: Reclassification adjustments for gains (losses) realized in net income (loss)[1]	85	—	(20)	—	—	65
Less: Income tax expense (benefit)	107	153	(61)	(42)	—	157
Less: Other comprehensive income (loss) attributable to NCI	(10)	14	—	8	2	14
Balance at September 30, 2020	$ 3,908	$ (101)	$ (1,098)	$ 176	$ 3	$ 2,888

[1] *Recognized in investment related gains (losses) on the condensed consolidated statements of income.*

(In millions)	Unrealized investment gains (losses) on AFS securities	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 June 30, 2019	$ 2,349	$ (661)	$ 77	$ (5)	$ 1,760
Other comprehensive income (loss) before reclassifications	1,132	(392)	124	(1)	863
Less: Reclassification adjustments for gains (losses) realized in net income (loss)[1]	7	(2)	—	—	5
Less: Income tax expense (benefit)	232	(82)	26	—	176
Balance at September 30, 2019	$ 3,242	$ (969)	$ 175	$ (6)	$ 2,442

[1] *Recognized in investment related gains (losses) on the condensed consolidated statements of income.*

(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, 2019	$ 3,102	$ —	$ (879)	$ 61	$ (3)	$ 2,281
Adoption of accounting standards	4	(4)	(6)	—	—	(6)
Other comprehensive income (loss) before reclassifications	1,403	(116)	(358)	140	9	1,078
Less: Reclassification adjustments for gains (losses) realized in net income (loss)[1]	306	—	(87)	—	—	219
Less: Income tax expense (benefit)	213	(23)	(58)	33	—	165
Less: Other comprehensive income (loss) attributable to NCI	82	4	—	(8)	3	81
Balance at September 30, 2020	$ 3,908	$ (101)	$ (1,098)	$ 176	$ 3	$ 2,888

[1] *Recognized in investment related gains (losses) on the condensed consolidated statements of income.*

(In millions)	Unrealized investment gains (losses) on AFS securities	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, 2018	$ (628)	$ 121	$ 39	$ (4)	$ (472)
Other comprehensive income (loss) before reclassifications	4,889	(1,391)	171	(2)	3,667
Less: Reclassification adjustments for gains (losses) realized in net income (loss)[1]	35	(10)	—	—	25
Less: Income tax expense (benefit)	984	(291)	35	—	728
Balance at September 30, 2019	$ 3,242	$ (969)	$ 175	$ (6)	$ 2,442

[1] *Recognized in investment related gains (losses) on the condensed consolidated statements of income.*

11. Related Parties

Apollo

Current fee structure – Substantially all of our investments are managed by Apollo, which provides direct investment management, asset allocation, mergers and acquisition asset diligence and certain operational support services for our investment portfolio, including investment compliance, tax, legal and risk management support.

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)	September 30, 2020	Percent of Total	December 31, 2019	Percent of Total
Core	$ 48,409	28.7 %	$ 32,474	25.5 %
Core Plus	39,543	23.4 %	30,155	23.6 %
Yield	58,791	34.8 %	48,557	38.0 %
High Alpha	6,776	4.0 %	5,062	4.0 %
Other	15,289	9.1 %	11,302	8.9 %
Total sub-allocation assets	$ 168,808	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.

During the three months ended September 30, 2020 and 2019, we incurred management fees, inclusive of the base and sub-allocation fees, of $111 million and $127 million, respectively. During the nine months ended September 30, 2020 and 2019, we incurred management fees, inclusive of the base and sub-allocation fees, of $362 million and $313 million, respectively. Management fees are included within net investment income on the condensed consolidated statements of income. As of September 30, 2020 and December 31, 2019, management fees payable were $31 million and $42 million, respectively, and are included in other liabilities on the condensed consolidated balance sheets.

In addition to the assets on our condensed 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.

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.

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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 $666 million and $487 million as of September 30, 2020 and December 31, 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 $0 million and $254 million of residential mortgage loans under this agreement during the three months ended September 30, 2020 and 2019, respectively. We purchased $169 million and $254 million of residential mortgage loans under this agreement during the nine months ended September 30, 2020 and 2019, respectively. Additionally, we hold ABS securities issued by AmeriHome affiliates of $165 million and $170 million as of September 30, 2020 and December 31, 2019, respectively, which are included in related party AFS securities on the condensed consolidated balances sheets. We also have commitments to make additional equity investments in A-A Mortgage of $125 million as of September 30, 2020. Additionally, on October 26, 2020, we invested in $195 million of unsecured notes issued by AmeriHome.

MidCap – During the third quarter of 2020, AAA Investment (Co Invest VII), L.P. (CoInvest VII) was dissolved. CoInvest VII held a significant investment in MidCap. CoInvest VII was included in related party investment funds on the condensed consolidated balance sheets and was reflected as a consolidated VIE prior to the first quarter of 2020. Subsequent to the dissolution of CoInvest VII, we now hold MidCap directly as profit participating notes, which are included in related party trading ABS securities on the condensed consolidated balance sheets. We have also advanced amounts under a subordinated debt facility to MidCap. During the second quarter of 2020, we invested $67 million in MidCap redeemable preferred stock. The subordinated debt facility and redeemable preferred stock are included in related party other investments and related party trading securities, respectively, on the condensed consolidated balance sheets. The following summarizes these investments in MidCap:

(In millions)	September 30, 2020	December 31, 2019
Investment fund	$ —	$ 547
Profit participating notes	532	—
Subordinated debt facility	322	339
Redeemable preferred stock	77	—
Total investment in MidCap	$ 931	$ 886

Additionally, we hold ABS and CLO securities issued by MidCap affiliates of $537 million and $624 million as of September 30, 2020 and December 31, 2019, respectively, which are included in related party AFS securities on the condensed 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 United Kingdom (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 September 30, 2020, we have not exercised our right of first refusal to reinsure liabilities ceded to Athora's insurance or reinsurance subsidiaries.

Our investment in Athora, which is included in related party investment funds on the condensed consolidated balance sheets, was $572 million and $132 million as of September 30, 2020 and December 31, 2019, respectively. During the second quarter of 2020, we contributed capital of $361 million to Athora. Additionally, as of September 30, 2020 and December 31, 2019, we had $117 million and $146 million, respectively, of funding agreements outstanding to Athora. We also have commitments to make additional equity investments in Athora of $370 million as of September 30, 2020.

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Venerable – We have coinsurance and modco agreements with Venerable Insurance and Annuity Company (VIAC, formerly Voya Insurance and Annuity Company). 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 $108 million and $99 million as of September 30, 2020 and December 31, 2019, respectively. The minority equity investment in VA Capital is included in related party investment funds on the condensed 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 condensed consolidated balance sheets. The loan is held at the principal balance less allowances and was $145 million and $148 million as of September 30, 2020 and December 31, 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 – We have 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 September 30, 2020 and December 31, 2019, we had $137 million and $97 million, respectively, of investments under the Strategic Partnership and these investments are included in related party investment funds on the condensed consolidated balance sheets and were reflected as consolidated VIEs in prior periods.

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 September 30, 2020 and December 31, 2019, our investment in securitizations of loans originated by PK was $1,244 million and $1,282 million, respectively, and are included in related party AFS or trading securities on the condensed consolidated balance sheets. We also have commitments to make additional investment in securitizations of loans originated by PK of $215 million as of September 30, 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) – Our subsidiary, Athene Co-Invest Reinsurance Affiliate 1A Ltd. (together with its subsidiaries, ACRA) is partially owned by ADIP, which is managed by AGM. As of March 31, 2020, ADIP owned 67% of the equity interests, while we retained 100% of the voting power and 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 nine months ended September 30, 2020, we received a capital contribution 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. Pursuant to the underlying transaction agreements, among other things (1) AGM has the right to purchase additional Class A common shares until August 26, 2020 to the extent AOG and certain affiliates, employees and consultants of AGM do not beneficially own at least 35% of the issued and outstanding Class A common shares (inclusive of Class A common shares over which any such persons have a valid proxy), on a fully diluted basis, in a number to achieve such 35% ownership level at a price based upon a weighted average price during the 30 days prior to the exercise of the purchase right and (2) 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 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 September 30, 2020 and December 31, 2019, we held $50 million and $58 million, respectively, of preferred shares, which are included in related party equity securities on the condensed consolidated balance sheets, and also held AA Infrastructure ABS securities of $293 million and $267 million, respectively, which are included in related party trading securities on the condensed consolidated balance sheets. We also have commitments to make additional investments in AA Infrastructure of $51 million as of September 30, 2020.

12. 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 $5,848 million and $4,793 million as of September 30, 2020 and December 31, 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 September 30, 2020 and December 31, 2019, we had $2,101 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 September 30, 2020 and December 31, 2019, we had $6,523 million and $3,700 million, respectively, of FABN funding agreements outstanding. We had $2,392 million of FABN capacity remaining as of September 30, 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 September 30, 2020, we had $1,000 million of FABR funding agreements outstanding.

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Pledged Assets and Funds in Trust (Restricted Assets)—The total restricted assets included on the condensed consolidated balance sheets are as follows:

(In millions)	September 30, 2020	December 31, 2019
AFS securities	$ 9,928	$ 9,369
Trading securities	54	45
Equity securities	24	22
Mortgage loans	4,715	2,535
Investment funds	55	84
Derivative assets	95	105
Short-term investments	5	92
Other investments	104	88
Restricted cash	1,226	402
Total restricted assets	$ 16,206	$ 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.

Letters of Credit—We have undrawn letters of credit totaling $1,413 million as of September 30, 2020. These letters of credit were issued for our reinsurance program and expire between December 10, 2020 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 Athene Annuity and Life Company (AAIA), purchased broad based variable COLI policies from American General Life Insurance Company (American General) that, as of September 30, 2020, had an asset value of $401 million, and is included in other assets on the condensed 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 parties have served initial document requests and interrogatories and are currently in early stage discovery. An initial scheduling conference is set for November 10, 2020. The value of the guarantees included within the asset value reflected above is $196 million as of September 30, 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, 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 have entered into consent orders with several states, including the NYSDFS and the CDI, to resolve underlying matters in those 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 pension risk transfer (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. Unless plaintiffs belatedly try to perfect their appeal, or to extend their time to do so, and are successful in such efforts, we believe that this litigation is concluded.

13. 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 is an internal measure 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 condensed consolidated statements of income:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Retirement Services	$ 1,711	$ 4,096	$ 5,769	$ 9,650
Corporate and Other	(15)	28	101	84
Non-operating adjustments				
Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets	637	84	(280)	1,490
Investment gains (losses), net of offsets	468	373	29	1,768
VIE expenses, noncontrolling interests and other adjustments to revenues	474	3	505	10
Total revenues	$ 3,275	$ 4,584	$ 6,124	$ 13,002

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 condensed consolidated statements of income:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Retirement Services	$ 361	$ 256	$ 773	$ 918
Corporate and Other	(59)	(13)	(89)	(18)
Non-operating adjustments				
Investment gains (losses), net of offsets	346	166	(18)	1,041
Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets	72	(117)	(268)	(201)
Integration, restructuring and other non-operating expenses	—	(34)	(13)	(46)
Stock-based compensation, excluding LTIP	(1)	(3)	(11)	(9)
Income tax (expense) benefit – non-operating	(97)	21	7	19
Net income available to Athene Holding Ltd. common shareholders	$ 622	$ 276	$ 381	$ 1,704

The following represents total assets by segment:

(In millions)	September 30, 2020	December 31, 2019
Retirement Services	$ 186,400	$ 143,881
Corporate and Other	4,688	2,994
Total assets	$ 191,088	$ 146,875

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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 September 30, 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 consolidated annualized ROE for the nine months ended September 30, 2020 and the year ended December 31, 2019 was 3.5% and 19.7%, respectively, and our consolidated annualized adjusted operating ROE was 9.1% and 14.1%, respectively. For the nine months ended September 30, 2020 and the year ended December 31, 2019, in our Retirement Services segment, we generated an annualized net investment spread of 1.14% and 1.50%, respectively, and an annualized adjusted operating ROE of 14.0% and 17.3%, respectively. Our Retirement Services segment generated an annualized investment margin on deferred annuities of 1.96% and 2.46% for the nine months ended September 30, 2020 and the year ended December 31, 2019, respectively. As of September 30, 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 deposits generated from our organic and inorganic channels:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Retail sales	$ 2,465	$ 1,921	$ 5,502	$ 5,646
Flow reinsurance	2,317	609	5,443	2,754
Funding agreements[1]	2,619	503	6,078	802
Pension risk transfer	—	2,604	1,246	5,233
Total organic deposits	7,401	5,637	18,269	14,435
Inorganic deposits	—	—	28,792	—
Gross deposits	7,401	5,637	47,061	14,435
Deposits attributable to ACRA noncontrolling interest	—	—	(18,268)	—
Net deposits	$ 7,401	$ 5,637	$ 28,793	$ 14,435

[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.*

Our organic channels, including retail, flow reinsurance and institutional products, provided deposits of $18.3 billion and $14.4 billion in the nine months ended September 30, 2020 and 2019, respectively, which were underwritten to attractive, at-or-above target returns despite the historically low interest rate environment. Organic deposits increased $3.8 billion, or 27%, 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 $8.7 billion and $8.5 billion for the nine months ended September 30, 2020 and 2019, respectively. 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.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Within our retail channel, we had fixed annuity sales of $5.5 billion and $5.6 billion for the nine months ended September 30, 2020 and 2019, respectively. The decrease in our retail channel was primarily driven by 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. The decrease was largely offset by very strong performance in the bank and broker-dealer channels including an increase in MYGA sales, and demonstrate strong sales execution despite the challenging sales environment. 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 independent marketing organizations (IMO); approximately 56,000 independent agents; and our growing network of 16 small and mid-sized banks and 101 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 deposits through our flow reinsurance channel of $5.4 billion and $2.8 billion for the nine months ended September 30, 2020 and 2019, respectively. The increase in our flow reinsurance channel from prior year was driven by strong volumes with existing partnerships as well as favorable MYGA sales during the year. 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 deposits of $7.3 billion and $6.0 billion for the nine months ended September 30, 2020 and 2019, respectively. The increase in our institutional channel was driven by higher funding agreement deposits, partially offset by lower PRT deposits. We issued funding agreements in the aggregate principal amount of $6.1 million and $802 million for the nine months ended September 30, 2020 and 2019, respectively, including our inaugural non-US dollar denominated FABN transaction in the second quarter, followed by additional non-US dollar denominated issuances in the third quarter. 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 deposits in the aggregate principal amount of $4.6 billion, $875 million and $598 million, respectively, for the nine months ended September 30, 2020. During the nine months ended September 30, 2020, we closed two PRT transactions and issued group annuity contracts in the aggregate principal amount of $1.2 billion, compared to $5.2 billion during the nine months ended September 30, 2019. Since entering the PRT channel in 2017 through September 30, 2020, we have closed 18 deals involving more than 181,000 plan participants resulting in the issuance of group annuities of $12.1 billion. 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 deposits. 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 a $500 million equity investment in an indirect parent of Jackson, which closed on July 17, 2020. 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 September 30, 2020, we estimate that we have approximately $7.6 billion in capital available to deploy, consisting of approximately $3.2 billion in excess capital, $2.6 billion in untapped debt capacity (assuming a peer average adjusted debt to capitalization ratio of 25%) and $1.8 billion in available uncalled capital at ACRA, subject, in the case of debt capacity, to favorable market conditions and general availability.

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 the original 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.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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 11 – Related Parties* to the consolidated financial statements for further discussion.

Industry Trends and Competition

Market Conditions

During the third quarter, there was a considerable divergence between the performance of the broader economy and the performance of the financial markets. While equity markets hit an all-time high in early September and credit spreads continued the compression that began in the second quarter, the economy remained in distress as jobless claims, while improving month over month, remained at record highs, nonfarm payroll employment remained depressed and consumer sentiment and retail sales followed similar patterns. Many economic sectors remain at lower levels of activity, particularly those associated with leisure, travel and consumer durables. There are some well performing sectors within the broader economy, notably consumer staples and large regional pockets of the housing market, but the performance of these sectors has not been sufficient to shift higher forward expectations for growth and rates. A significant portion of the disconnect between economic and financial market performance appears to be a result of monetary stimulus. The Federal Reserve (Fed) has nearly doubled its balance sheet since the beginning of the year, in particular with significant increases in holdings of Treasuries and MBS. These Fed actions are likely a significant contributor to buoyant valuations of risk assets and continued low rates. The 10-year treasury yield has remained under 70 basis points for much of the quarter. In direct contrast to the aggressive actions of the Fed, Congress has been unable to reach agreement on additional fiscal stimulus, and the fiscal stimulus measures signed late in the first quarter have begun to run off. As we enter the fourth quarter, there are a number of events on the horizon that are likely to keep markets volatile through year-end. Among these are near-term risks related to the election and associated challenges with passage of additional fiscal stimulus and a resurgence of COVID-19 as we transition to the fall season. Heightened equity market volatility may adversely affect the hedging costs of our liability hedging program and create greater volatility in earnings due to changes in the value of alternative investments, the AOG units that we hold and FIA derivatives and associated embedded derivatives, as well as changes in other liability costs. Heightened credit market volatility may lead to increased credit spreads. See *-Interest Rate Environment and Part I—Item 3. Quantitative and Qualitative Disclosures About Market Risks—Sensitivities* for further discussion regarding how heightened volatility might impact our business.

Interest Rate Environment

Both as a result of significant central bank intervention and a continued flight-to-quality trade (coupled with the ongoing global search for yield), interest rates remained close to all-time lows throughout the quarter. Importantly, yields outside of the US, which had been close to zero, and in some cases negative, moved even lower, exacerbating demand. Communications from global central banks suggest that market support will continue, although there remains significant additional purchasing to complete relating to previously announced programs, both in the US and elsewhere.

The environment for yield focused buyers remains challenging. Quality names and structures will remain well-bid ensuring that yields on these assets remains relatively low. Credit spreads have a good amount of room to tighten before they come close to the lows of the last three years (approximately 40-50 basis points on US investment grade credit, for example), and so will likely continue to attract buyers. On the supply side, the new issues market remains robust, even considering the current credit spread environment. Therefore, deployment challenges are likely to persist.

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. Year-to-date trends have entailed decreasing interest rates leading to a decrease in our investment income from floating rate investments, whereas widening credit spreads have resulted in an overall increase in asset yields, which we expect would result in an increase in the yield on our new investment purchases and a decline 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, which has been experienced during the first nine months of 2020. Our investment portfolio includes $25.3 billion of floating rate investments, or 18% of our net invested assets as of September 30, 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 September 30, 2020, most of our products were fixed annuities with 23% of our FIAs at the minimum guarantees and 38% of our fixed rate annuities at the minimum crediting rates. As of September 30, 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 *Part I—Item 3. Quantitative and Qualitative Disclosures About Market Risks* to this report and *Part II—Item 7A. Quantitative and Qualitative Disclosures About Market Risks* in our 2019 Annual Report, 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 with the first wave of employees returning to the office. Thereafter, employees returned in three additional waves, with each wave following the prior by at least two weeks. As of 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. 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 October 31, 2020, we had ten 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 have 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 nine months ended September 30, 2020, we recognized $181 million less in floating rate income than we recognized for the nine months ended September 30, 2019, primarily as a result of the declines in interest rates occurring during the nine months ended September 30, 2020.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

A greater proportion of the 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. During the nine months ended September 30, 2020, we recognized an income statement impact of $(201) million resulting from our FIA products (net of offsets) and decreases in the market value of our OneMain holding, partially offset by an increase in the market value of our AOG holding, as the share price rebounded following market value decreases in the first quarter.

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 September 30, 2020, we had approximately $10.9 billion of available liquidity comprised of $7.5 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 begun to stabilize, we have begun to invest 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 on a daily basis. As of October 31, 2020, 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 begun 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. During the nine months ended September 30, 2020, we increased our reserve for credit losses, net of noncontrolling interests, by $202 million, post-adoption of the new accounting standard regarding accounting for current expected credit losses, more commonly referred to as "CECL." 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 60% 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 during the nine months ended September 30, 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 UK Financial Conduct Authority (FCA) has announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. It is expected that a number of private-sector banks currently reporting information used to set LIBOR will stop doing so after 2021 when their current reporting commitment ends, which could either cause LIBOR to stop publication immediately or cause the FCA to determine that the quality of LIBOR has degraded to the degree that LIBOR is no longer representative of its underlying market. With an estimated $200 trillion in notional transactions referencing USD LIBOR in the cash and derivatives markets, including more than $35 trillion extending past 2021, 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 plan, which involves the following six phases: (1) identify and quantify our exposure to LIBOR; (2) establish a counterparty communication strategy; (3) evaluate the specific risks to our business arising as a result of the transition; (4) identify actions that we can take to mitigate the risks identified in phase 3; (5) monitor market developments regarding the adoption of a replacement rate; and (6) transition to the market consensus rate or rates once such rate or rates emerge and are operational.

The phases of our plan are not discrete and need not occur in chronological order. 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 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 September 30, 2020, we had contracts tied to LIBOR in the notional amounts set forth in the table below:

(In millions)	Total Exposure	Extending Beyond 2021
Investments	$ 24,761	$ 21,416
Product Liabilities	14,022	4,906
Derivatives Hedging Product Liabilities	17,553	1,193
Other Derivatives	478	478
Other Contracts	2,963	2,663
Total notional of contracts tied to LIBOR	$ 59,777	$ 30,656

Investments

As of September 30, 2020, our investments tied to LIBOR were in the following asset classes:

(In millions)	Total Exposure	Extending Beyond 2021
Multi-lateral Arrangements		
Corporates	$ 851	$ 487
RMBS	3,975	3,826
CMBS	400	80
CLO	12,206	12,026
ABS	1,887	1,825
Bank Loans	478	356
Total Multi-lateral Arrangements	19,797	18,600
Bi-lateral Arrangements		
CML	4,812	2,664
RML	152	152
Total Bi-lateral Arrangements	4,964	2,816
Total investments tied to LIBOR	$ 24,761	$ 21,416

Of the total notional value of investment-related contracts tied to LIBOR, extending beyond 2021, $18.6 billion or 86.9% 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 of $2.8 billion or 13.1% 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 II–Item 1A. Risk Factors–Uncertainty relating to the LIBOR Calculation process and potential phasing out of LIBOR after 2021 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 September 30, 2020, we had product liabilities with a notional value of approximately $14.0 billion for which LIBOR is a component in the determination of interest credited, of which we expect $4.9 billion to extend beyond 2021. 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 September 30, 2020, we held derivatives with a notional value of approximately $17.6 billion to hedge our exposure to these product liabilities, of which we expect $1.2 billion to extend beyond 2021. Included within this category are $3.1 billion of Eurodollar futures, of which we expect $1.2 billion to extend beyond 2021. 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 expect that substantially all of such derivatives will expire before the end of 2021. 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.

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. We are currently evaluating the Protocol and Supplement and expect to join industry peers by adhering to the Protocol and Supplement prior to the effective date of January 25, 2021. To the extent that the fallbacks ultimately 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.

Other Contracts and Other Sources of Exposure

Other contracts 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 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 intend to transition the benchmark yield curve in such models from LIBOR to the Secured Overnight Financing Rate 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 completing all the phases of our plan prior to the discontinuation of LIBOR. Completion of certain phases 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 complete all phases of 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 $57.6 billion for the six months ended June 30, 2020, a 24.3% 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 six months ended June 30, 2020 (the most recent period for which specific market share data is available), we were the 5th largest company based on sales of $3.0 billion, translating to a 5.1% market share. For the six months ended June 30, 2019, our market share was 4.9% with sales of $3.7 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. According to LIMRA, total FIA sales in the United States were $73.5 billion for the year ended December 31, 2019, a 5.6% increase from the year ended December 31, 2018. According to LIMRA data, for the six months ended June 30, 2020 (the most recent period for which specific market share data is available), we were the 2nd largest provider of FIAs based on sales of $2.5 billion, and our market share for the same period was 8.8%. For the six months ended June 30, 2019, we were the 2nd largest provider of FIAs based on sales of $3.4 billion, translating to an 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.

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.

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, allowances, 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 market value adjustments (MVA) 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). From 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 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 using 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 could have been converted 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 settlement 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 total debt and 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 measurement 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.

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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 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 PRT costs including interest credited, benefit payments and other reserve changes, net of premiums received when issued, as well as 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.

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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 deposits generated during a specific period of time. Our sales statistics include deposits 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.

Consolidated Results of Operations

The following summarizes the consolidated results of operations:

	Three months ended September 30,		Nine months ended September 30,	
(In millions, except percentages)	2020	2019	2020	2019
Revenues	$ 3,275	$ 4,584	$ 6,124	$ 13,002
Benefits and expenses	2,251	4,305	5,401	11,233
Income before income taxes	1,024	279	723	1,769
Income tax expense (benefit)	140	(14)	124	48
Net income	884	293	599	1,721
Less: Net income attributable to noncontrolling interests	232	—	151	—
Net income attributable to Athene Holding Ltd.	652	293	448	1,721
Less: Preferred stock dividends	30	17	67	17
Net income available to AHL common shareholders	$ 622	$ 276	$ 381	$ 1,704
ROE	16.2 %	8.5 %	3.5 %	20.8 %

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

In this section, references to 2020 refer to the three months ended September 30, 2020 and references to 2019 refer to the three months ended September 30, 2019.

Net Income Available to AHL Common Shareholders

Net income available to AHL common shareholders increased by $346 million, or 125%, to $622 million in 2020 from $276 million in 2019. ROE increased to 16.2% from 8.5% in 2019. The increase in net income available to AHL common shareholders was driven by a decrease of $2.1 billion in benefits and expenses, partially offset by a $1.3 billion decrease in revenues, $232 million in noncontrolling interests, a $154 million increase in income tax expense, and a $13 million increase in preferred stock dividends.

Revenues

Revenues decreased by $1.3 billion to $3.3 billion in 2020 from $4.6 billion in 2019. The decrease was driven by a decrease in premium, partially offset by an increase in investment related gains and losses and an increase in net investment income.

Premiums decreased by $2.6 billion to $112 million in 2020 from $2.7 billion in the prior year, driven by lower PRT premiums compared to prior year.

Investment related gains and losses increased by $1.1 billion to $1.8 billion in 2020 from $665 million in the prior year, primarily due to the change in fair value of reinsurance assets, the change in fair value of FIA hedging derivatives and the change in provision for credit losses. The change in fair value of reinsurance assets increased $581 million primarily driven by the change in the value of the underlying assets related to credit spreads tightening, partially offset by less of a decrease in US Treasury rates. The change in fair value of FIA hedging derivatives increased $529 million driven by the 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 8.5% in 2020, compared to an increase of 1.2% in 2019. The favorable change in the provision for credit losses of $84 million was primarily due to favorable changes in prepayment assumptions.

Net investment income increased by $119 million to $1.2 billion in 2020 from $1.1 billion in the prior year, primarily driven by favorable alternative investment performance and investment earnings attributed to the Jackson reinsurance transaction as well as a non-recurring adjustment on derivative collateral, partially offset by an unrealized loss on our investment in Apollo of $101 million mainly due to the decrease in valuation price and $80 million of lower floating rate investment income due to the lower interest rate environment.

Benefits and Expenses

Benefits and expenses decreased by $2.1 billion to $2.3 billion in 2020 from $4.3 billion in 2019. The decrease was driven by a decrease in future policy and other policy benefits, partially offset by an increase in interest sensitive contract benefits and an increase in DAC, DSI and VOBA amortization. Our annual unlocking of assumptions resulted in a decrease in benefits and expenses of $77 million, compared to an increase of $165 million in 2019. The 2020 unlocking was driven by a decrease of $110 million in FIA embedded derivative liabilities and an increase of $33 million related to DAC, DSI, VOBA and rider reserves, compared to an increase of $76 million in FIA embedded derivative liabilities and an increase of $89 million related to DAC, DSI, VOBA and rider reserves in 2019.

Future policy and other policy benefits decreased by $2.5 billion to $439 million in 2020 from $3.0 billion in 2019, primarily attributable to lower PRT obligations, partially offset by an increase in the change in rider reserves. The change in rider reserves of $80 million was primarily due to favorable net change in FIA derivatives and a $34 million unfavorable change in unlocking of assumptions. Unlocking in 2020 was favorable by $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 $61 million related to changes in lapse assumptions, partially offset by changes in the long-term net investment earned rate assumption.

Interest sensitive contract benefits increased by $424 million to $1.2 billion in 2020 from $801 million in 2019, driven by an increase in FIA fair value embedded derivatives of $294 million and growth in the block of business including the Jackson reinsurance transaction. The change in the FIA fair value embedded derivatives was primarily due to the performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, which experienced an increase of 8.5% in 2020, compared to an increase of 1.2% in 2019, partially offset by a favorable change in unlocking of assumption of $186 million and an unfavorable change in discount rates used in our embedded derivative calculations as the current year experienced a smaller decrease in discount rates compared to 2019. Unlocking in 2020 was $110 million favorable primarily due to lowering future option budgets, while 2019 unlocking was $76 million unfavorable mainly attributed to changes in lapse assumptions.

DAC, DSI and VOBA amortization increased by $4 million to $347 million in 2020 from $343 million in 2019, reflecting unfavorable net change in FIA derivatives and growth in the block of business, offset by a $90 million change in unlocking of assumptions and an unfavorable change in investment related gains. Unlocking in 2020 was $60 million unfavorable primarily related to changes in the long-term net investment earned rate assumptions and mortality experience, partially offset by lapse assumptions, while 2019 unlocking was $150 million unfavorable primarily related to changes in the long-term net investment earned rate and lapse assumptions.

Taxes

Income tax expense (benefit) increased by $154 million to $140 million in 2020 from $(14) million in 2019. The income tax expense for 2020 was primarily driven by higher income subject to tax resulting from the favorable change in fair value of reinsurance assets and net investment income.

Our effective tax rate in the third quarter of 2020 was 14% and (5)% in 2019. Our effective tax rates may vary period to period depending 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 $232 million to $232 million in 2020 from $0 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 from 33% to 36.55%. There was no significant noncontrolling interest prior to the ACRA sale to ADIP.

Preferred Stock Dividends

Preferred stock dividends increased by $13 million to $30 million in 2020 from $17 million in 2019, driven by dividends paid on the preferred stock we issued in June of 2020.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

In this section, references to 2020 refer to the nine months ended September 30, 2020 and references to 2019 refer to the nine months ended September 30, 2019.

Net Income Available to AHL Common Shareholders

Net income available to AHL common shareholders decreased by $1.3 billion, or 78%, to $381 million in 2020 from $1.7 billion in 2019. ROE decreased to 3.5% from 20.8% in 2019. The decrease in net income available to AHL common shareholders was driven by a $6.9 billion decrease in revenues, a $151 million increase in noncontrolling interests, a $76 million increase in income tax expense and a $50 million increase in preferred stock dividends, partially offset by a decrease of $5.8 billion in benefits and expenses.

Revenues

Revenues decreased by $6.9 billion to $6.1 billion in 2020 from $13.0 billion in 2019. The decrease was driven by a decrease in premiums, a decrease in investment related gains and losses, and a decrease in net investment income.

Premiums decreased by $3.9 billion to $1.6 billion in 2020 from $5.5 billion in the prior year, driven by lower PRT premiums compared to prior year, partially offset by an increase in flow reinsurance payout annuities with life contingencies.

Investment related gains and losses decreased by $3.0 billion to $773 million in 2020 from $3.8 billion in the prior year, primarily due to the change in fair value of FIA hedging derivatives, the change in fair value of reinsurance assets, the change in provision for credit losses, the change in fair value of trading securities and a decrease in equity securities reflecting the decline in financial markets. The change in fair value of FIA hedging derivatives decreased $1.7 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 4.1% in 2020, compared to an increase of 18.7% in 2019. The change in fair value of reinsurance assets decreased $801 million primarily driven by the change in the value of the underlying assets related to credit spreads widening, partially offset by the decrease in US Treasury rates. The unfavorable change in gross provision for credit losses of $205 million was primarily a result of the forecasted economic downturn from the spread of COVID-19. The unfavorable change in fair value of trading securities of $191 million was comprised primarily of a decrease in AmerUs Closed Block assets of $87 million, CLO equity securities, non-redeemable preferred stock and other trading securities mainly due to credit spreads widening, partially offset by the decrease in US Treasury rates.

Net investment income decreased by $64 million to $3.3 billion in 2020 from $3.4 billion in the prior year, primarily driven by $181 million less in floating rate investment income due to the lower short-term interest rates, higher investment management expenses and less favorable alternative investment performance, partially offset by a gain on our investment in Apollo of $83 million due to the increase in valuation price.

Benefits and Expenses

Benefits and expenses decreased by $5.8 billion to $5.4 billion in 2020 from $11.2 billion in 2019. The decrease was driven by a decrease in future policy and other policy benefits, a decrease in interest sensitive contract benefits and a decrease in DAC, DSI and VOBA amortization, partially offset by an increase in policy and other operating expenses. Our annual unlocking of assumptions resulted in a decrease in benefits and expenses of $77 million, compared to an increase of $165 million in 2019. The unlocking was driven by a decrease of $110 million in FIA embedded derivative liabilities and an increase of $33 million related to DAC, DSI, VOBA and rider reserves, compared to an increase of $76 million in FIA embedded derivative liabilities and an increase of $89 million related to DAC, DSI, VOBA and rider reserves in 2019.

Future policy and other policy benefits decreased by $3.9 billion to $2.5 billion in 2020 from $6.4 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 favorable change in the AmerUs Closed Block fair value liability of $97 million was primarily driven by the lower unrealized gains on the underlying investments related to credit spreads widening, partially offset by the decrease in US Treasury rates compared to prior year. The favorable change in rider reserve of $38 million was primarily due to the unfavorable change in fair value of reinsurance assets derivatives, 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 $61 million related to changes in lapse assumptions, partially offset by changes in the long-term net investment earned rate assumption.

Interest sensitive contract benefits decreased by $1.4 billion to $2.0 billion in 2020 from $3.4 billion in 2019, driven by a decrease in FIA fair value embedded derivatives of $1.6 billion, partially offset by growth in the block of business including the Jackson reinsurance transaction. The change in the FIA fair value embedded derivatives was primarily due the performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, which experienced an increase of 4.1% in 2020, compared to an increase of 18.7% in 2019, as well as a favorable change in discount rates used in our embedded derivative calculations as the current year experienced less of a decrease in rates compared to 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 $569 million to $284 million in 2020 from $853 million 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, partially offset by a $90 million change in unlocking of assumptions and 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 assumptions 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.

Policy and other operating expenses increased by $93 million in 2020 to $637 million from $544 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 (benefit) increased by $76 million to $124 million in 2020 from $48 million in 2019. The income tax expense for 2020 was primarily driven by higher income subject to income tax including the unrealized gains on our investment in Apollo.

Our effective tax rate in 2020 was 17% and 3% in 2019. Our effective tax rates may vary period to period depending 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 $151 million to $151 million in 2020 from $0 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.

Preferred Stock Dividends

Preferred stock dividends increased by $50 million to $67 million in 2020 from $17 million in 2019, driven by dividends we paid on preferred stock we issued in June of 2020.

Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations

Results of Operations by Segment

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions, except percentages)	2020	2019	2020	2019
Net income available to AHL common shareholders	$ 622	$ 276	$ 381	$ 1,704
Non-operating adjustments				
Realized gains (losses) on sale of AFS securities	(11)	46	(10)	99
Unrealized, allowances and other investment gains (losses)	49	(31)	(268)	8
Change in fair value of reinsurance assets	434	314	270	1,500
Offsets to investment losses	(126)	(163)	(10)	(566)
Investment gains (losses), net of offsets	346	166	(18)	1,041
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	72	(117)	(268)	(201)
Integration, restructuring and other non-operating expenses	—	(34)	(13)	(46)
Stock compensation expense	(1)	(3)	(11)	(9)
Income tax (expense) benefit – non-operating	(97)	21	7	19
Less: Total non-operating adjustments	320	33	(303)	804
Adjusted operating income available to common shareholders	$ 302	$ 243	$ 684	$ 900
Adjusted operating income (loss) available to common shareholders by segment				
Retirement Services	$ 361	$ 256	$ 773	$ 918
Corporate and Other	(59)	(13)	(89)	(18)
Adjusted operating income available to common shareholders	$ 302	$ 243	$ 684	$ 900
Adjusted operating ROE	11.7 %	10.6 %	9.1 %	13.3 %
Retirement Services adjusted operating ROE	20.2 %	13.5 %	14.0 %	16.0 %

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders increased by $59 million, or 24%, to $302 million in 2020 from $243 million in 2019. Adjusted operating ROE was 11.7%, up from 10.6% in 2019. Adjusted operating income available to common shareholders excluding the investment in Apollo, net of tax was $383 million in 2020. The increase in adjusted operating income available to common shareholders was primarily driven by an increase in our Retirement Services segment of $105 million, partially offset by a decrease in our Corporate and Other segment of $46 million.

Our consolidated net investment earned rate was 4.41% in 2020, an increase from 4.35% in 2019, primarily due to the favorable performance in our alternative investment portfolio, partially offset by less favorable performance in our fixed and other investment portfolio. Alternative net investment earned rate was 19.44% in 2020, an increase from 9.26% in 2019, primarily driven by the favorable performance of alternatives mainly due to favorable AmeriHome performance, favorable credit income, higher income from private equities and an increase in Catalina. Fixed and other net investment earned rate was 3.70% in 2020, a decrease from 4.11% in 2019, driven by lower floating rate investment income, lower returns on the assets from the Jackson reinsurance transaction and higher levels of cash than in the prior year, partially offset by a non-recurring adjustment on derivative collateral.

Non-operating Adjustments

Non-operating adjustments increased by $287 million to $320 million in 2020 from $33 million in 2019. The increase in non-operating adjustments was primarily driven by the favorable change in net FIA derivatives, the favorable change in fair value of reinsurance assets and a favorable change in provision for credit losses of $79 million (net of noncontrolling interests). Net FIA derivatives were favorable by $189 million primarily due to the favorable change in unlocking of $97 million, the favorable performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, and a favorable change in discount rates used in our embedded derivative calculations. 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. The change in fair value of reinsurance assets were favorable by $120 million primarily due to credit spreads tightening, partially offset by less of a decrease in US Treasury rates than the prior year.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders decreased by $216 million, or 24%, to $684 million in 2020 from $900 million in 2019. Adjusted operating ROE was 9.1%, down from 13.3% in 2019. Adjusted operating income available to common shareholders excluding the investment in Apollo, net of tax was $632 million in 2020. The decrease in adjusted operating income available to common shareholders was primarily driven by a decrease in our Retirement Services segment of $145 million, as well as a decrease in our Corporate and Other segment of $71 million.

Our consolidated net investment earned rate was 3.87% in 2020, a decrease from 4.43% in 2019, primarily due to lower returns in our fixed and other investment portfolio and the unfavorable performance in our alternative portfolio. Fixed and other net investment earned rate was 3.87% in 2020, a decrease from 4.21% in 2019, driven by 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. Alternative net investment earned rate was 3.74% in 2020, a decrease from 9.30% in 2019, driven by unfavorable performance in the first quarter of 2020 reflecting the economic downturn from the spread of COVID-19, a decrease in market value of the equity position in OneMain and lower MidCap returns, partially offset by favorable AmeriHome performance.

Non-operating Adjustments

Non-operating adjustments decreased by $1.1 billion to $(303) million in 2020 from $804 million in 2019. The decrease in non-operating adjustments was primarily driven by the unfavorable change in fair value of reinsurance assets, change in provision for credit losses, lower realized gains (losses) on the sale of AFS securities and the unfavorable change in net FIA derivatives. The change in fair value of reinsurance assets were unfavorable $1.2 billion due to credit spreads widening, partially offset by a decrease in US Treasury rates. The unfavorable change in net provision for credit loss in 2020 of $202 million, net of noncontrolling interest, was primarily a result of the forecasted economic downturn from the spread of COVID-19. Realized gains (losses) on sale of AFS securities decreased $109 million due to realized gains recognized in 2019 reflecting favorable economic conditions. Net FIA derivatives were unfavorable by $67 million primarily due to the unfavorable 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 discount rates used in our embedded derivative calculations as well as 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.

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.

Three Months Ended September 30, 2020 Compared to the Three Months Ended September 30, 2019

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders increased by $105 million, or 41%, to $361 million in 2020, from $256 million in 2019. Adjusted operating ROE was 20.2%, up from 13.5% in the prior period. The increase in adjusted operating income available to common shareholders was driven by higher net investment earnings, partially offset by higher cost of funds and higher operating tax expense primarily driven by higher taxable earnings in 2020. Net investment earnings increased $180 million primarily driven by $19.5 billion of growth in our average net invested assets from prior year attributed to a strong growth in deposits and the Jackson reinsurance transaction, as well as favorable alternative investment performance and a non-recurring adjustment on derivative collateral, partially offset by lower floating rate income and higher levels of cash than in the prior year related to strong deposits in the quarter and raising liquidity in response to the economic downturn. Cost of funds were $26 million higher primarily related to growth in the block of business, including the Jackson reinsurance transaction, partially offset by a decrease in rider reserves and DAC amortization. Rider reserves and DAC amortization decreased primarily due to a favorable change in unlocking of $54 million, partially offset by higher gross profits. 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

	Three months ended September 30,	
	2020	2019
Net investment earned rate	4.22 %	4.31 %
Cost of funds	2.81 %	3.18 %
Net investment spread	1.41 %	1.13 %

Net investment spread, which measures the spread on our investment performance less the total cost of our liabilities, increased 28 basis points to 1.41% in 2020 from 1.13% in 2019. Net investment earned rate decreased due to a decline in the fixed and other net investment earned rate, partially offset by a higher alternative net investment earned rate. The fixed and other net investment earned rate decreased in 2020 to 3.70% from 4.11% in 2019, primarily attributed to lower floating rate investment income, lower returns on the assets from the Jackson reinsurance transaction and higher levels of cash compared to the prior year, partially offset by a non-recurring adjustment on derivative collateral. The alternative net investments earned rate increased in 2020 to 17.24% from 8.90% in 2019, driven by higher AmeriHome returns mainly due to an increase in valuation reflecting higher origination volumes and increased gains on sale margins, as well as favorable performance on alternatives reported on a lag reflecting the favorable economic conditions in the second quarter.

Cost of funds decreased by 37 basis points to 2.81% in 2020, from 3.18% in 2019, primarily driven by lower other liability costs and lower cost of crediting. Other liability costs decreased 28 basis points primarily driven by a favorable change in unlocking of $54 million, favorable other liability costs from the Jackson reinsurance transaction, partially offset by higher gross profits impacting rider reserves and DAC amortization. Cost of crediting decreased 9 basis points primarily driven by a decrease in floating rate funding agreements, as well as lower rates on those recently issued, and lower rates on recent PRT transactions.

Investment Margin on Deferred Annuities

	Three months ended September 30,	
	2020	2019
Net investment earned rate	4.22 %	4.31 %
Cost of crediting on deferred annuities	1.98 %	1.98 %
Investment margin on deferred annuities	2.24 %	2.33 %

Investment margin on deferred annuities, which measures our investment performance less the cost of crediting for our deferred annuities, decreased by 9 basis points to 2.24% in 2020, from 2.33% in 2019, driven by a decrease in the net investment earned rate, while the cost of crediting on deferred annuities was consistent with the prior year 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.

Nine Months Ended September 30, 2020 Compared to the Nine Months Ended September 30, 2019

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders decreased by $145 million, or 16%, to $773 million in 2020, from $918 million in 2019. Adjusted operating ROE was 14.0%, down from 16.0% in the prior period. The decrease in adjusted operating income available to common shareholders was primarily driven by lower net investment earnings and higher cost of funds. Net investment earnings decreased $53 million primarily driven by lower floating rate investment income, unfavorable alternative investment performance and higher levels of cash than in the prior year, partially offset by $12.2 billion of growth in our average net invested assets from prior year attributed to a strong growth in deposits and the Jackson reinsurance transaction. Cost of funds was higher $46 million primarily due to higher cost of crediting, partially offset by lower other liability costs. Cost of crediting increased $82 million primarily due to growth in the block of business, growth in the institutional channel at higher rates, partially offset by a decrease in floating rate funding agreements, lower rates on recently issued funding agreements and PRT transactions and lower deferred annuity rates related to favorable rate actions and lower option costs. Other liability costs decreased primarily due to favorable rider reserves and DAC amortization related to a favorable change in unlocking of $54 million and lower gross profits, partially offset by unfavorable impacts from equity market performance and growth in the block of business.

Net Investment Spread

	Nine months ended September 30,	
	2020	2019
Net investment earned rate	3.90 %	4.38 %
Cost of funds	2.76 %	3.00 %
Net investment spread	1.14 %	1.38 %

Net investment spread, which measures the spread on our investment performance less the total cost of our liabilities, decreased 24 basis points to 1.14% in 2020 from 1.38% in 2019. Net investment earned rate decreased due to a decline in the fixed and other net investment earned rate and the alternative net investment earned rate. The fixed and other net investment earned rate decreased to 3.87% in 2020 from 4.21% 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 investments earned rate decreased in 2020 to 4.57% from 8.63% in 2019, primarily driven by unfavorable performance as a result of the economic downturn from the spread of COVID-19 in the first quarter of 2020 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 higher AmeriHome returns mainly due to an increase in valuation reflecting higher origination volumes and increased gains on sale margins.

Cost of funds decreased by 24 basis points to 2.76% in 2020, from 3.00% in 2019, primarily driven by lower cost of crediting and other liability costs. Cost of crediting decreased 10 basis points primarily driven by a decrease in floating rate funding agreements, lower rates on recently issued funding agreements and PRT transactions and lower deferred annuity rates related to favorable rate actions and lower option costs. Other liability costs decreased 14 basis points primarily driven by favorable rider reserves and DAC amortization related to a favorable change in unlocking, lower Jackson other liability costs and lower gross profits, partially offset by unfavorable impacts from equity market performance.

Investment Margin on Deferred Annuities

	Nine months ended September 30,	
	2020	2019
Net investment earned rate	3.90 %	4.38 %
Cost of crediting on deferred annuities	1.94 %	1.98 %
Investment margin on deferred annuities	1.96 %	2.40 %

Investment margin on deferred annuities, which measures our investment performance less the cost of crediting for our deferred annuities, decreased by 44 basis points to 1.96% in 2020, from 2.40% 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.

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 increased by $46 million to $59 million from $13 million for the three months ended September 30, 2020 and 2019, respectively. The increase in adjusted operating loss available to common shareholders was primarily driven by an $81 million loss on our investment in Apollo, net of tax, partially offset by favorable alternative investment performance from our investment in Athora, an increase in the market value of our equity position in OneMain and the favorable performance on alternatives reported on a lag reflecting the favorable economic conditions in the second quarter of 2020.

Adjusted operating loss available to common shareholders increased by $71 million to $89 million from $18 million for the nine months ended September 30, 2020 and 2019, respectively. The increase in adjusted operating loss available to common shareholders was primarily driven by unfavorable alternative investment performance as a result of the economic downturn from the spread of COVID-19 in the first quarter of 2020 and a decline in the market value of our equity position in OneMain, as well as higher preferred stock dividends, partially offset by a $52 million gain on our investment in Apollo, net of tax.

Consolidated Investment Portfolio

We had consolidated investments, including related parties, of $170.2 billion and $130.6 billion as of September 30, 2020 and December 31, 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 condensed consolidated statements of income included management fees under our investment management arrangements with Apollo, inclusive of base and sub-allocation fees, of $111 million and $127 million, respectively, during the three months ended September 30, 2020 and 2019, and $362 million and $313 million, respectively, during the nine months ended September 30, 2020 and 2019. The total amounts we have incurred, directly and indirectly, from Apollo and its affiliates were as follows:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Investment management agreements[1,2]	$ 163	$ 133	$ 454	$ 377
Fund investments[3]	31	18	42	59
Other[4]	15	7	37	19
Gross fees	209	158	533	455
ACRA noncontrolling interest[5]	18	—	32	—
Net fees	$ 191	$ 158	$ 501	$ 455

[1] *Excludes $1 million and $0 million of sub-advisory fees paid to ISG for the benefit of third-party sub-advisors for the three months ended September 30, 2020 and 2019, respectively, and excludes $2 million and $2 million for the nine months ended September 30, 2020 and 2019, respectively.*

[2] *Includes $56 million and $7 million of fees charged by Apollo to third-party cedants for the three months ended September 30, 2020 and 2019, respectively, and $104 million and $67 million for the nine months ended September 30, 2020 and 2019, 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 equity method 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 $142.8 billion and $117.5 billion as of September 30, 2020 and December 31, 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.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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

	September 30, 2020		December 31, 2019	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
AFS securities, at fair value	$ 73,988	43.5 %	$ 71,374	54.7 %
Trading securities, at fair value	2,069	1.2 %	2,070	1.6 %
Equity securities	697	0.4 %	247	0.2 %
Mortgage loans, net of allowances	14,591	8.6 %	14,306	11.0 %
Investment funds	723	0.4 %	750	0.6 %
Policy loans	387	0.2 %	417	0.3 %
Funds withheld at interest	48,593	28.5 %	15,181	11.6 %
Derivative assets	2,771	1.6 %	2,888	2.2 %
Short-term investments	165	0.1 %	596	0.5 %
Other investments	949	0.6 %	158	0.1 %
Total investments	144,933	85.1 %	107,987	82.8 %
Investments in related parties				
AFS securities, at fair value	4,857	2.9 %	3,804	2.9 %
Trading securities, at fair value	1,397	0.8 %	785	0.6 %
Equity securities, at fair value	50	— %	64	— %
Mortgage loans, net of allowances	640	0.4 %	653	0.5 %
Investment funds	4,808	2.8 %	3,550	2.7 %
Funds withheld at interest	13,053	7.7 %	13,220	10.1 %
Other investments, net of allowances	467	0.3 %	487	0.4 %
Total related party investments	25,272	14.9 %	22,563	17.2 %
Total investments including related party	$ 170,205	100.0 %	$ 130,550	100.0 %

The increase in our total investments, including related party, as of September 30, 2020 of $39.7 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 deposits of $18.3 billion in excess of liability outflows of $8.7 billion, an increase in unrealized gains on AFS securities of $1.3 billion attributed to a decrease in US Treasury rates, partially offset by a widening of credit spreads, an increase in investment funds driven by our investment in Apollo of $1.2 billion and an additional investment in Athora and our equity investment in Jackson. These were partially offset by 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.

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 condensed 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 condensed consolidated statements of income.

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

	September 30, 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	$ 71	$ —	$ 2	$ —	$ 73	0.1 %
US state, municipal and political subdivisions	765	—	163	(1)	927	1.2 %
Foreign governments	311	—	29	—	340	0.4 %
Corporate	46,424	(30)	5,094	(359)	51,129	64.9 %
CLO	8,621	(1)	68	(318)	8,370	10.6 %
ABS	4,255	(3)	136	(188)	4,200	5.3 %
CMBS	2,279	(19)	68	(89)	2,239	2.8 %
RMBS	6,434	(87)	397	(34)	6,710	8.5 %
Total AFS securities	69,160	(140)	5,957	(989)	73,988	93.8 %
AFS securities – related party						
Corporate	780	—	4	—	784	1.0 %
CLO	1,365	(2)	11	(30)	1,344	1.7 %
ABS	2,716	—	62	(49)	2,729	3.5 %
Total AFS securities – related party	4,861	(2)	77	(79)	4,857	6.2 %
Total AFS securities including related party	$ 74,021	$ (142)	$ 6,034	$ (1,068)	$ 78,845	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:

	September 30, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
Corporate				
Industrial other[1]	$ 17,984	22.8 %	$ 14,956	19.9 %
Financial	15,769	20.0 %	15,286	20.3 %
Utilities	12,161	15.4 %	11,217	14.9 %
Communication	2,893	3.7 %	2,739	3.7 %
Transportation	3,106	3.9 %	3,049	4.1 %
Total corporate	51,913	65.8 %	47,247	62.9 %
Other government-related securities				
US state, municipal and political subdivisions	927	1.2 %	1,541	2.1 %
Foreign governments	340	0.4 %	327	0.4 %
US government and agencies	73	0.1 %	36	— %
Total non-structured securities	53,253	67.5 %	49,151	65.4 %
Structured securities				
CLO	9,714	12.3 %	8,285	11.0 %
ABS	6,929	8.8 %	7,967	10.6 %
CMBS	2,239	2.9 %	2,400	3.2 %
RMBS				
Agency	23	— %	3	— %
Non-agency	6,687	8.5 %	7,372	9.8 %
Total structured securities	25,592	32.5 %	26,027	34.6 %
Total AFS securities including related party	$ 78,845	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 $78.8 billion and $75.2 billion as of September 30, 2020 and December 31, 2019, respectively. The increase was mainly driven by strong growth from organic deposits 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 $1.3 billion attributed to a decrease in US Treasury rates, partially offset by a widening of credit spreads. These were partially offset by a restructuring of an existing agreement with a reinsurance partner and the establishment of the allowance for credit losses.

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

An important exception to the General Designation Process occurs in the case of certain loan-backed and structured securities (LBaSS). The NRSRO ratings methodology 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 assumes that the holder is the original purchaser at par. In contrast, the SVO’s LBaSS methodology 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 fixed maturity portfolio since a large portion of our holdings were purchased and are carried at significant discounts to par.

The SVO has developed a designation process and provides instruction on modeled LBaSS. For modeled LBaSS, the process is specific to the non-agency RMBS and CMBS asset classes. 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), based on each US insurer’s statutory book value price, to utilize in determining the NAIC designation for each modeled LBaSS.

The NAIC designation determines the associated level of risk-based capital (RBC) 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:

	September 30, 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	$ 36,459	$ 39,246	49.8 %	$ 36,392	$ 38,667	51.4 %
2	32,342	34,614	43.9 %	30,752	32,336	43.0 %
Total investment grade	68,801	73,860	93.7 %	67,144	71,003	94.4 %
3	4,192	4,021	5.1 %	3,237	3,300	4.4 %
4	894	845	1.1 %	740	740	1.0 %
5	101	86	0.1 %	102	94	0.1 %
6	33	33	0.0 %	39	41	0.1 %
Total below investment grade	5,220	4,985	6.3 %	4,118	4,175	5.6 %
Total AFS securities including related party	$ 74,021	$ 78,845	100.0 %	$ 71,262	$ 75,178	100.0 %

A significant majority of our AFS portfolio, 93.7% and 94.4% as of September 30, 2020 and December 31, 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:

(In millions, except percentages)	September 30, 2020 Fair Value	September 30, 2020 Percent of Total	December 31, 2019 Fair Value	December 31, 2019 Percent of Total
NRSRO rating agency designation				
AAA/AA/A	$ 30,541	38.7 %	$ 28,299	37.7 %
BBB	29,268	37.1 %	29,032	38.6 %
Non-rated[1]	10,798	13.7 %	10,014	13.3 %
Total investment grade	70,607	89.5 %	67,345	89.6 %
BB	3,920	5.0 %	3,403	4.5 %
B	1,009	1.3 %	813	1.1 %
CCC	1,698	2.2 %	1,981	2.6 %
CC and lower	988	1.2 %	1,076	1.4 %
Non-rated[1]	623	0.8 %	560	0.8 %
Total below investment grade	8,238	10.5 %	7,833	10.4 %
Total AFS securities including related party	$ 78,845	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, as well as NAIC SVO Private Letter designations.

The portion of our AFS portfolio that was considered below investment grade based on NRSRO ratings was 10.5% and 10.4% as of September 30, 2020 and December 31, 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 September 30, 2020 and December 31, 2019, non-rated securities were comprised 66% and 61%, respectively, of corporate private placement securities for which we have not sought individual ratings from the NRSRO, and 21% and 24%, respectively, were comprised 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 September 30, 2020 and December 31, 2019, 95% 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 $6.9 billion and $8.0 billion as of September 30, 2020 and December 31, 2019, respectively. The decrease in our ABS portfolio is mainly driven by sales in excess of purchases as well as net unrealized losses due to credit spreads widening, partially offset by the lower interest rate environment. As of September 30, 2020 and December 31, 2019, our ABS portfolio included $6.3 billion (91% of the total) and $7.4 billion (92% of the total), respectively, of securities that are considered investment grade based on NAIC designations, while $6.2 billion (90% 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 $9.7 billion and $8.3 billion as of September 30, 2020 and December 31, 2019, respectively.

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

	September 30, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
NAIC designation				
1	$ 5,869	60.4 %	$ 4,626	55.9 %
2	3,512	36.2 %	3,499	42.2 %
Total investment grade	9,381	96.6 %	8,125	98.1 %
3	322	3.3 %	133	1.6 %
4	8	0.1 %	20	0.2 %
5	3	— %	7	0.1 %
6	—	— %	—	— %
Total below investment grade	333	3.4 %	160	1.9 %
Total AFS CLO including related party	$ 9,714	100.0 %	$ 8,285	100.0 %
NRSRO rating agency designation				
AAA/AA/A	$ 5,869	60.4 %	$ 4,626	55.9 %
BBB	3,512	36.2 %	3,499	42.2 %
Non-rated	—	— %	—	— %
Total investment grade	9,381	96.6 %	8,125	98.1 %
BB	322	3.3 %	133	1.6 %
B	8	0.1 %	20	0.2 %
CCC	3	— %	7	0.1 %
CC and lower	—	— %	—	— %
Non-rated	—	— %	—	— %
Total below investment grade	333	3.4 %	160	1.9 %
Total AFS CLO including related party	$ 9,714	100.0 %	$ 8,285	100.0 %

As of September 30, 2020 and December 31, 2019, a substantial majority of our AFS CLO portfolio, 96.6% 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 additional asset purchases, partially offset by net unrealized losses due to credit spreads widening.

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 September 30, 2020 and December 31, 2019, respectively. As of September 30, 2020 and December 31, 2019, our CMBS portfolio included $2.0 billion (91% of the total) and $2.1 billion (89% of the total), respectively, of securities that are considered investment grade based on NAIC designations, while $1.7 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 $6.7 billion and $7.4 billion as of September 30, 2020 and December 31, 2019, respectively.

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

	September 30, 2020		December 31, 2019	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
NAIC designation				
1	$ 6,189	92.2 %	$ 6,701	90.9 %
2	210	3.2 %	330	4.5 %
Total investment grade	6,399	95.4 %	7,031	95.4 %
3	257	3.8 %	289	3.9 %
4	50	0.7 %	52	0.7 %
5	4	0.1 %	3	— %
6	—	— %	—	— %
Total below investment grade	311	4.6 %	344	4.6 %
Total AFS RMBS	$ 6,710	100.0 %	$ 7,375	100.0 %
NRSRO rating agency designation				
AAA/AA/A	$ 665	9.9 %	$ 715	9.7 %
BBB	531	7.9 %	606	8.2 %
Non-rated[1]	2,312	34.5 %	2,428	32.9 %
Total investment grade	3,508	52.3 %	3,749	50.8 %
BB	229	3.4 %	281	3.8 %
B	260	3.9 %	232	3.2 %
CCC	1,617	24.1 %	1,890	25.6 %
CC and lower	987	14.7 %	1,074	14.6 %
Non-rated[1]	109	1.6 %	149	2.0 %
Total below investment grade	3,202	47.7 %	3,626	49.2 %
Total AFS RMBS	$ 6,710	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, 95.4% and 95.4% as of September 30, 2020 and December 31, 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 September 30, 2020 and December 31, 2019, NRSRO characterized 52.3% 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. As of September 30, 2020, our AFS securities, including related party, had a fair value of $78.8 billion, which was 6.5% above amortized cost of $74.0 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. 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.

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

	September 30, 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	$ 7,727	$ (239)	$ 7,488	96.9 %	$ 39,246	(0.6)%
2	7,627	(381)	7,246	95.0 %	34,614	(1.1)%
Total investment grade	15,354	(620)	14,734	96.0 %	73,860	(0.8)%
3	2,127	(242)	1,885	88.6 %	4,021	(6.0)%
4	502	(70)	432	86.1 %	845	(8.3)%
5	61	(11)	50	82.0 %	86	(12.8)%
6	1	—	1	100.0 %	33	— %
Total below investment grade	2,691	(323)	2,368	88.0 %	4,985	(6.5)%
Total	$ 18,045	$ (943)	$ 17,102	94.8 %	$ 78,845	(1.2)%

The following tables reflect 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 $943 million and $469 million as of September 30, 2020 and December 31, 2019, respectively. The increase in unrealized losses was driven by credit spreads widening, partially offset by the decrease in US Treasury rates during the nine months ended September 30, 2020.

As of September 30, 2020 and December 31, 2019, we held $6.3 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 $143 million and $65 million, or 15% 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 condensed consolidated financial statements, as well as *Critical Accounting Estimates and Judgments.*

As of September 30, 2020, we held an allowance for credit loss on AFS securities of $142 million. During the nine months ended September 30, 2020, we recorded a change in provision for credit losses on AFS securities of $125 million, of which $64 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 nine months ended September 30, 2020 were $16 million primarily related to corporates. During the nine months ended September 30, 2019, we recorded $32 million of OTTI impairments.

International Exposure

A portion of our AFS securities are invested in securities with international exposure. As of September 30, 2020 and December 31, 2019, 34% and 32% 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:

	September 30, 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	$ 1,963	$ 2,047	7.7 %	$ 1,109	$ 1,137	4.7 %
Italy	6	7	— %	6	7	— %
Spain	64	70	0.3 %	66	71	0.2 %
Total Ireland, Italy, Greece, Spain and Portugal[1]	2,033	2,124	8.0 %	1,181	1,215	4.9 %
Other Europe	7,223	7,783	29.3 %	7,333	7,711	32.1 %
Total Europe	9,256	9,907	37.3 %	8,514	8,926	37.0 %
Non-US North America	11,986	11,888	44.7 %	11,650	11,670	48.5 %
Australia & New Zealand	1,870	2,051	7.7 %	1,853	1,966	8.2 %
Central & South America	514	542	2.0 %	473	501	2.1 %
Africa & Middle East	1,577	1,644	6.2 %	350	379	1.6 %
Asia/Pacific	531	561	2.1 %	580	616	2.6 %
Total	$ 25,734	$ 26,593	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 94.5% and 95.8% of these securities are investment grade by NAIC designation as of both September 30, 2020 and December 31, 2019. As of September 30, 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 $2.1 billion and $1.2 billion of exposure in these countries as of September 30, 2020 and December 31, 2019, respectively.

As of September 30, 2020, we held United Kingdom and Channel Islands AFS securities of $3.2 billion, or 4.0% of our AFS securities, including related parties. As of September 30, 2020, these securities were in a net unrealized gain position of $177 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 $3.5 billion and $2.9 billion as of September 30, 2020 and December 31, 2019. The increase in trading securities was primarily driven by the dissolution of CoInvest VII during the quarter, 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:

	September 30, 2020		December 31, 2019	
(In millions, except percentages)	Net Carrying Value	Percent of Total	Net Carrying Value	Percent of Total
Property type				
Office building	$ 3,526	23.2 %	$ 2,899	19.3 %
Retail	2,029	13.3 %	2,182	14.6 %
Apartment	2,335	15.3 %	2,142	14.3 %
Hotels	1,182	7.8 %	1,104	7.4 %
Industrial	1,407	9.2 %	1,448	9.7 %
Other commercial[1]	679	4.5 %	730	4.9 %
Total net commercial mortgage loans	11,158	73.3 %	10,505	70.2 %
Residential loans	4,073	26.7 %	4,454	29.8 %
Total mortgage loans, net of allowances	$ 15,231	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 $15.2 billion and $15.0 billion as of September 30, 2020 and December 31, 2019, respectively. This included $2.0 billion and $1.9 billion of mezzanine mortgage loans as of September 30, 2020 and December 31, 2019, respectively. 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 September 30, 2020 and December 31, 2019, we had $81 million and $67 million, respectively, of mortgage loans that were 90 days past due, of which $34 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 condensed consolidated financial statements for information regarding credit loss allowance for collection loss, loan-to-value, and debt service coverage.

As of September 30, 2020, we had a valuation allowance of $328 million comprising of $232 million of CML and $96 million of RML allowances. During the nine months ended September 30, 2020, we recorded a change in provision for credit losses on CMLs of $55 million and RMLs of $50 million. The increase in provision for credit losses was primarily a result of the adoption of CECL and the economic downturn experienced from the spread of COVID-19. 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.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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

(In millions, except percentages)	September 30, 2020		December 31, 2019	
	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Investment funds				
Real estate	$ 290	5.3 %	$ 277	6.4 %
Credit funds	110	2.0 %	153	3.6 %
Private equity	257	4.6 %	236	5.5 %
Real assets	66	1.2 %	83	2.0 %
Natural resources	—	— %	1	— %
Total investment funds	723	13.1 %	750	17.5 %
Investment funds – related parties				
Differentiated investments				
MidCap	—	— %	547	12.7 %
AmeriHome	666	12.1 %	487	11.3 %
Catalina	317	5.7 %	271	6.3 %
Athora	572	10.3 %	132	3.1 %
Venerable	108	2.0 %	99	2.3 %
Other	272	4.9 %	222	5.2 %
Total differentiated investments	1,935	35.0 %	1,758	40.9 %
Real estate	686	12.4 %	853	19.8 %
Credit funds	373	6.8 %	370	8.6 %
Private equity	257	4.6 %	105	2.4 %
Real assets	196	3.5 %	182	4.2 %
Natural resources	101	1.8 %	163	3.8 %
Public equities	62	1.1 %	119	2.8 %
Investment in Apollo	1,198	21.7 %	—	— %
Total investment funds – related parties	4,808	86.9 %	3,550	82.5 %
Total investment funds including related parties	$ 5,531	100.0 %	$ 4,300	100.0 %

Overall, the total investment funds, including related party, were $5.5 billion and $4.3 billion, respectively, as of September 30, 2020 and December 31, 2019. See *Note 2 – Investments* to the condensed 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 $1.2 billion as of September 30, 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 September 30, 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 condensed 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.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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

	September 30, 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	— %	$ 15	0.1 %
US state, municipal and political subdivisions	524	0.8 %	482	1.7 %
Foreign governments	291	0.5 %	143	0.5 %
Corporate	37,939	61.5 %	14,590	51.4 %
CLO	4,610	7.5 %	2,586	9.1 %
ABS	3,851	6.2 %	2,510	8.8 %
CMBS	2,398	3.9 %	756	2.7 %
RMBS	2,289	3.7 %	1,482	5.2 %
Equity securities	96	0.2 %	74	0.3 %
Mortgage loans	7,003	11.4 %	4,357	15.3 %
Investment funds	974	1.6 %	807	2.8 %
Derivative assets	183	0.3 %	224	0.8 %
Short-term investments	1,024	1.7 %	157	0.6 %
Other investments	15	— %	—	— %
Cash and cash equivalents	809	1.3 %	239	0.8 %
Other assets and liabilities	(375)	(0.6)%	(21)	(0.1)%
Total funds withheld at interest including related party	$ 61,646	100.0 %	$ 28,401	100.0 %

As of September 30, 2020 and December 31, 2019, we held $61.6 billion and $28.4 billion, respectively, of funds withheld at interest receivables, including related party. Approximately 94.6% and 94.4% of the fixed maturity securities within the funds withheld at interest are investment grade by NAIC designation as of September 30, 2020 and December 31, 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 net unrealized gains attributed to a decrease in US Treasury rates, partially offset by a widening of credit spreads.

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 fixed indexed 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 condensed 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:

	September 30, 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	$ 68,479	47.9 %	$ 55,077	46.9 %
CLO	12,958	9.1 %	10,223	8.7 %
Credit	81,437	57.0 %	65,300	55.6 %
RMBS	8,278	5.8 %	8,394	7.1 %
CML	16,210	11.3 %	14,038	12.0 %
RML	4,243	3.0 %	4,490	3.8 %
CMBS	3,379	2.4 %	2,930	2.5 %
Real estate	32,110	22.5 %	29,852	25.4 %
ABS	10,423	7.3 %	10,317	8.8 %
Alternative investments	6,448	4.5 %	5,586	4.8 %
State, municipal, political subdivisions and foreign government	2,057	1.4 %	2,260	1.9 %
Equity securities	406	0.3 %	365	0.3 %
Short-term investments	685	0.5 %	624	0.5 %
US government and agencies	85	0.1 %	49	— %
Other investments	20,104	14.1 %	19,201	16.3 %
Cash and equivalents	6,682	4.7 %	1,958	1.7 %
Policy loans and other	1,304	0.9 %	1,175	1.0 %
Net invested assets excluding investment in Apollo	141,637	99.2 %	117,486	100.0 %
Investment in Apollo	1,198	0.8 %	—	— %
Net invested assets	$ 142,835	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 $142.8 billion and $117.5 billion as of September 30, 2020 and December 31, 2019, respectively. As of September 30, 2020, our net invested assets were mainly comprised of 47.9% of corporate securities, 24.6% of structured securities, 14.3% of mortgage loans and 4.5% of alternative investments. Corporate securities included $18.1 billion of private placements, which represented 12.6% of our net invested assets. The increase in net invested assets as of September 30, 2020 from December 31, 2019 was primarily driven by 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 $1.2 billion, growth in deposits over liability outflows 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 condensed 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 in order 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:

	September 30, 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	$ 818	12.7 %	$ 595	10.7 %
MidCap	609	9.4 %	547	9.8 %
Catalina	317	4.9 %	271	4.9 %
Venerable	108	1.7 %	99	1.8 %
Other	318	4.9 %	208	3.7 %
Total differentiated investments	2,170	33.6 %	1,720	30.9 %
Real estate	1,268	19.7 %	1,430	25.6 %
Credit	917	14.2 %	968	17.3 %
Private equity	570	8.8 %	378	6.8 %
Real assets	378	5.9 %	349	6.2 %
Natural resources	48	0.7 %	51	0.9 %
Other	—	— %	58	1.0 %
Total Retirement Services alternative investments	5,351	82.9 %	4,954	88.7 %
Corporate and Other				
Athora	553	8.6 %	140	2.5 %
Credit	94	1.5 %	128	2.3 %
Natural resources	230	3.6 %	245	4.4 %
Equities[1]	220	3.4 %	119	2.1 %
Total Corporate and Other alternative investments	1,097	17.1 %	632	11.3 %
Net alternative investments	$ 6,448	100.0 %	$ 5,586	100.0 %

[1] *As of September 30, 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 $6.4 billion and $5.6 billion as of September 30, 2020 and December 31, 2019, respectively, representing 4.5% and 4.8% of our net invested assets portfolio as of September 30, 2020 and December 31, 2019, respectively.

Net alternative investments do not correspond to the total investment funds, including related parties and VIEs, on our condensed 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. Two of our largest alternative investments are in asset originators, MidCap and AmeriHome, both of which, from time to time, provide us with access to assets for our investment portfolio.

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 $609 million and $547 million as of September 30, 2020 and December 31, 2019, respectively. As of September 30, 2020 and December 31, 2019, this alternative investment is comprised of our investment in MidCap, of $532 million and $547 million, respectively, and redeemable preferred stock of $77 million and $0 million, respectively. The dissolution of CoInvest VII during the quarter 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 condensed consolidated balance sheets rather than an investment fund. MidCap returned a net investment earned rate of 10.79% and 14.90% for the three months ended September 30, 2020 and 2019, respectively, and 0.47% and 13.32% for the nine months ended September 30, 2020 and 2019, respectively. Alternative investment income from MidCap was $15 million and $21 million for the three months ended September 30, 2020 and 2019, respectively, and $4 million and $56 million for the nine months ended September 30, 2020 and 2019, respectively. The decrease in alternative investment income for the three months ended September 30, 2020 compared to 2019 was mainly due to lower origination volumes due to the current interest rate environment. The decrease in alternative investment income for the nine months ended September 30, 2020 compared to 2019 was mainly due to a decrease in valuation in the first quarter reflecting an increase in loan loss assumptions and lower origination volumes due to the current interest rate environment. The redeemable preferred stock returned a net investment earned rate of 15.70% and 0.00% for the three months ended September 30, 2020 and 2019, respectively, and 47.93% and 0.00% for the nine months ended September 30, 2020 and 2019, respectively. Alternative investment income from the redeemable preferred stock was $3 million and $0 million for the three months ended September 30, 2020 and 2019, respectively, and $14 million and $0 million for the nine months ended September 30, 2020 and 2019, respectively. The increase in alternative investment income from the redeemable preferred stock was primarily driven by 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 $818 million and $595 million as of September 30, 2020 and December 31, 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. A-A Mortgage returned a net investment earned rate of 45.32% and 14.03% for the three months ended September 30, 2020 and 2019, respectively, and 42.58% and 13.90% for the nine months ended September 30, 2020 and 2019, respectively. Alternative investment income from A-A Mortgage was $88 million and $20 million for the three months ended September 30, 2020 and 2019, respectively, and $223 million and $59 million for the nine months ended September 30, 2020 and 2019, respectively. The increase in alternative investment income for both the three and nine months ended September 30, 2020 compared to 2019 was mainly due to an increase in valuation driven by strong earnings reflecting increased origination volumes and increased gains on sales to secondary markets.

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 September 30, 2020 and December 31, 2019, we indirectly held equity positions of $220 million and $119 million, respectively. As of September 30, 2020 and December 31, 2019, we held approximately 2.8 million shares of OneMain with a market value of $62 million and $119 million, respectively. The decrease in market value is driven by the decline in share price, partially offset by dividend received in 2020.

Non-GAAP Measure Reconciliations

The reconciliations to the nearest GAAP measure for adjusted operating income (loss) available to common shareholders is included in the *Consolidated Results of Operations* section.

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:

(In millions)	September 30, 2020	December 31, 2019
Total AHL shareholders’ equity	$ 15,943	$ 13,391
Less: Preferred stock	1,755	1,172
Total AHL common shareholders’ equity	14,188	12,219
Less: AOCI	2,888	2,281
Less: Accumulated change in fair value of reinsurance assets	778	493
Total adjusted AHL common shareholders’ equity	$ 10,522	$ 9,445
Segment adjusted AHL common shareholders’ equity		
Retirement Services	$ 7,321	$ 7,443
Corporate and Other	3,201	2,002
Total adjusted AHL common shareholders’ equity	$ 10,522	$ 9,445

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2020	2019	2020	2019
Average AHL shareholders’ equity	$ 15,327	$ 12,955	$ 14,667	$ 10,911
Less: Average preferred stock	1,755	1,006	1,464	586
Less: Average AOCI	2,536	2,101	2,585	985
Less: Average accumulated change in fair value of reinsurance assets	697	683	636	326
Average adjusted AHL common shareholders’ equity	$ 10,339	$ 9,165	$ 9,982	$ 9,014
Segment average adjusted AHL common shareholders’ equity				
Retirement Services	$ 7,139	$ 7,598	$ 7,381	$ 7,651
Corporate and Other	3,200	1,567	2,601	1,363
Average adjusted AHL common shareholders’ equity	$ 10,339	$ 9,165	$ 9,982	$ 9,014

The reconciliation of net investment income to net investment earnings and earned rate is as follows:

	Three months ended September 30,				Nine months ended September 30,			
	2020		2019		2020		2019	
(In millions, except percentages)	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP net investment income	$ 1,209	3.48 %	$ 1,090	3.67 %	$ 3,290	3.42 %	$ 3,354	3.87 %
Change in fair value of reinsurance assets	444	1.28 %	199	0.67 %	932	0.97 %	492	0.57 %
Alternative income gain (loss)	23	0.07 %	6	0.02 %	(22)	(0.02)%	13	0.01 %
ACRA noncontrolling interest	(196)	(0.56)%	—	— %	(349)	(0.36)%	—	— %
Apollo investment (income) loss	101	0.29 %	—	— %	(83)	(0.09)%	—	— %
Held for trading amortization and other	(51)	(0.15)%	(3)	(0.01)%	(47)	(0.05)%	(19)	(0.02)%
Total adjustments to arrive at net investment earnings/earned rate	321	0.93 %	202	0.68 %	431	0.45 %	486	0.56 %
Total net investment earnings/earned rate	$ 1,530	4.41 %	$ 1,292	4.35 %	$ 3,721	3.87 %	$ 3,840	4.43 %
Retirement Services	$ 1,444	4.22 %	$ 1,264	4.31 %	$ 3,703	3.90 %	$ 3,756	4.38 %
Corporate and Other	86	17.59 %	28	7.28 %	18	1.32 %	84	8.92 %
Total net investment earnings/earned rate	$ 1,530	4.41 %	$ 1,292	4.35 %	$ 3,721	3.87 %	$ 3,840	4.43 %
Retirement Services average net invested assets	$ 136,852		$ 117,338		$ 126,563		$ 114,391	
Corporate and Other average net invested assets ex. Apollo investment	1,945		1,567		1,785		1,262	
Consolidated average net invested assets ex. Apollo investment	$ 138,797		$ 118,905		$ 128,348		$ 115,653	

The reconciliation of interest sensitive contract benefits to Retirement Services' cost of crediting, and the respective rates, is as follows:

	Three months ended September 30,				Nine months ended September 30,			
	2020		2019		2020		2019	
(In millions, except percentages)	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP interest sensitive contract benefits	$ 1,225	3.58 %	$ 801	2.73 %	$ 1,982	2.09 %	$ 3,411	3.98 %
Interest credited other than deferred annuities and institutional products	73	0.21 %	63	0.21 %	211	0.22 %	168	0.19 %
FIA option costs	284	0.83 %	282	0.96 %	821	0.86 %	840	0.98 %
Product charges (strategy fees)	(34)	(0.10)%	(31)	(0.10)%	(100)	(0.11)%	(88)	(0.10)%
Reinsurance embedded derivative impacts	14	0.04 %	14	0.05 %	43	0.05 %	43	0.05 %
Change in fair value of embedded derivatives – FIAs	(779)	(2.28)%	(560)	(1.91)%	(1,009)	(1.06)%	(2,739)	(3.19)%
Negative VOBA amortization	3	0.01 %	9	0.03 %	15	0.02 %	28	0.03 %
ACRA noncontrolling interest	(151)	(0.44)%	—	— %	(226)	(0.24)%	—	— %
Other changes in interest sensitive contract liabilities	5	0.02 %	(2)	(0.01)%	3	— %	(5)	(0.01)%
Total adjustments to arrive at cost of crediting	(585)	(1.71)%	(225)	(0.77)%	(242)	(0.26)%	(1,753)	(2.05)%
Retirement Services cost of crediting	$ 640	1.87 %	$ 576	1.96 %	$ 1,740	1.83 %	$ 1,658	1.93 %
Retirement Services cost of crediting on deferred annuities	$ 506	1.98 %	$ 453	1.98 %	$ 1,379	1.94 %	$ 1,345	1.98 %
Retirement Services cost of crediting on institutional products	134	2.95 %	123	3.68 %	361	3.03 %	313	3.71 %
Retirement Services cost of crediting	$ 640	1.87 %	$ 576	1.96 %	$ 1,740	1.83 %	$ 1,658	1.93 %
Retirement Services average net invested assets	$ 136,852		$ 117,338		$ 126,563		$ 114,391	
Average account value on deferred annuities	102,144		91,467		94,600		90,638	
Average net institutional reserve liabilities	18,162		13,320		15,882		11,200	

The reconciliation of GAAP benefits and expenses to other liability costs is as follows:

(In millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
GAAP benefits and expenses	$ 2,251	$ 4,305	$ 5,401	$ 11,233
Premiums	(112)	(2,688)	(1,607)	(5,475)
Product charges	(144)	(135)	(425)	(392)
Other revenues	(13)	(6)	(29)	(27)
Cost of crediting	(342)	(280)	(876)	(775)
Change in fair value of embedded derivatives – FIA, net of offsets	(863)	(497)	(852)	(2,574)
DAC, DSI and VOBA amortization related to investment gains and losses	(86)	(151)	16	(505)
Rider reserves related to investment gains and losses	(21)	(9)	9	(61)
Policy and other operating expenses, excluding policy acquisition expenses	(132)	(130)	(394)	(350)
AmerUs closed block fair value liability	(15)	(46)	(70)	(158)
ACRA noncontrolling interest	(193)	—	(269)	—
Other changes in benefits and expenses	(10)	(5)	(27)	(3)
Total adjustments to arrive at other liability costs	(1,931)	(3,947)	(4,524)	(10,320)
Other liability costs	$ 320	$ 358	$ 877	$ 913
Retirement Services	$ 320	$ 358	$ 877	$ 913
Corporate and Other	—	—	—	—
Consolidated other liability costs	$ 320	$ 358	$ 877	$ 913

The reconciliation of policy and other operating expenses to operating expenses is as follows:

(In millions)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
GAAP policy and other operating expenses	$ 231	$ 194	$ 637	$ 544
Interest expense	(34)	(15)	(83)	(47)
Policy acquisition expenses, net of deferrals	(99)	(63)	(243)	(194)
Integration, restructuring and other non-operating expenses	—	(34)	(13)	(46)
Stock compensation expenses	(1)	(3)	(11)	(9)
ACRA noncontrolling interest	(16)	—	(39)	—
Other changes in policy and other operating expenses	(3)	—	(3)	—
Total adjustments to arrive at operating expenses	(153)	(115)	(392)	(296)
Operating expenses	$ 78	$ 79	$ 245	$ 248
Retirement Services	$ 63	$ 67	$ 202	$ 197
Corporate and Other	15	12	43	51
Consolidated operating expenses	$ 78	$ 79	$ 245	$ 248

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The reconciliation of total investments, including related parties, to net invested assets is as follows:

(In millions)	September 30, 2020	December 31, 2019
Total investments, including related parties	$ 170,205	$ 130,550
Derivative assets	(2,771)	(2,888)
Cash and cash equivalents (including restricted cash)	8,774	4,639
Accrued investment income	796	807
Payables for collateral on derivatives and other secured transactions	(2,644)	(2,743)
Reinsurance funds withheld and modified coinsurance	(1,441)	(1,440)
VIE and VOE assets, liabilities and noncontrolling interest	(130)	25
Unrealized (gains) losses	(5,211)	(4,095)
Ceded policy loans	(221)	(235)
Net investment receivables (payables)	(705)	(57)
Allowance for credit losses	484	—
Total adjustments to arrive at gross invested assets	(3,069)	(5,987)
Gross invested assets	167,136	124,563
ACRA noncontrolling interest	(24,301)	(7,077)
Net invested assets	$ 142,835	$ 117,486

The reconciliation of total investment funds, including related parties, to net alternative investments within net invested assets is as follows:

(In millions)	September 30, 2020	December 31, 2019
Investment funds, including related parties	$ 5,531	$ 4,300
Equity securities	222	78
CLO and ABS equities included in trading securities	973	405
Investment in Apollo	(1,198)	—
Investment funds within funds withheld at interest	974	807
Royalties and other assets included in other investments	59	67
Unrealized (gains) losses and other adjustments	(10)	8
ACRA noncontrolling interest	(103)	(79)
Total adjustments to arrive at alternative investments	917	1,286
Net alternative investments	$ 6,448	$ 5,586

The reconciliation of total liabilities to net reserve liabilities is as follows:

(In millions)	September 30, 2020	December 31, 2019
Total liabilities	$ 173,971	$ 132,734
Short-term debt	—	(475)
Long-term debt	(1,487)	(992)
Derivative liabilities	(147)	(97)
Payables for collateral on derivatives and securities to repurchase	(3,144)	(3,255)
Funds withheld liability	(440)	(408)
Other liabilities	(1,897)	(1,181)
Reinsurance ceded receivables	(5,104)	(4,863)
Policy loans ceded	(221)	(235)
ACRA noncontrolling interest	(23,762)	(6,574)
Other	(2)	(2)
Total adjustments to arrive at net reserve liabilities	(36,204)	(18,082)
Net reserve liabilities	$ 137,767	$ 114,652

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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 September 30, 2020 was $66.2 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 September 30, 2020 was $40.9 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 September 30, 2020 and had a remaining term of more than 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 Athene USA'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 – Athene USA 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 deposits. Uses of cash include investment purchases, payments to policyholders for surrenders, withdrawals and payout benefits, interest and principal payments on funding agreements, 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 September 30, 2020 and December 31, 2019, approximately 75% and 78%, respectively, of our deferred annuity liabilities were subject to penalty upon surrender. In addition, as of September 30, 2020 and December 31, 2019, approximately 57% 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. 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 September 30, 2020 and December 31, 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 September 30, 2020 and December 31, 2019, we had funding agreements outstanding with the FHLB in the aggregate principal amount of $2.1 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 September 30, 2020, the total maximum borrowings under the FHLB facilities were limited to $30.7 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 September 30, 2020 we had the ability to draw up to a total of approximately $3.5 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.

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 condensed 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 September 30, 2020, the fair value of securities and collateral held by counterparties and payables for repurchase agreements was $1.2 billion and $1.1 billion, 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 September 30, 2020, we had no outstanding payables under this facility.

Cash Flows

Our cash flows were as follows:

	Nine months ended September 30,	
(In millions)	2020	2019
Net income	$ 599	$ 1,721
Payment at recapture of reinsurance agreements	(723)	—
Non-cash revenues and expenses	1,049	264
Net cash provided by operating activities	925	1,985
Sales, maturities and repayments of investments	13,144	11,763
Purchases of investments	(20,581)	(19,543)
Other investing activities	338	521
Net cash used in investing activities	(7,099)	(7,259)
Issuance of common stock	350	—
Net proceeds and repayments of debt	424	—
Deposits on investment-type policies and contracts	13,994	8,879
Withdrawals on investment-type policies and contracts	(5,320)	(4,846)
Net capital contributions and distributions to/from noncontrolling interests	194	—
Net change in cash collateral posted for derivative transactions and securities to repurchase	487	1,354
Issuance of preferred stock, net of expenses	583	1,172
Preferred stock dividends	(67)	(17)
Repurchase of common stock	(425)	(548)
Other financing activities	114	(90)
Net cash provided by financing activities	10,334	5,904
Effect of exchange rate changes on cash and cash equivalents	(28)	—
Net increase in cash and cash equivalents[1]	$ 4,132	$ 630

[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 $925 million and $2.0 billion for the nine months ended September 30, 2020 and 2019, respectively. The decrease in cash provided by operating activities was primarily driven by the restructuring of a coinsurance agreement to a funds withheld agreement with an existing reinsurance partner, lower cash received from PRT transactions and a decrease in net investment income.

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 $7.1 billion and $7.3 billion for the nine months ended September 30, 2020 and 2019, respectively. The decrease in cash used in investing activities was primarily attributed to higher sales of investments, mainly offset by an increase in purchases attributed to deploying the deposits received and redeployment of the investment portfolio associated with the Jackson reinsurance transaction.

Cash flows from financing activities

The primary cash inflows from financing activities are deposits 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 $10.3 billion and $5.9 billion for the nine months ended September 30, 2020 and 2019, respectively. The increase in cash provided by financing activities was primarily attributed to higher investment-type deposits from retail, flow reinsurance and funding agreement deposits net of withdrawals, proceeds of $499 million of long-term debt, the issuance of stock in connection with the strategic transaction with Apollo and net capital contributions from noncontrolling interests, partially offset by the change in cash collateral posted for derivative transactions driven by unfavorable equity market performance in 2020, lower preferred stock issuances than prior year, the repayment of short-term debt and the payment of preferred stock dividends.

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 Bermuda Monetary Authority (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.

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. 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 underwriters' discount and estimated expenses. See *Note 10 – Equity* to the condensed 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 September 30, 2020 and December 31, 2019, the revolving note payable had an outstanding balance of $280 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. In addition, certain covenants in our credit agreement prohibit us from maintaining debt in excess of specified thresholds. Specifically, our credit agreement prohibits us from permitting the Consolidated Debt to Capitalization Ratio (as such term is defined in the credit agreement) to exceed 35% as of the end of any quarter.

Capital Resources

As of December 31, 2019 and 2018, our US insurance companies' TAC, as defined by the NAIC, was $2.4 billion and $2.2 billion, respectively, and our US RBC ratio was 429% and 421%, 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, 2019 and 2018, respectively.

Bermuda capital for ALRe was $11.0 billion and $9.7 billion as of December 31, 2019 and 2018, respectively. ALRe adheres to BMA regulatory capital requirements to maintain statutory capital and surplus to meet the minimum margin of solvency and maintain minimum economic balance sheet (EBS) capital and surplus to meet the enhanced capital requirement. 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 $14.1 billion and $12.0 billion, resulting in a BSCR ratio of 310% and 340% as of December 31, 2019 and 2018, respectively. An insurer must have a BSCR ratio of 100% or greater to be considered solvent by the BMA. As of December 31, 2019 and 2018, ALRe held the appropriate capital to adhere to these regulatory standards.

As of December 31, 2019 and 2018, our ALRe RBC was 443% and 405%, respectively. We believe that we have a strong capital position in light of our risks and that we are well positioned to meet policyholder and other obligations. We also believe that our strong capital position, as well as our excess capital position and access to uncalled capital commitments at ACRA, may provide us the opportunity to take advantage of market dislocations as they arise. 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 excess capital calculations, net of risk charges.

The RBC ratios we calculate for our US and for our Bermuda subsidiaries (under US methodologies for our US insurance subsidiaries and our ALRe RBC ratio methodology for our Bermuda insurance subsidiaries) are typically used to determine the capital needed to support our Retirement Services segment. We generally find that this methodology reflects the amount of capital required as determined by our internal capital models and the capital models of our three rating agencies, S&P, A.M. Best and Fitch.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Repurchase of Securities

Share Repurchase Program

In December 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 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 13.2 million Class A common shares for $416 million during the nine months ended September 30, 2020. As of November 3, 2020, we have repurchased, in the aggregate, 35.5 million Class A common shares for $1.3 billion since inception of our share repurchase program and have $224 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 September 30, 2020:

	Payments Due by Period				
(In millions)	Total	2020	2021-2022	2023-2024	2025 and thereafter
Interest sensitive contract liabilities	$ 141,207	$ 14,204	$ 28,384	$ 24,770	$ 73,849
Future policy benefits	24,823	545	1,118	1,143	22,017
Other policy claims and benefits	118	118	—	—	—
Dividends payable to policyholders	110	5	10	10	85
Long-term debt[1]	2,117	15	144	144	1,814
Securities to repurchase[2]	1,161	505	26	26	604
Total	$ 169,536	$ 15,392	$ 29,682	$ 26,093	$ 98,369

[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 8 – Debt to the condensed 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 12 – Commitments and Contingencies* to the condensed 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 condensed consolidated financial statements.

Off Balance Sheet Arrangements

None.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

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 of our 2019 Annual Report. The most critical accounting estimates and judgments include those used in determining:

- fair value of investments;
- credit loss allowances;
- future policy benefit reserves;
- derivatives valuation, including embedded derivatives;
- deferred acquisition costs, deferred sales inducements and value of business acquired;
- consolidation of VIEs; and
- valuation allowances on deferred tax assets.

Except as described below, the above critical accounting estimates and judgments are discussed in detail in *Part II—Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Estimates and Judgments* of our 2019 Annual Report. Due to the adoption of CECL in the first quarter 2020 and the significance of the Jackson reinsurance transaction in the second quarter 2020, the following updates and replaces the substantively similar information provided in the 2019 Annual Report.

See *Note 1 – Business, Basis of Presentation and Significant Accounting Policies* to the condensed consolidated financial statements for adoption of new and future accounting pronouncements.

Investments

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*—Liabilities for Guaranteed Living Withdrawal Benefits and Guaranteed Minimum Death Benefits*

As of September 30, 2020, the GLWB and GMDB liability balance, including the impacts of shadow adjustments, totaled $4.8 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)	September 30, 2020
+10% assessments	$ (155)
−10% assessments	172
+100 bps discount rate	139
−100 bps discount rate	(172)
1% higher annual equity growth	(48)
1% lower annual equity growth	45

Derivatives*—Valuation of Embedded Derivatives on FIAs*

As of September 30, 2020, we had embedded derivative liabilities classified as Level 3 in the fair value hierarchy of $11.7 billion. The increase (decrease) to the embedded derivatives on FIA products from hypothetical changes in discount rates is summarized as follows:

(In millions)	September 30, 2020
+100 bps discount rate	$ (957)
−100 bps discount rate	1,094

Deferred Acquisition Costs, Deferred Sales Inducements, and Value of Business Acquired—As of September 30, 2020, DAC, DSI and VOBA totaled $5.2 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:

	September 30, 2020			
(In millions)	DAC	DSI	VOBA	Total
+10% estimated future gross profits	$ 149	$ 35	$ 54	$ 238
−10% estimated future gross profits	(171)	(41)	(59)	(271)
+100 bps discount rate	(158)	(58)	(39)	(255)
−100 bps discount rate	183	68	44	295

Item 3. Quantitative and Qualitative Disclosures About Market Risks

We regularly analyze our exposure to market risks, which reflect potential losses in value due to credit and counterparty risk, interest rate risk, currency risk, commodity price risk and equity price risk. As a result of that analysis, we have determined that we are primarily exposed to credit risk, interest rate risk and equity price risk. A description of our market risk exposures, including strategies used to manage our exposure to market risk, may be found under *Part II—Item 7A. Quantitative and Qualitative Disclosures About Market Risk* of the 2019 Annual Report.

There have been no material changes to our market risk exposures from those previously disclosed in the 2019 Annual Report, except as described below. The following updates and replaces the information provided in the 2019 Annual Report:

Sensitivities

Interest Rate Risk

We assess interest rate exposures 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 September 30, 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 $731 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 $57 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 September 30, 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 change in interest rates that persists for a 12-month period, the estimated impact to adjusted operating income would be a corresponding change of approximately $35 – $45 million. 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 2. 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 September 30, 2020, which discussion encompasses the impact of such an increase on certain of the non-operating adjustment items.

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

Assuming all other factors are constant, we estimate that a decline in public equity market prices of 10% would be relatively unchanged from the sensitivities shown in *Part II—Item 7A. Quantitative and Qualitative Disclosures About Market Risk* of the 2019 Annual Report.

Item 4. 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 ensure 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.

Changes in Internal Control Over Financial Reporting

There were no changes to our internal control over financial reporting as defined in Exchange Act Rule 13a-15(f) during the quarter ended September 30, 2020, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. 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 proceeding or claim 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 the government 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 12 – Commitments and Contingencies – Litigation, Claims and Assessments* to the condensed consolidated financial statements.

Item 1A. Risk Factors

The following should be read in conjunction with, and supplement and amend, the factors that may affect our business or operations described in *Part I–Item 1A. Risk Factors* of our 2019 Annual Report. Other than as described in this Item 1A, there have been no material changes to our risk factors from the risk factors previously disclosed in our 2019 Annual Report.

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. We believe that these metrics provide the most comprehensive view of our risk exposures. See *Part 1–Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations–Key Operating and Non-GAAP Measures–Net Invested Assets* for further discussion.

The following updates and supplements the risk factors described in our 2019 Annual Report:

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 are closely monitoring 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. At this time, 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 and cannot be predicted, including new information which may emerge concerning the severity of the COVID-19 pandemic and the actions taken to contain or address its impact, and may cause us to revisit or revise estimates of future earnings or other guidance we have previously provided to the markets. In particular, certain projected financial information previously provided to our shareholders in connection with our recent share issuance transaction with Apollo may as a result of the impact from the COVID-19 pandemic materially differ from our actual results, and should not be relied upon.

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 substantially completed our employee repopulation plan. While we have taken measures to reduce the risk of transmission among employees, including implementing social distancing measures and face covering and contact tracing protocols, 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 one exception, 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 resident 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 further 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 risk discussed elsewhere in this report and in our 2019 Annual 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 further 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. Since the first quarter of 2020, we have been in dialogue with S&P to obtain ratings for our debt investments in the PK AirFinance securitization. Prior to the issuance of ratings for PK AirFinance, as a result of COVID-19, the rating agencies, including S&P, initially placed moratoriums on rating new aircraft and airline debt securities but have since recommenced processes to rate such new securities. We have been in dialogue with S&P regarding various scenarios and stress tests with respect to our investment in PK AirFinance and expect a rating to be issued in the fourth quarter of 2020. However, if we are unable to obtain ratings from S&P, or another NRSRO, we could be required to classify our debt investments as non-admissible under statutory accounting principles, in which case our statutory capital would be reduced by an amount equivalent to our debt investments.

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.

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 nine months ended September 30, 2020, have and may further increase collateral requirements to counterparties and may create liquidity risk. As of September 30, 2020, we had collateral with a value of $5.0 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 September 30, 2020, we had commitments to make investments in the amount of $5.8 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.

See *Item 2. 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 following updates and replaces the final paragraph of the similarly named risk factor in our 2019 Annual Report:

Uncertainty relating to the LIBOR calculation process and potential phasing out of LIBOR after 2021 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.

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 six-phase 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. To the extent that management effort and attention is focused on other matters, such as responding to the risk posed by COVID-19, successfully completing all of the phases of our plan prior to the discontinuation of LIBOR could become more difficult. Although we expect that we will be successful at completing all the phases of our plan prior to the discontinuation of LIBOR, we can provide no assurance at this time. Failure to complete all phases of 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 2. 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 September 30, 2020, $21.4 billion or 70% 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.

The following updates and replaces, in their entirety, the similarly named risk factors in our 2019 Annual Report:

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. Our most significant potential exposures to concentration risk of single issuers 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; Athora, an insurance holding company focused on the European life insurance market; and PK AirFinance, a provider and arranger of loans principally to airlines and aircraft leasing companies secured by commercial aircraft.

As of September 30, 2020, our exposure, including loaned amounts, to MidCap was $931 million, which represented 0.7% of our net invested assets and 5.8% of total Athene Holding Ltd. shareholders' equity. On October 30, 2020, we invested in $300 million of unsecured notes issued by AmeriHome. Proforma for this investment, as of September 30, 2020, our exposure to A-A Mortgage and AmeriHome was $1,118 million, which represented 0.8% of our net invested assets and 7.0% of total Athene Holding Ltd. shareholders' equity. As of September 30, 2020, our exposure to Athora was $553 million, which represented 0.4% of our net invested assets and 3.5% of total Athene Holding Ltd. shareholders' equity. As of September 30, 2020, our exposure to securitizations of loans originated by PK AirFinance, net of amounts attributable to noncontrolling interest, was $1.2 billion, which represented 0.8% of our net invested assets and 7.5% of total Athene Holding Ltd. shareholders' equity.

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 likely 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.

To the extent that we suffer a significant loss on our investment in MidCap, A-A Mortgage, Athora 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 September 30, 2020, 13% 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 September 30, 2020, 23% 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 above with respect to our real estate-related investments could materially and adversely affect our financial condition and results of operations.

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." However, in certain types of reinsurance transactions, it is not clear whether any amounts paid or accrued by non-US reinsurance entities would be netted against amounts paid or accrued to such entities for purposes of calculating the "base erosion payments" and "base erosion tax benefits."

In light of the possibility of material additional tax cost to our US subsidiaries and the lack of clear guidance regarding the appropriate method by which to compute the BEAT, we have undertaken certain actions intended to mitigate the potential effect of the BEAT on our results of operations. Such actions may have adverse consequences to our business, such as subjecting income in respect of our affiliate reinsurance to a layer of withholding tax of up to 30%, which would not have been payable under our prior structure. There can be no assurances that our efforts to mitigate the BEAT will be successful, and our consideration of any further actions may be expensive and time consuming. In addition, we have been, and may continue to be, required to take action before the uncertainty regarding the BEAT is resolved, and accordingly any action we take may, in hindsight, prove to have been unnecessary, ineffective or counterproductive.

The application of the BEAT to our reinsurance arrangements could be affected by further legislative action (including possibly a "technical corrections" bill), 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, and the uncertainty regarding the correct interpretation of the BEAT may make such disagreements more likely. 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 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 one exception, each of the Non-US Companies currently intends to operate in a manner that will not cause it to be treated as being engaged in a trade or business within the US. 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 income tax treaty between the US and the UK (UK Treaty) because its Class A common shares are listed and regularly traded on the NYSE. In addition, certain of the Non-US Subsidiaries are UK tax residents (together with AHL, the UK Resident Companies) and 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 non-US 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 non-US 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 non-US 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 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 non-US 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 non-US 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 for US federal income tax purposes 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 (the "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 non-US 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 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 non-US entities.

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 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.

The following updates and replaces, in its entirety, the risk factor entitled *Our bye-laws contain provisions that cause a holder of Class A common shares to lose the right to vote the shares if the holder owns an equity interest in Apollo, AP Alternative Assets, L.P. (AAA) or certain other entities* in our 2019 Annual Report:

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.

The following updates and replaces, in their entirety, the similarly named risk factors in our 2019 Annual Report:

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 any 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.

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 September 30, 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 September 30, 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 September 30, 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 2. Unregistered Sales of Equity Securities and Use of Proceeds

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Securities

Purchases of common stock made by or on behalf of us or our affiliates during the three months ended September 30, 2020 are set forth below:

Period	(a) Total number of shares purchased	(b) Average price paid per share		(c) Total number of shares purchased as part of publicly announced programs[1]	(d) Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs[1]	
July 1 – July 31, 2020	362	$	31.19	—	$	321,408,033
August 1 – August 31, 2020	1,104,081	$	36.19	1,104,081	$	281,480,706
September 1 – September 30, 2020[2]	1,616,830	$	35.32	1,616,830	$	224,440,004

[1] *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 June 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 condensed consolidated financial statements for more information.*

[2] *On September 11, 2020, we repurchased 605,554 Class A common shares at $35.70 per share from AAA Investments, L.P., a related party. The repurchase was made under our share repurchase program.*

EXHIBIT INDEX

Exhibit No.	Description
4.1	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).
4.2	Form of 3.500% Senior Notes due 2031 (included in Exhibit 4.1).
10.1	Form of ADIP (Athene) Carry Plan, L.P. Award Letter.
10.2	Amendment No. 1 to Coinsurance Agreement, dated September 30, 2020 between Jackson National Life Insurance Company and Athene Life Re Ltd.
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: November 3, 2020

/s/ Martin P. Klein

Martin P. Klein
Executive Vice President and Chief Financial Officer
(principal financial officer and duly authorized signatory)

ADIP (Athene) Carry Plan, L.P.

Award Letter

July 9, 2020

[_______]

Dear [______]:

Reference is made to the Amended and Restated Exempted Limited Partnership Agreement of ADIP (Athene) Carry Plan, L.P. (the "Partnership") dated June 12, 2020 (as the same may be amended, supplemented or modified from time to time, the "Carry Plan LPA"). Capitalized terms not defined herein have the meanings set forth in the Carry Plan LPA.

This letter is your "Award Letter" as defined in the Carry Plan LPA.

Your Initial Point Award

The Fund General Partner is entitled to a 15% "carried interest" in the Fund's net profits, which it has divided into 1,500 "Points" for purposes of allocation among its limited partners. As a limited partner of the Fund General Partner, the Partnership has received an allocation of 500 Points of the Fund General Partner. The Partnership issues to its limited partners Points in the Partnership, with each Point corresponding with one Point of the Fund General Partner held by the Partnership. References herein to "Points" refer to Points issued by the Partnership.

You are being granted the number of Points set forth on your Participant Execution Page attached hereto (out of a maximum of 500 Points that will be issued and outstanding at any time) on the terms set forth in this Award Letter and the Carry Plan LPA. Your Points will not be reduced (or otherwise be subject to dilution) without your consent except (i) as a result of becoming a Retired Partner as described below under "Effect of Retirement on Points; Vesting Terms" or (ii) as a result of a breach of a Restrictive Covenant as described in Annex A hereto.

Effect of Retirement on Points; Vesting Terms

Your Points are subject to vesting on a monthly basis on the last day of the month over the five (5) year period beginning on your Vesting Commencement Date (as defined below), and your Vesting Percentage (as defined below) shall determine the number of Points you may be eligible to retain in the event you become a Retired Partner. Prior to becoming a Retired Partner, your Vesting Percentage does not affect the level of the distributions to which your Points entitle you. As of the date that you become a Retired Partner, your Points will be reduced automatically to (i) zero if your retirement is for Cause (as defined below), or (ii) an amount equal to your Vested Points calculated as of that date. The Administrator (as defined below) may (but has no obligation to) agree to a lesser reduction (or to no reduction) of your Points or a later effective date.

The term "Vested Points" means the sum of the following products with respect to all of your Points held as of the date you became a Retired Partner: (i) the number of such Points that have the same Vesting Commencement Date multiplied by (ii) the Vesting Percentage applicable to such Points as of the date you became a Retired Partner.

The term "Vesting Percentage" as applied to you means, as of the date you become a Retired Partner:

(a) if such retirement occurs other than as a result of Cause, death or Disability, a fraction (expressed as a percentage) of $x/80$ (which provides that you will vest in $1/80^{th}$ of your Points for each complete calendar month elapsed beginning on the Vesting Commencement Date and ending on the date you become a Retired Partner not to exceed 75% of your total Points attained after sixty (60) months), and

(b) if such retirement occurs as a result of death or Disability, a fraction (expressed as a percentage) of $x/160 + 3/8$ (which provides that you will vest in a minimum of 37.5% of your total Points plus an additional $1/160^{th}$ of your Points for each complete calendar month elapsed beginning on the Vesting Commencement Date and ending on the date you become a Retired Partner, which, in the aggregate, shall not exceed 75% of your total Points attained after sixty (60) months),

in each case where:

$x =$ the lesser of:

(i) the number of complete calendar months elapsed for the period commencing on the Vesting Commencement Date and ending on the date you become a Retired Partner, or

(ii) 60.

The term "Vesting Commencement Date" means (i) October 1, 2019 in the case of your initial Point award set forth above, and (ii) the applicable award date in the case of any additional Points that may be awarded to you in the future, unless otherwise specified in connection with such future award.

Restrictive Covenants

In consideration of your participation in the Carry Plan LPA, you will be subject to restrictive covenants in favor of Athene, including regarding confidentiality, non-solicitation and non-competition as set forth in Annex A (such covenants, the "Restrictive Covenants"). Your participation in the Carry Plan LPA, and any benefits conveyed through this Award Letter, are conditioned upon you executing (and returning to the Administrator the executed copy of) Annex A, and this Award Letter will be null and void should you fail to do so. Among other restrictions, please note that the confidentiality restrictions shall survive indefinitely following separation from service. If the Administrator determines that you have violated any covenant set forth in Annex A, your Points will be automatically reduced to zero effective as of the first date on which any such breach actually occurred (for the avoidance of doubt, as determined in the good faith discretion of the Administrator). If you received any distribution with respect to your Points after such effective date, you are required to repay such amounts in full to the Partnership on demand in accordance with Section 4.5 of the Carry Plan LPA.

Miscellaneous

Your admission to the Partnership as a limited partner will take effect upon your delivery to the Administrator of your signed Participant Execution Page. This Award Letter shall be governed by and construed in accordance with the laws of Bermuda without regard to the principles of conflicts of laws that would cause the laws of another jurisdiction to apply (provided that, as set forth in Annex A, the Restrictive Covenants shall be governed by Delaware law). This Award Letter is binding on and enforceable against the Administrator, the Partnership and you. This Award Letter may be amended only in a written document signed by each party hereto. This Award Letter may be executed by facsimile and in one or more counterparts, all of which shall constitute one and the same instrument.

Section 83(b) Election

As a condition to the effectiveness of your limited partner interest and your award of Points, you are required to make, not later than August 10, 2020, an effective election under Section 83(b) of the Code by filing with the Internal Revenue Service the Section 83(b) election form attached hereto as Annex B, and to contemporaneously submit a copy of such election to the attention of:

Athene Employee Services, LLC
Attn: Kristi Burma, EVP of Human Resources
7700 Mills Civic Parkway
West Des Moines, IA 50266-3862
Email: kburma@athene.com

Definitions

For purposes of this Award Letter, "Administrator" means the Person or Persons to whom the General Partner has delegated its administrative duties, powers and authority vested in it under the Carry Plan LPA.

For purposes of this Award Letter, "Cause" means (i) if at the time of termination you are a party to a written employment agreement with Athene or Apollo Insurance Solutions Group LP, (formerly known as Athene Asset Management LLC) ("ISG") which defines such term, the meaning given in such employment agreement; and (ii) in all other cases, a termination of your service with Athene or ISG based on (A) your commission of a felony or a crime of moral turpitude (under the laws of the United States or any relevant state, or a similar crime or offense under the applicable laws of any relevant foreign jurisdiction); (B) your commission of a willful and material act of dishonesty involving Athene, ISG or any of their respective Affiliates; (C) your material non-curable breach of the your obligations under this Award Letter or any other agreement entered into between you and Athene, ISG or any of their respective Affiliates; (D) your breach of Athene's policies or procedures (or the policies or procedures of ISG or any of Athene's or their respective Affiliates which are applicable) that causes material harm to Athene, ISG, any of their respective Affiliates or any of their business reputations; (E) your willful misconduct or gross negligence which causes material harm to Athene, ISG, any of their respective Affiliates or any of their business reputations; (F) your violation of a fiduciary duty of loyalty to Athene, ISG or any of their respective Affiliates that causes material harm to Athene, ISG, any of their respective Affiliates or any of their business reputations; (G) your knowing attempt to obstruct or knowing failure to cooperate with any investigation authorized by Athene, ISG, any of their respective Affiliates or any governmental or self-regulatory entity; (H) your disqualification or bar by any governmental or self-regulatory authority or the loss of any governmental or self-regulatory license that is reasonably necessary for you to perform your duties to Athene, ISG or any of their respective Affiliates; (I) any directive made by any governmental or self-regulatory authority to terminate your services; or (J) your failure to cure a material breach of your obligations under this Award Letter or any other agreement entered into between you and Athene, ISG or any of their respective Affiliates within thirty (30) days after written notice of such breach. For the avoidance of doubt, the termination of your service with Athene, ISG or any of their respective Affiliates for Cause shall constitute Cause under this Award Letter.

For purposes of this Award Letter, "Disability" means, with respect to each Limited Partner, (i) if such Limited Partner is at the time of termination a party to a written employment agreement with Athene or ISG which defines such term, the meaning given in such employment agreement, and (ii) in all other cases, a physical or mental impairment which, as reasonably determined by the General Partner or its delegate, renders the Limited Partner unable to perform the essential functions of his or her employment with his or her employer, even with reasonable accommodation that does not impose an undue hardship on his or her employer, for more than 90 days in any 180-day period, unless a longer period is required by federal, state or other applicable law, in which case that longer period would apply.

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If the above correctly reflects our understanding and agreement with respect to the foregoing matters, please so confirm by signing the Participant Execution Page accompanying this Award Letter.

Very truly yours,

ADIP (Athene) Carry Plan, L.P.

By: Athene Life Re Ltd., the General Partner

By: ___________
Name:
Title:

ADIP (Athene) Carry Plan, LP

Participant Execution Page

The undersigned acknowledges receipt of the following agreements (together with this Award Letter, the "ADIP (Athene) Carry Plan Admission Agreements"):

(1) the Carry Plan LPA; and

(2) the Secured Reimbursement Agreement among the undersigned as "Limited Partner," ADIP (Athene) Carry Plan, L.P. and Apollo Principal Holdings III, L.P.

This execution page constitutes a counterpart signature page to each of the ADIP (Athene) Carry Plan Admission Agreements.

The undersigned hereby joins, adheres to and agrees to be bound by the Carry Plan LPA as a limited partner. Without limitation to the foregoing, the undersigned hereby confirms each power of attorney granted in the Carry Plan LPA of the Partnership to which it adheres, as if such power of attorney were set forth in full herein.

The undersigned hereby irrevocably makes, constitutes and appoints the General Partner of the Partnership, with full power of substitution, the true and lawful representative and attorney-in-fact, and in the undersigned's name, place and stead, with the power from time to time to make, execute, sign, acknowledge, swear to, verify, deliver, record, file and/or publish the applicable partnership agreement and any statutory filings related thereto for and on the undersigned's behalf.

POINTS:	

The undersigned hereby agrees to adhere to and be bound by each of the applicable ADIP (Athene) Carry Plan Admission Agreements, in each case with effect from the date of the Award Letter.

Name of Participant: ________________________________

Signature of Participant: ________________________________

Annex A

PARTICIPANT RESTRICTIVE COVENANTS

In consideration of the ADIP (Athene) Carry Plan, L.P. Award Letter (the "Award Letter") and your participation in the Carry Plan LPA, you ("Participant") agree to the restrictive covenants set forth below in this Annex A to the Award Letter ("Annex A"). Capitalized terms not defined herein have the meanings set forth in the Award Letter or the Carry Plan LPA.

1. **Confidential Information.**

a. Participant shall not disclose or use at any time any Confidential Information (as defined below) of which Participant is or becomes aware, whether or not such information is developed by Participant, except to the extent that such disclosure or use is directly related to and required by Participant's performance in good faith of duties for Athene, ISG or any of their respective Affiliates. Participant shall take all appropriate steps to safeguard Confidential Information in Participant's possession and to protect it against disclosure, misuse, espionage, loss and theft. Participant shall deliver to Athene upon Participant's Termination of Relationship (as defined below), or at any time Athene may request, all memoranda, notes, plans, records, reports, computer tapes and software and other documents and data (and copies thereof) relating to the Confidential Information or the business of Athene, ISG or any of their respective Affiliates which Participant may then possess or have under his or her control. Notwithstanding the foregoing, Participant may truthfully respond to a lawful and valid subpoena or other legal process, but shall give Athene the earliest possible notice thereof, shall, as much in advance of the return date as possible, make available to Athene and its counsel the documents and other information sought, and shall assist Athene and such counsel in resisting or otherwise responding to such process. As used in this Annex A, the term "Confidential Information" means information that is not generally known to the public and that is used, developed or obtained by Athene, ISG or any of their respective Affiliates in connection with their businesses, including, but not limited to, information, observations and data obtained by Participant while providing services to Athene, ISG, any of their respective Affiliates or any predecessors thereof (including those obtained prior to the date hereof) concerning (i) the business or affairs of Athene, ISG or any of their respective Affiliates (or such predecessors), (ii) products or services, (iii) fees, costs and pricing structures, (iv) designs, (v) analyses, (vi) drawings, photographs and reports, (vii) computer software, including operating systems, applications and program listings, (viii) flow charts, manuals and documentation, (ix) data bases, (x) accounting and business methods, (xi) inventions, devices, new developments, methods and processes, whether patentable or unpatentable and whether or not reduced to practice, (xii) customers and clients and customer or client lists, (xiii) other copyrightable works, (xiv) all production methods, processes, technology and trade secrets, and (xv) all similar and related information in whatever form. Confidential Information will not include any information that has been published (other than a disclosure by Participant in breach of this Annex A) in a form generally available to the public prior to the date Participant proposes to disclose or use such information. Confidential Information will not be deemed to have been published merely because individual portions of the information have been separately published, but only if all material features comprising such information have been published in combination.

b. Participant understands that nothing contained in this Annex A limits Participant's ability to report possible violations of law or regulation to, or file a charge or complaint with, the Securities and Exchange Commission, the Equal Employment Opportunity Commission, the National Labor Relations Board, the Occupational Safety and Health Administration, the Department of Justice, the Congress, any Inspector General, or any other federal, state or local governmental agency or commission ("Government Agencies"). Participant further understands that this Annex A does not limit Participant's ability to communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to Athene. Nothing in this Annex A shall limit Participant's ability under applicable United States federal law to (i) disclose in confidence trade secrets to federal, state, and local government officials, or to an attorney, for the sole purpose of reporting or investigating a suspected violation of law or (ii) disclose trade secrets in a document filed in a lawsuit or other proceeding, but only if the filing is made under seal and protected from public disclosure.

c. As used in this Annex A, the term "Termination of Relationship" means, with respect to Participant, the termination of Participant's services as an employee or director of, or consultant to, Athene and ISG for any reason, including, subject to Section 409A of the Internal Revenue Code of 1986 (as amended), as a result of the subsidiary to which Participant provides services no longer being a subsidiary of Athene because of a sale, divestiture or other disposition of such subsidiary.

2. **Restriction on Competition.**

a. Participant acknowledges that, in the course of his or her service with Athene, ISG and/or their predecessors (the "Protected Companies"), he or she has become familiar, or will become familiar, with the Protected Companies' trade secrets and with other confidential and proprietary information concerning the Protected Companies and that his or her services have been and will be of special, unique and extraordinary value to the Protected Companies. Participant agrees that if Participant were to become employed by, or substantially involved in, the business of a competitor of the Protected Companies during the Restricted Period (as defined below), it would be very difficult for Participant not to rely on or use the Protected Companies' trade secrets and confidential information. Thus, to avoid the inevitable disclosure of the Protected Companies' trade secrets and confidential information, and to protect such trade secrets and confidential information and the Protected Companies' relationships and goodwill with customers, during the Restricted Period, Participant will not directly or indirectly through any other Person engage in, enter the employ of, render any services to, have any ownership interest in, nor participate in the financing, operation, management or control of, any Competing Business (as defined below). For purposes of this Annex A, the phrase "directly or indirectly through any other Person engage in" shall include, without limitation, any direct or indirect ownership or profit participation interest in such enterprise, whether as an owner, stockholder, member, partner, joint venturer or otherwise, and shall include any direct or indirect participation in such enterprise as an employee, consultant, director, officer or licensor of technology. For purposes of this Annex A, "Restricted Area" means anywhere in the United States, Bermuda and elsewhere in the world where the Protected Companies engage in business, including, without limitation, jurisdictions where any of the Protected Companies reasonably anticipate engaging in business on the date of Participant's Termination of Relationship (provided that as of the date of Participant's Termination of Relationship, to the knowledge of Participant, such area has been discussed as a market that the Protected Companies reasonably contemplate engaging in within the twelve (12) month period following the date of Participant's Termination of Relationship). For purposes of this Annex A, "Competing Business" means a Person that at any time during Participant's period of service has competed, or any time during the twelve (12) month period following the date of Participant's Termination of Relationship begins competing with the Protected Companies anywhere in the Restricted Area and in the business of (i) retail annuities, (ii) annuity reinsurance, focusing on contracts reinsuring a quota share of future premiums of various fixed annuity product lines, (iii) reinsuring blocks of existing annuity business, (iv) issuing funding agreements or participating in a funding agreement backed note program, (v) pension risk transfer transactions, (vi) managing investments held by ceding companies pursuant to funds withheld and/or modified coinsurance contracts with their affiliates, (vii) managing investments in the life insurance industry, or (viii) any other significant business conducted by the Protected Companies as of the date of Participant's Termination of Relationship and any significant business the Protected Companies conduct in the twelve (12) month period after Participant's Termination of Relationship (provided that as of the date of Participant's Termination of Relationship, to the knowledge of Participant, such business has been discussed as a business that the Protected Companies reasonably contemplate engaging in within such twelve (12) month period). For purposes of this Annex A, "Restricted Period" means Participant's period of service until his or her Termination of Relationship, and thereafter through and including: (A) twelve (12) months following Participant's Termination of Relationship with respect to any Participant with a title of CEO, President or EVP at the time of the Termination of Relationship; (B) nine (9) months following Participant's Termination of Relationship with respect to any Participant with a title of SVP at the time of the Termination of Relationship and (C) six (6) months following Participant's Termination of Relationship with respect to any Participant with a title of VP at the time of the Termination of Relationship.

b. Nothing herein shall prohibit Participant from (i) being a passive owner of not more than 1% of the outstanding stock of any class of a corporation which is publicly traded, so long as Participant has no active participation in the business of such corporation, or (ii) providing services to a subsidiary, division or affiliate of a Competing Business if such subsidiary, division or affiliate is not itself engaged in a Competing Business and Participant does not provide services to, or have any responsibilities regarding, the Competing Business.

3. **Non-Solicitation of Employees and Consultants**. During Participant's period of service and for a period of twelve (12) months after the date of Participant's Termination of Relationship, Participant shall not directly or indirectly through any other Person (a) induce or attempt to induce any employee or independent contractor of the Protected Companies to leave the employ or service, as applicable, of the Protected Companies, or in any way interfere with the relationship between the Protected Companies, on the one hand, and any employee or independent contractor thereof, on the other hand, or (b) hire any person who was an employee of the Protected Companies, in each case, until six (6) months after such individual's employment relationship with the Protected Companies has been terminated.

4. **Non-Solicitation of Customers**. During Participant's period of service and for a period of twelve (12) months after the date of Participant's Termination of Relationship, Participant shall not directly or indirectly through any other Person influence or attempt to influence customers, vendors, suppliers, licensors, lessors, joint venturers, ceding companies, associates, consultants, agents, or partners of the Protected Companies to divert their business away from the Protected Companies, and Participant will not otherwise interfere with, disrupt or attempt to disrupt the business relationships, contractual or otherwise, between the Protected Companies, on the one hand, and any of their customers, suppliers, vendors, lessors, licensors, joint venturers, associates, officers, employees, consultants, managers, partners, members or investors, on the other hand (collectively, "Protected Company Clients"); provided, however, that this provision shall not apply to any Protected Company Clients for whom Participant does not in the course of Participant's services to Athene or any Protected Company (a) perform services on behalf of Athene or any of the Protected Companies, or (b) have contact or acquire or have access to confidential information or other competitively advantageous information as a result of or in connection with Athene's services to Athene.

5. **Understanding of Covenants**. Participant represents and agrees that he or she (a) is familiar with and carefully considered the foregoing covenants set forth in this Annex A (together, the "Restrictive Covenants"), (b) is fully aware of his or her obligations hereunder, (c) agrees to the reasonableness of the length of time, scope and geographic coverage, as applicable, of the Restrictive Covenants, (d) agrees that the Restrictive Covenants are necessary to protect the Protected Companies' confidential and proprietary information, good will, stable workforce and customer relations, and (e) agrees that the Restrictive Covenants will continue in effect for the applicable periods set forth above in this Annex A regardless of whether Participant is then entitled to receive severance pay or benefits from any of the Protected Companies. Participant understands that the Restrictive Covenants may limit his or her ability to earn a livelihood in a business similar to the business of the Protected Companies, but he or she nevertheless believes that he or she has received and will receive sufficient consideration and other benefits as an employee of or other service provider to Participant and as otherwise provided in the Award Letter to clearly justify such restrictions which, in any event (given his or her education, skills and ability), Participant does not believe would prevent him or her from otherwise earning a living. Participant agrees that the Restrictive Covenants do not confer a benefit upon the Protected Companies disproportionate to the detriment of Participant.

6. **Enforcement**. Participant agrees that Participant's services are unique and that he or she has access to Confidential Information. Accordingly, Participant agrees that a breach by Participant of any of the Restrictive Covenants would cause immediate and irreparable harm to Athene that would be difficult or impossible to measure, and that damages to Athene for any such injury would therefore be an inadequate remedy for any such breach. Therefore, Participant agrees that in the event of any breach or threatened breach of any provision of this Annex A, Athene shall be entitled, in addition to and without limitation upon all other remedies Athene may have under this Annex A, the Award Letter, and/or the Carry Plan LPA, at law or otherwise, to obtain specific performance, injunctive relief and/or other appropriate relief (without posting any bond or deposit) in order to enforce or prevent any violations of the provisions of this Annex A, as the case may be, or require Participant to account for and pay over to Athene all compensation, profits, moneys, accruals, increments or other benefits derived from or received as a result of any transactions constituting a breach of this Annex A, if and when final judgment of a court of competent jurisdiction is so entered against Participant. Participant further agrees that the applicable period of time any Restrictive Covenant is in effect following the date of Participant's Termination of Relationship,

as determined pursuant to the foregoing provisions of this Annex A, shall be extended by the same amount of time that Participant is in breach of any Restrictive Covenant.

7. Additional Terms.

a. *Condition of Partnership and Award Letter*. Participant understands, agrees and acknowledges that Participant's admission to the Partnership as a limited partner , and any benefits conveyed through the Award Letter, are conditioned upon Participant executing (and returning to the Administrator the executed copy of) this Annex A and the Participant Execution Page attached to the Award Letter. Participant further acknowledges and agrees that the Award Letter will be null and void and of no effect if Participant fails to execute and return to Athene an executed copy of this Annex A by the date specified in the Award Letter.

b. *Successors*. This Annex A may not be assigned by Participant. This Annex A shall be binding upon Participant and, except as regards to personal services, his or her heirs, personal representatives, executors and administrators, and shall inure to the benefit of Athene, its successors and assigns. Athene may assign its rights and delegate its obligations hereunder to any Protected Company, or in connection with any sale, transfer or other disposition of all or substantially all of its or their business or assets. Upon such assignment, Athene will be entirely relieved and discharged of all its obligations hereunder and the receiving entity will be deemed to have assumed all of the obligations Athene hereunder. Any such assignment shall not constitute a Termination of Relationship for purposes of this Annex A or commence the running of any of the time periods of the Restrictive Covenants.

c. *Governing Law; Jurisdiction; Venue*. Notwithstanding anything to the contrary in the Award Letter, this Annex A shall be governed by the laws of the State of Delaware and construed in accordance therewith without giving effect to principles of conflicts of laws. Participant and Athene hereby agree that all legal proceedings arising out of or in connection with this Annex A shall be brought exclusively in the state and federal courts in the State of Delaware. Participant and Athene each irrevocably consent to, and agree not to challenge, the exclusive jurisdiction and exclusive venue of the state and federal courts in the State of Delaware.

d. *Waiver of Jury Trial*. THE PARTIES HEREBY IRREVOCABLY WAIVE ALL RIGHTS TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF, BASED ON OR PERTAINING TO THIS ANNEX A.

e. *At Will Employment.* Nothing in this Annex A confers upon Participant the right to be retained in the service of Athene (or any other Protected Company). Any such employment is at-will and may be terminated by either Athene or Participant at any time for any reason, with or without cause or notice.

f. *Severability*. In case any of the provisions of this Annex A are held to be invalid, the same shall be deemed to be severable and shall not defeat the remaining provisions of this Annex A; and the court having power to make such an adjudication is further authorized to modify any provisions hereof which may be deemed unduly restrictive to the end that such restrictions, as modified, shall be reasonable and valid.

g. *Amendment and Waiver*. Except as provided in Section 8(f) above, the provisions of this Annex A may not be amended without the written consent of Athene where such amendment would impair Athene's rights under this Annex A. No course of conduct or failure or delay in enforcing the provisions of this Annex A shall affect the validity, binding effect or enforceability of this Annex A.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

Acknowledgment and Acceptance of Annex A:

By signing below and returning this Annex A to the Administrator with the Award Letter, I hereby acknowledge receipt of this Annex A, voluntarily accept the benefits provided to me through the Award Letter and the Carry Plan LPA, confirm that I have read this Annex A, and agree to be bound by the terms and conditions of Annex A.

____
Participant Name:

____
Acceptance Date:

Annex B

**ELECTION TO INCLUDE VALUE OF POINTS
IN GROSS INCOME
IN YEAR OF TRANSFER UNDER CODE SECTION 83(b)**

The undersigned hereby elects pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended (the "Code"), to include the value of the property described below in gross income in the year of transfer and supplies the following information in accordance with the regulations promulgated thereunder:

1. The name, address and social security number of the taxpayer:

[Name]
[Address]
[Social Security Number]

2. A description of the property with respect to which the election is being made: A limited partnership interest in ADIP (Athene) Carry Plan, L.P., a Bermuda exempted limited partnership (the "Partnership").

3. The date on which the property was transferred: [______ __], 20[__]. The taxable year for which such election is made: calendar year 20__.

4. The restrictions to which the property is subject: The property is subject to time-based vesting conditions, pursuant to which the taxpayer will forfeit a portion of the property upon a termination of employment determined based on when such termination occurs.

5. The fair market value at the time of transfer (determined without regard to any lapse restriction) of the property with respect to which the election is being made: $[___] per Point.

6. The amount paid for such property: $0 per Point.

A copy of this election has been furnished to:

Athene Employee Services, LLC
Attn: Kristi Burma, EVP of Human Resources
7700 Mills Civic Parkway
West Des Moines, IA 50266-3862
Email: kburma@athene.com,

for whom the taxpayer rendered the services underlying the transfer of property, pursuant to Treasury Regulations §1.83 2(d).

____
Date

____
[Name]

AMENDMENT NO. 1 TO
COINSURANCE AGREEMENT

This AMENDMENT NO. 1 TO COINSURANCE AGREEMENT (this "Amendment"), is made and entered into as of September 30, 2020, by and between Jackson National Life Insurance Company, a Michigan life insurance company (the "Cedant"), and Athene Life Re Ltd., a Class E insurer under the Bermuda Insurance Act 1978 (the "Reinsurer").

PRELIMINARY STATEMENTS

A. The parties entered into that certain Coinsurance Agreement, dated as of June 18, 2020 (the "Coinsurance Agreement"); and

B. In connection with the Cedant's, the Reinsurer's and the Investment Manager's discussions concerning the preparation of Required Hedge Documentation (as defined below) with IMA Hedge Counterparties (as defined below) that are subject to the approval of the Company in accordance with the Hedge Guidelines (as defined below), the Cedant and the Reinsurer desire to amend the Coinsurance Agreement pursuant to Section 18.07 of the Coinsurance Agreement as set forth in this Amendment.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties to this Amendment agree as follows:

ARTICLE I
AMENDMENTS

Section 1.01 Amendment to Section 1.01. Section 1.01 of the Coinsurance Agreement is hereby amended by adding the following defined terms in their alphabetical order:

"Excess Margin Collateral" means (i) the amount of additional collateral, if any, required to be posted by the Funds Withheld Account under the Required Hedge Documentation in favor of the applicable IMA Hedge Counterparty as a result of the use of corporate bonds or any other assets (other than cash) to satisfy all margin collateral requirements for Hedges in excess of the collateral that would otherwise be required to be posted by the Funds Withheld Account in favor of the applicable IMA Hedge Counterparty if only cash collateral was utilized to satisfy such IMA Hedge Counterparty's margin collateral requirements, plus (ii) without duplication of the amount under clause (i), the amount posted by the Funds Withheld Account under the Required Hedge Documentation in favor of the applicable IMA Hedge Counterparty to satisfy any initial margin required for the Hedges under such Required Hedge Documentation.

"Hedges" shall have the meaning ascribed thereto in the Investment Management Agreement.

"Hedge Guidelines" shall have the meaning ascribed thereto in the Investment Management Agreement.

"IMA Hedge Counterparties" shall have the meaning ascribed thereto in the Investment Management Agreement.

"Required Hedge Documentation" shall have the meaning ascribed thereto in the Investment Management Agreement.

Section 1.02 Amendment to the definition of "Required Trust Balance". The definition of "Required Trust Balance" set forth in Section 1.01 of the Coinsurance Agreement is hereby replaced in its entirety by the following:

"Required Trust Balance" means, as of any date of determination, an amount equal to (a) (i) the Required Trust Percentage *multiplied by* (ii) (A) the Reserves as of such date of determination (as set forth in the report delivered by the Cedant to the Reinsurer pursuant to Section 5.02(b)), *plus* (B) (x) prior to the occurrence of a Triggering Event, the Ceded IMR (as set forth in the report delivered by the Cedant to the Reinsurer pursuant to

Section 5.02(b)) and (y) during the continuance of a Triggering Event, the Triggering Event IMR (as set forth in the report delivered by the Cedant to the Reinsurer pursuant to Section 5.02(b)), *minus* (b) the Maximum Additional Letter of Credit Amount, *minus* (c) the aggregate purchase cost as of such date of determination of any in-force Reinsurer Hedges (as set forth in the report delivered by the Reinsurer to the Cedant pursuant to Section 5.01(c)), *minus* (d) an amount equal to the excess of (i) the aggregate face amount of any Letters of Credit as of such date of determination *over* (ii) the Additional Letter of Credit Amount as of such date of determination, *minus* (e) the Funds Withheld Balance, *minus* (f) the aggregate remaining unamortized balance of all Excess Loss Payments, if any, as of such date of determination, *plus* (g) the Excess Margin Collateral as of such date of determination (as set forth in the report delivered by the Cedant to the Reinsurer pursuant to Section 5.02(b)).

Section 1.03 Amendment to Schedule 5.02(b)(ii). Schedule 5.02(b)(ii) to the Coinsurance Agreement (the Required Balance Statement) is hereby replaced in its entirety by Schedule 5.02(b)(ii) attached hereto.

Section 1.04 Amendment to Exhibits C-1 and C-2. Exhibit C-1 (Funds Withheld Investment Guidelines (Pre-Triggering Event)) and Exhibit C-2 Funds Withheld Investment Guidelines (Post-Triggering Event) to the Coinsurance Agreement are hereby replaced in their entirety by Exhibit C-1 and Exhibit C-2, respectively, attached hereto.

ARTICLE II
GENERAL PROVISIONS

Section 2.01 Defined Terms. Capitalized terms used in this Amendment that are not defined herein shall have the respective meanings ascribed to them in the Coinsurance Agreement.

Section 2.02 General Provisions. The general provisions set forth in Article XVIII of the Coinsurance Agreement are incorporated herein by reference to the extent applicable, and shall apply to this Amendment *mutatis mutandis*.

Section 2.03 Ratification. Except as amended hereby, the Coinsurance Agreement shall continue in full force and effect. The Cedant and the Reinsurer hereby expressly ratify and confirm the Coinsurance Agreement as modified hereby.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, the parties hereby execute this Amendment as of the date first set forth above.

JACKSON NATIONAL LIFE INSURANCE COMPANY
By: /s/ Kenneth H. Stewart
Name: Kenneth H. Stewart
Title: Executive VP, Corporate Development

ATHENE LIFE RE LTD.
By: **/s/ Adam Laing**
Name: Adam Laing
Title: Chief Financial Officer

Schedule 5.02(b)(ii)

Form of Required Balance Statement

This schedule has been omitted pursuant to Regulation S-K Item 601(a)(5).

Exhibit C-1

Pre-Triggering Event

Investment Guidelines

This exhibit has been omitted pursuant to Regulation S-K Item 601(a)(5).

Exhibit C-2

Post-Triggering Event

Investment Guidelines

This exhibit has been omitted pursuant to Regulation S-K Item 601(a)(5).

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 Quarterly Report on Form 10-Q 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: November 3, 2020

/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 Quarterly Report on Form 10-Q 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: November 3, 2020

/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 Quarterly Report on Form 10-Q for the quarter ended September 30, 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: November 3, 2020	/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 Quarterly Report on Form 10-Q for the quarter ended September 30, 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: November 3, 2020	/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.