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, 2019
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

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 ☑

The number of shares of each class of our common stock outstanding is set forth in the table below, as of September 30, 2019:

Class A common shares	150,165,459	Class M-2 common shares	841,011
Class B common shares	25,433,465	Class M-3 common shares	1,000,000
Class M-1 common shares	3,282,890	Class M-4 common shares	3,984,107

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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 and cash flows may differ materially from those 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, 2018 (2018 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;
- 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;
- the impact of changes to the creditworthiness of our reinsurance and derivative counterparties;
- 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;
- 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 approval of insurance regulators and other regulatory authorities as required for the operation of our insurance subsidiaries;
- 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 (U.S.) subsidiaries becoming subject to U.S. federal income taxation;
- adverse changes in U.S. tax law;
- our being subject to U.S. withholding tax under the Foreign Account Tax Compliance Act (FATCA);
- changes in our ability to pay dividends or make distributions;
- our failure to obtain approval of the share exchange transaction with Apollo by our shareholders or regulators;
- our failure to recognize the benefits expected to be derived from the share exchange transaction with Apollo;
- unexpected difficulties or expenditures related to the share exchange transaction with Apollo;
- disruption of our current plans, operations and relationships with policyholders, reinsurance counterparties or other business partners caused by the announcement and pendency of the share exchange transaction with Apollo;

- the commencement of legal proceedings, including those that may be instituted against us, our board of directors, our executive officers and others following the announcement of the share exchange transaction with Apollo;
- the failure to close the ACRA capital raise or the failure to achieve the economic benefits expected to be derived therefrom; 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 2018 Annual Report and those discussed elsewhere in this report and in our 2018 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. The forward-looking statements included in this report are made only as of the date that this report was filed with the U.S. 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
AAM	Athene Asset Management LLC, now known as Apollo Insurance Solutions Group LLC
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
AmeriHome	AmeriHome Mortgage Company, LLC
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 and (5) any affiliate of any of the foregoing (except that Athene, Athene employees, and ISG employees are not members of the Apollo Group)
Athene USA	Athene USA Corporation
Athora	Athora Holding Ltd., formerly known as AGER Bermuda 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 LLC, formerly known as Athene Asset Management LLC
LIMRA	Life Insurance and Market Research Association
MidCap	MidCap FinCo Designated Activity Company
NAIC	National Association of Insurance Commissioners
NYSDFS	New York State Department of Financial Services
RLI	ReliaStar Life Insurance Company
Treasury	United States Department of the Treasury
Voya	Voya Financial, Inc.
VIAC	Voya Insurance and Annuity Company
Venerable	Venerable Holdings, Inc., together with its subsidiaries

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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 of ALRe, when applying the NAIC risk-based capital factors.
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 ALRe calculated under U.S. statutory accounting principles, including that for policyholder reserve liabilities which are subjected to U.S. cash flow testing requirements, but excluding certain items that do not exist under our applicable Bermuda requirements, such as interest maintenance reserves
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 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 and multi-year guaranteed 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
IMA	Investment management agreement
IMO	Independent marketing organization
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). 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)
Investment margin	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

Term or Acronym	Definition
MVA	Market value adjustment
MYGA	Multi-year guaranteed annuity
Net investment earned rate	Income from our invested assets divided by the average 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
Other liability costs	Other liability costs include DAC, DSI and VOBA amortization, rider reserves, institutional costs, the cost of liabilities on products other than deferred annuities including 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
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. 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. 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
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
U.S. RBC Ratio	The CAL RBC ratio for AADE, our parent U.S. 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, 2019	December 31, 2018
Assets		
Investments		
Available-for-sale securities, at fair value (amortized cost: 2019 – $66,866 and 2018 – $60,025)	$ 70,903	$ 59,265
Trading securities, at fair value	2,411	1,949
Equity securities, at fair value	359	216
Mortgage loans, net of allowances (portion at fair value: 2019 – $28 and 2018 – $32)	13,465	10,340
Investment funds (portion at fair value: 2019 – $156 and 2018 – $182)	712	703
Policy loans	466	488
Funds withheld at interest (portion at fair value: 2019 – $804 and 2018 – $57)	15,280	15,023
Derivative assets	2,386	1,043
Short-term investments, at fair value	571	191
Other investments (portion at fair value: 2019 – $64 and 2018 – $52)	130	122
Total investments	106,683	89,340
Cash and cash equivalents	3,833	2,911
Restricted cash	199	492
Investments in related parties		
Available-for-sale securities, at fair value (amortized cost: 2019 – $2,347 and 2018 – $1,462)	2,368	1,437
Trading securities, at fair value	306	249
Equity securities, at fair value	381	120
Mortgage loans	653	291
Investment funds (portion at fair value: 2019 – $249 and 2018 – $201)	2,763	2,232
Funds withheld at interest (portion at fair value: 2019 – $655 and 2018 – $(110))	13,560	13,577
Other investments	387	386
Accrued investment income (related party: 2019 – $28 and 2018 – $25)	781	682
Reinsurance recoverable (related party: 2019 – $320 and 2018 – $344; portion at fair value: 2019 – $1,954 and 2018 – $1,676)	5,697	5,534
Deferred acquisition costs, deferred sales inducements and value of business acquired	4,960	5,907
Other assets (related party: 2019 – $2 and 2018 – $357)	970	1,635
Assets of consolidated variable interest entities		
Investments		
Trading securities, at fair value (related party: 2019 – $1 and 2018 – $35)	19	35
Equity securities, at fair value – related party	6	50
Investment funds (related party: 2019 – $599 and 2018 – $583; portion at fair value: 2019 – $569 and 2018 – $567)	619	624
Cash and cash equivalents	3	2
Other assets	14	1
Total assets	$ 144,202	$ 125,505

(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, 2019	December 31, 2018
Liabilities and Equity		
Liabilities		
Interest sensitive contract liabilities (related party: 2019 – $15,693 and 2018 – $16,850; portion at fair value: 2019 – $11,415 and 2018 – $8,901)	$ 101,666	$ 96,610
Future policy benefits (related party: 2019 – $1,474 and 2018 – $1,259; portion at fair value: 2019 – $2,369 and 2018 – $2,173)	22,909	16,704
Other policy claims and benefits (related party: 2019 – $9 and 2018 – $10)	129	142
Dividends payable to policyholders	115	118
Long-term debt	992	991
Derivative liabilities	46	85
Payables for collateral on derivatives	2,323	969
Funds withheld liability (related party: 2019 – $347 and 2018 – $337; portion at fair value: 2019 – $35 and 2018 – $(1))	768	721
Other liabilities (related party: 2019 – $85 and 2018 – $59)	1,708	888
Liabilities of consolidated variable interest entities	1	1
Total liabilities	130,657	117,229
Commitments and Contingencies (Note 10)		
Equity		
Preferred stock		
Series A – par value $1 per share; $863 aggregate liquidation preference; authorized, issued and outstanding: 2019 and 2018 – 0.0 shares	—	—
Series B – par value $1 per share; $345 aggregate liquidation preference; authorized, issued and outstanding: 2019 and 2018 – 0.0 shares	—	—
Common stock		
Class A – par value $0.001 per share; authorized: 2019 and 2018 – 425.0 shares; issued and outstanding: 2019 – 150.1 and 2018 – 162.4 shares	—	—
Class B – par value $0.001 per share; convertible to Class A; authorized: 2019 and 2018 – 325.0 shares; issued and outstanding: 2019 – 25.4 and 2018 – 25.4 shares	—	—
Class M-1 – par value $0.001 per share; convertible to Class A; authorized: 2019 and 2018 – 7.1 shares; issued and outstanding: 2019 – 3.3 and 2018 – 3.4 shares	—	—
Class M-2 – par value $0.001 per share; convertible to Class A; authorized: 2019 and 2018 – 5.0 shares; issued and outstanding: 2019 – 0.8 and 2018 – 0.8 shares	—	—
Class M-3 – par value $0.001 per share; convertible to Class A; authorized: 2019 and 2018 – 7.5 shares; issued and outstanding: 2019 – 1.0 and 2018 – 1.0 shares	—	—
Class M-4 – par value $0.001 per share; convertible to Class A; authorized: 2019 and 2018 – 7.5 shares; issued and outstanding: 2019 – 4.0 and 2018 – 4.1 shares	—	—
Additional paid-in capital	4,435	3,462
Retained earnings	6,668	5,286
Accumulated other comprehensive income (loss) (related party: 2019 – $22 and 2018 – $(25))	2,442	(472)
Total shareholders' equity	13,545	8,276
Total liabilities and equity	$ 144,202	$ 125,505

(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, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Revenues				
Premiums (related party of $51 and $41 for the three months ended and $173 and $623 for the nine months ended September 30, 2019 and 2018, respectively)	$ 2,605	$ 526	$ 5,304	$ 1,535
Product charges (related party of $14 and $14 for the three months ended and $42 and $19 for the nine months ended September 30, 2019 and 2018, respectively)	135	119	392	321
Net investment income (related party investment income of $155 and $193 for the three months ended and $472 and $369 for the nine months ended September 30, 2019 and 2018, respectively, and related party investment expense of $127 and $88 for the three months ended and $313 and $257 for the nine months ended September 30, 2019 and 2018, respectively)	1,070	1,070	3,297	2,883
Investment related gains (losses) (related party of $272 and $30 for the three months ended and $1,018 and $(12) for the nine months ended September 30, 2019 and 2018, respectively)	688	816	3,776	578
Other-than-temporary impairment investment losses				
Other-than-temporary impairment losses	(34)	(7)	(43)	(10)
Other-than-temporary impairment losses reclassified to (from) other comprehensive income	9	4	11	4
Net other-than-temporary impairment losses	(25)	(3)	(32)	(6)
Other revenues	6	10	27	22
Revenues of consolidated variable interest entities				
Net investment income (related party of $20 and $15 for the three months ended and $56 and $39 for the nine months ended September 30, 2019 and 2018, respectively)	20	15	57	39
Investment related gains (losses) (related party of $1 and $23 for the three months ended and $7 and $17 for the nine months ended September 30, 2019 and 2018, respectively)	2	23	10	17
Total revenues	4,501	2,576	12,831	5,389
Benefits and expenses				
Interest sensitive contract benefits (related party of $97 and $129 for the three months ended and $394 and $145 for the nine months ended September 30, 2019 and 2018, respectively)	801	742	3,411	1,115
Amortization of deferred sales inducements	20	23	38	66
Future policy and other policy benefits (related party of $70 and $58 for the three months ended and $267 and $638 for the nine months ended September 30, 2019 and 2018, respectively)	2,872	928	6,224	2,193
Amortization of deferred acquisition costs and value of business acquired	323	36	815	207
Dividends to policyholders	12	10	30	32
Policy and other operating expenses (related party of $10 and $22 for the three months ended and $30 and $27 for the nine months ended September 30, 2019 and 2018, respectively)	194	158	544	454
Total benefits and expenses	4,222	1,897	11,062	4,067
Income before income taxes	279	679	1,769	1,322
Income tax expense (benefit)	(14)	56	48	165
Net income	293	623	1,721	1,157
Less: Preferred stock dividends	17	—	17	—
Net income available to Athene Holding Ltd. common shareholders	$ 276	$ 623	$ 1,704	$ 1,157
Earnings per share				
Basic – Classes A, B, M-1, M-2, M-3 and M-4	$ 1.50	$ 3.16	$ 8.97	$ 5.86
Diluted – Class A	1.50	3.15	8.95	5.85
Diluted – Class B	1.50	3.16	8.97	5.86
Diluted – Class M-1	1.50	3.16	8.97	5.86
Diluted – Class M-2	1.50	3.16	8.97	5.83
Diluted – Class M-3	1.50	3.16	8.97	5.83
Diluted – Class M-4	1.29	2.42	7.77	4.36

See accompanying notes to the unaudited condensed consolidated financial statements

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Net income	$ 293	$ 623	$ 1,721	$ 1,157
Other comprehensive income (loss), before tax				
Unrealized investment gains (losses) on available-for-sale securities	744	(140)	3,484	(1,733)
Noncredit component of other-than-temporary impairment losses on available-for-sale securities	(9)	(4)	(11)	(4)
Unrealized gains on hedging instruments	124	7	171	52
Pension adjustments	—	—	(1)	3
Foreign currency translation adjustments	(1)	—	(1)	(10)
Other comprehensive income (loss), before tax	858	(137)	3,642	(1,692)
Income tax expense (benefit) related to other comprehensive income (loss)	176	(23)	728	(318)
Other comprehensive income (loss)	682	(114)	2,914	(1,374)
Comprehensive income (loss)	$ 975	$ 509	$ 4,635	$ (217)

See accompanying notes to the unaudited condensed consolidated financial statements

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 shareholders' equity
Balance at June 30, 2018	$ —	$ —	$ 3,492	$ 4,823	$ 147	$ 8,462
Net income	—	—	—	623	—	623
Other comprehensive loss	—	—	—	—	(114)	(114)
Issuance of common shares, net of expenses	—	—	1	—	—	1
Stock-based compensation	—	—	6	—	—	6
Balance at September 30, 2018	$ —	$ —	$ 3,499	$ 5,446	$ 33	$ 8,978
Balance at June 30, 2019	$ —	$ —	$ 4,144	$ 6,461	$ 1,760	$ 12,365
Net income	—	—	—	293	—	293
Other comprehensive income	—	—	—	—	682	682
Issuance of preferred shares, net of expenses	—	—	333	—	—	333
Issuance of common shares, net of expenses	—	—	2	—	—	2
Stock-based compensation	—	—	8	—	—	8
Retirement or repurchase of shares	—	—	(52)	(69)	—	(121)
Preferred stock dividends	—	—	—	(17)	—	(17)
Balance at September 30, 2019	$ —	$ —	$ 4,435	$ 6,668	$ 2,442	$ 13,545

	Nine months ended					
(In millions)	Preferred stock	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive income (loss)	Total shareholders' equity
Balance at December 31, 2017	$ —	$ —	$ 3,472	$ 4,255	$ 1,449	$ 9,176
Adoption of accounting standards	—	—	—	39	(42)	(3)
Net income	—	—	—	1,157	—	1,157
Other comprehensive loss	—	—	—	—	(1,374)	(1,374)
Issuance of common shares, net of expenses	—	—	2	—	—	2
Stock-based compensation	—	—	25	—	—	25
Retirement or repurchase of shares	—	—	—	(5)	—	(5)
Balance at September 30, 2018	$ —	$ —	$ 3,499	$ 5,446	$ 33	$ 8,978
Balance at December 31, 2018	$ —	$ —	$ 3,462	$ 5,286	$ (472)	$ 8,276
Net income	—	—	—	1,721	—	1,721
Other comprehensive income	—	—	—	—	2,914	2,914
Issuance of preferred shares, net of expenses	—	—	1,172	—	—	1,172
Issuance of common shares, net of expenses	—	—	4	—	—	4
Stock-based compensation	—	—	23	—	—	23
Retirement or repurchase of shares	—	—	(226)	(322)		(548)
Preferred stock dividends	—	—	—	(17)	—	(17)
Balance at September 30, 2019	$ —	$ —	$ 4,435	$ 6,668	$ 2,442	$ 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)	2019	2018
Cash flows from operating activities		
Net income	$ 1,721	$ 1,157
Adjustments to reconcile net income to net cash provided by operating activities:		
Amortization of deferred acquisition costs and value of business acquired	815	207
Amortization of deferred sales inducements	38	66
Accretion of net investment premiums, discounts and other	(60)	(143)
Payment at inception of reinsurance agreements, net (related party: 2019 – $0 and 2018 – $(407))	—	(394)
Net investment (income) loss (related party: 2019 – $(95) and 2018 – $(77))	(94)	(61)
Net recognized (gains) losses on investments and derivatives (related party: 2019 – $(19) and 2018 – $(5))	(1,672)	(559)
Policy acquisition costs deferred	(521)	(495)
Changes in operating assets and liabilities:		
Accrued investment income (related party: 2019 – $(3) and 2018 – $(13))	(99)	(70)
Interest sensitive contract liabilities (related party: 2019 – $338 and 2018 – $126)	3,086	591
Future policy benefits, other policy claims and benefits, dividends payable to policyholders and reinsurance recoverable (related party: 2019 – $223 and 2018 – $54)	973	997
Funds withheld assets and liabilities (related party: 2019 – $(1,261) and 2018 – $(114))	(2,488)	(232)
Other assets and liabilities	299	97
Consolidated variable interest entities related:		
Net recognized (gains) losses on investments and derivatives (related party: 2019 – $(7) and 2018 – $(18))	(10)	(18)
Other operating activities, net	(3)	—
Net cash provided by operating activities	1,985	1,143
Cash flows from investing activities		
Sales, maturities and repayments of:		
Available-for-sale securities (related party: 2019 – $101 and 2018 – $120)	8,344	9,003
Trading securities (related party: 2019 – $32 and 2018 – $30)	162	320
Equity securities	69	25
Mortgage loans (related party: 2019 – $4 and 2018 – $0)	1,513	1,048
Investment funds (related party: 2019 – $196 and 2018 – $197)	301	330
Derivative instruments and other invested assets	1,008	1,548
Short-term investments (related party: 2019 – $0 and 2018 – $162)	274	430
Purchases of:		
Available-for-sale securities (related party: 2019 – $(1,065) and 2018 – $(784))	(11,413)	(12,029)
Trading securities (related party: 2019 – $(6) and 2018 – $0)	(425)	(17)
Equity securities (related party: 2019 – $(243) and 2018 – $0)	(421)	(163)
Mortgage loans (related party: 2019 – $(366) and 2018 – $(389))	(5,013)	(4,079)
Investment funds (related party: 2019 – $(621) and 2018 – $(894))	(738)	(1,073)
Derivative instruments and other invested assets (related party: 2019 – $0 and 2018 – $(150))	(853)	(973)
Short-term investments (related party: 2019 – $0 and 2018 – $(121))	(653)	(421)
Consolidated variable interest entities related:		
Sales, maturities and repayments of investments (related party: 2019 – $84 and 2018 – $103)	92	114
Purchases of investments (related party: 2019 – $(16) and 2018 – $(14))	(27)	(66)
Deconsolidation of Athora Holding Ltd.	—	(296)
Other investing activities, net	521	245
Net cash used in investing activities	(7,259)	(6,054)

(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)	2019	2018
Cash flows from financing activities		
Proceeds from short-term debt	$ —	$ 183
Repayment of short-term debt	—	(183)
Proceeds from long-term debt	—	998
Deposits on investment-type policies and contracts (related party: 2019 – $130 and 2018 – $140)	8,879	7,011
Withdrawals on investment-type policies and contracts (related party: 2019 – $(332) and 2018 – $(143))	(4,846)	(4,254)
Payments (for) from coinsurance agreements on investment-type contracts, net	(39)	9
Net change in cash collateral posted for derivative transactions	1,354	(8)
Issuance of preferred stock, net of expenses	1,172	—
Preferred stock dividends	(17)	—
Repurchase of common stock	(548)	(5)
Other financing activities, net	(51)	106
Net cash provided by financing activities	5,904	3,857
Net increase (decrease) in cash and cash equivalents	630	(1,054)
Cash and cash equivalents at beginning of year[1]	3,405	4,997
Cash and cash equivalents at end of period[1]	$ 4,035	$ 3,943
Supplementary information		
Non-cash transactions		
Deposits on investment-type policies and contracts through reinsurance agreements (related party: 2019 – $159 and 2018 – $17,574)	$ 619	$ 18,508
Withdrawals on investment-type policies and contracts through reinsurance agreements (related party: 2019 – $1,351 and 2018 – $604)	2,764	899
Investments received from settlements on reinsurance agreements	56	36
Investments received from settlements on related party reinsurance agreements	97	—
Investments received from pension risk transfer premiums	4,506	92
Investments exchanged for related party investments	—	95
Investment in Athora Holding Ltd. received upon deconsolidation	—	108

[1] *Includes cash and cash equivalents, restricted cash, and cash and cash equivalents of consolidated variable interest entities.*

(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 all United States (U.S.) states and the District of Columbia.

We conduct business primarily through the following consolidated subsidiaries:

- Our non-U.S. 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 USA Corporation, an Iowa corporation (together with its subsidiaries, Athene USA).

In addition, we consolidate certain variable interest entities (VIEs), for which we determined we are the primary beneficiary.

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 significant intercompany accounts and transactions have been eliminated. Interim operating results are not necessarily indicative of the results expected for the entire year.

The condensed consolidated balance sheet as of December 31, 2018 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, 2018. The preparation of financial statements requires the use of management estimates. Actual results may differ from estimates used in preparing the condensed consolidated financial statements.

Adopted Accounting Pronouncements

Leases (ASU 2019-01, ASU 2018-20, ASU 2018-11, ASU 2018-10, ASU 2018-01, ASU 2017-13 and ASU 2016-02)
These updates increase transparency and comparability for lease transactions. ASU 2016-02 requires a lessee to recognize a right-of-use asset and lease liability on the balance sheet for all leases with an original term longer than twelve months and disclose key information about leasing arrangements. Lessor accounting is largely unchanged.

ASU 2016-02 requires the adoption on a modified retrospective basis. However, ASU 2018-11 provides the option to recognize the cumulative effect as an adjustment to the opening balance of retained earnings in the year of adoption, while continuing to present all prior periods under the previous lease guidance. These updates also provide optional practical expedients in transition.

We adopted these updates effective January 1, 2019 by recording a lease liability and right-of-use asset related to office space, copiers, reserved areas and equipment at data centers, and other agreements. We will continue to present all prior periods under the previous lease guidance. We elected the "package of practical expedients," which permits us to maintain our prior conclusions about lease identification, classification and initial direct costs. We also elected the short-term lease exception, which allows us to exclude contracts with a lease term of 12 months or less, including any reasonably certain renewal options, from consideration under the new guidance. This update did not have a material effect on our consolidated financial statements.

Derivatives and Hedging (ASU 2018-16)
The amendments in this update allow entities to use the Overnight Index Swap rate based on the Secured Overnight Financing Rate as a U.S. benchmark interest rate for hedge accounting purposes, in addition to the previously acceptable rates. We adopted this update prospectively for qualifying new or redesignated hedging relationships entered into on or after January 1, 2019. This update did not have an effect on our consolidated financial statements.

Stock Compensation – Nonemployee Share-Based Payments (ASU 2018-07)
The amendments in this update simplify the accounting for share-based payments to nonemployees by aligning with the accounting for share-based payments to employees, with certain exceptions. We adopted this update on a modified retrospective basis effective January 1, 2019. This update did not have a material effect on our consolidated financial statements.

Recently Issued Accounting Pronouncements

Financial Instruments – Credit Losses (ASU 2019-05, ASU 2019-04, ASU 2018-19 and ASU 2016-13)
This update will limit the number of credit impairment models used for different assets, and will result in accelerated credit loss recognition on assets held at amortized cost, which includes our commercial and residential mortgage loans. The identification of purchased credit-deteriorated financial assets will include 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 will be recognized immediately in the income statement. Available-for-sale (AFS) securities are not in scope of the new credit loss model, but will undergo targeted improvements to the current reporting model including the establishment of a valuation allowance for credit losses versus the current direct write down approach. We will be required to adopt this update effective January 1, 2020, and we expect to make a cumulative-effect adjustment to the opening balance of retained earnings as of that date.

Although we continue to evaluate the impact of this guidance on our consolidated financial statements, internal controls, and policies and procedures, we have run multiple economic scenarios through our credit loss models for our current commercial mortgage loan portfolio. These initial model runs indicate that our retained earnings will decrease by approximately $140 million to $240 million on a pre-tax basis, or 1.4% to 2.5% of the commercial mortgage loan portfolio, upon implementation.

The ultimate impact of adoption is dependent upon changes in the outstanding balance and composition of our investment portfolio, macroeconomic conditions and reasonable and supportable forecasts of those macroeconomic conditions used within our credit loss models. Further validation of our models could also impact our balance sheet adjustment upon implementation.

In the months ahead, we will continue to validate and test our credit loss models, further assess other assets within the scope of the new standard for which the impact to retained earnings is expected to be less significant, finalize new policies and procedures, and further establish the necessary controls for implementation.

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. The update is effective January 1, 2020. Early adoption is permitted. We are currently evaluating the impact of this guidance 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 will be required to adopt this update retrospectively with a cumulative-effect adjustment to retained earnings at the beginning of the earliest period presented. The update is effective January 1, 2020. Early adoption is permitted. We are currently evaluating the impact of this guidance 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 will be required to adopt this update on January 1, 2020, and we can elect to adopt this update either prospectively or retrospectively. Early adoption is permitted. We are currently evaluating the impact of this guidance 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. We will be required to adopt this update on January 1, 2020, and depending on the specific amendment will be required to adopt prospectively or retrospectively. We early adopted the removal and modification of certain disclosures as permitted. We do not expect the adoption of this update will have a material effect on our consolidated financial statements.

Insurance – Targeted Improvements to the Accounting for Long-Duration Contracts (ASU 2018-12)
This update amends 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 utilized 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 the Company's annuity products. The change in fair value of the market risk benefits is to be recognized in net income, excluding the portion attributable to changes in instrument-specific credit risk which is recognized in other comprehensive income.
- The update also introduces disclosure requirements around the liability for future policy benefits, policyholder account balances, market risk benefits, separate account liabilities, and deferred acquisition costs. This includes disaggregated rollforwards of these balances and information about significant inputs, judgments, assumptions and methods used in their measurement.

We will be required to adopt this update effective January 1, 2021. 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.

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 will be 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 will continue to have the option to perform a qualitative assessment to determine if a quantitative impairment test is necessary. We will be required to adopt this update prospectively effective January 1, 2020. Early adoption is permitted. We do not expect the adoption of this update will have a material effect 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), residential mortgage-backed securities (RMBS) and redeemable preferred stock. Our AFS investment portfolio includes related party investments that are primarily a result of investments over which Apollo Global Management, Inc. (AGM and, together with its subsidiaries, 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, 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:

	September 30, 2019				
(In millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	OTTI in AOCI
AFS securities					
U.S. government and agencies	$ 36	$ 1	$ —	$ 37	$ —
U.S. state, municipal and political subdivisions	1,233	260	(1)	1,492	—
Foreign governments	301	27	—	328	—
Corporate	43,948	3,415	(318)	47,045	9
CLO	7,044	15	(188)	6,871	—
ABS	4,967	164	(20)	5,111	2
CMBS	2,639	130	(4)	2,765	7
RMBS	6,698	565	(9)	7,254	12
Total AFS securities	66,866	4,577	(540)	70,903	30
AFS securities – related party					
Corporate	23	1	—	24	—
CLO	834	1	(17)	818	—
ABS	1,490	36	—	1,526	—
Total AFS securities – related party	2,347	38	(17)	2,368	—
Total AFS securities including related party	$ 69,213	$ 4,615	$ (557)	$ 73,271	$ 30

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	December 31, 2018				
(In millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	OTTI in AOCI
AFS securities					
U.S. government and agencies	$ 57	$ —	$ —	$ 57	$ —
U.S. state, municipal and political subdivisions	1,183	117	(7)	1,293	—
Foreign governments	162	2	(3)	161	—
Corporate	38,018	394	(1,315)	37,097	1
CLO	5,658	2	(299)	5,361	—
ABS	4,915	53	(48)	4,920	—
CMBS	2,390	27	(60)	2,357	7
RMBS	7,642	413	(36)	8,019	11
Total AFS securities	60,025	1,008	(1,768)	59,265	19
AFS securities – related party					
CLO	587	—	(25)	562	—
ABS	875	4	(4)	875	—
Total AFS securities – related party	1,462	4	(29)	1,437	—
Total AFS securities including related party	$ 61,487	$ 1,012	$ (1,797)	$ 60,702	$ 19

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

	September 30, 2019	
(In millions)	Amortized Cost	Fair Value
AFS securities		
Due in one year or less	$ 1,117	$ 1,122
Due after one year through five years	9,246	9,540
Due after five years through ten years	11,319	11,907
Due after ten years	23,836	26,333
CLO, ABS, CMBS and RMBS	21,348	22,001
Total AFS securities	66,866	70,903
AFS securities – related party		
Due in one year or less	5	5
Due after one year through five years	18	19
CLO and ABS	2,324	2,344
Total AFS securities – related party	2,347	2,368
Total AFS securities including related party	$ 69,213	$ 73,271

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, aggregated by class of security and length of time the fair value has remained below amortized cost:

	September 30, 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						
U.S. government and agencies	$ —	$ —	$ 2	$ —	$ 2	$ —
U.S. state, municipal and political subdivisions	13	—	22	(1)	35	(1)
Corporate	1,808	(215)	1,313	(103)	3,121	(318)
CLO	3,128	(69)	2,354	(119)	5,482	(188)
ABS	435	(5)	245	(15)	680	(20)
CMBS	110	(2)	99	(2)	209	(4)
RMBS	468	(7)	78	(2)	546	(9)
Total AFS securities	5,962	(298)	4,113	(242)	10,075	(540)
AFS securities – related party						
CLO	400	(8)	181	(9)	581	(17)
Total AFS securities – related party	400	(8)	181	(9)	581	(17)
Total AFS securities including related party	$ 6,362	$ (306)	$ 4,294	$ (251)	$ 10,656	$ (557)

	December 31, 2018					
	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						
U.S. government and agencies	$ 32	$ —	$ 2	$ —	$ 34	$ —
U.S. state, municipal and political subdivisions	139	(2)	82	(5)	221	(7)
Foreign governments	97	(2)	15	(1)	112	(3)
Corporate	20,213	(942)	4,118	(373)	24,331	(1,315)
CLO	5,054	(297)	90	(2)	5,144	(299)
ABS	1,336	(23)	506	(25)	1,842	(48)
CMBS	932	(27)	497	(33)	1,429	(60)
RMBS	1,417	(31)	140	(5)	1,557	(36)
Total AFS securities	29,220	(1,324)	5,450	(444)	34,670	(1,768)
AFS securities – related party						
CLO	534	(25)	—	—	534	(25)
ABS	306	(2)	116	(2)	422	(4)
Total AFS securities – related party	840	(27)	116	(2)	956	(29)
Total AFS securities including related party	$ 30,060	$ (1,351)	$ 5,566	$ (446)	$ 35,626	$ (1,797)

As of September 30, 2019, we held 1,411 AFS securities that were in an unrealized loss position. Of this total, 484 were in an unrealized loss position 12 months or more. As of September 30, 2019, we held 30 related party AFS securities that were in an unrealized loss position. Of this total, three 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.

Other-Than-Temporary Impairments—For the nine months ended September 30, 2019, we incurred $32 million of net OTTI, of which $19 million related to intent-to-sell impairments. The net remaining OTTI of $13 million related to credit impairments where a portion was bifurcated in AOCI. Any credit loss impairments not bifurcated in AOCI are excluded from the rollforward below.

The following table represents a rollforward of the cumulative amounts recognized on the condensed consolidated statements of income for OTTI related to pre-tax credit loss impairments on AFS securities, for which a portion of the securities' total OTTI was recognized in AOCI:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Beginning balance	$ 13	$ 7	$ 10	$ 14
Initial impairments – credit loss OTTI recognized on securities not previously impaired	9	3	11	4
Additional impairments – credit loss OTTI recognized on securities previously impaired	1	1	2	1
Reduction in impairments from securities sold, matured or repaid	—	(1)	—	(9)
Ending balance	$ 23	$ 10	$ 23	$ 10

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)	2019	2018	2019	2018
AFS securities	$ 760	$ 730	$ 2,276	$ 2,117
Trading securities	48	52	139	150
Equity securities	4	4	11	8
Mortgage loans	173	120	483	315
Investment funds	76	56	188	179
Funds withheld at interest	106	169	403	301
Other	32	28	116	74
Investment revenue	1,199	1,159	3,616	3,144
Investment expenses	(129)	(89)	(319)	(261)
Net investment income	$ 1,070	$ 1,070	$ 3,297	$ 2,883

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)	2019	2018	2019	2018
AFS securities				
Gross realized gains on investment activity	$ 47	$ 56	$ 120	$ 128
Gross realized losses on investment activity	(21)	(50)	(38)	(93)
Net realized investment gains on AFS securities	26	6	82	35
Net recognized investment gains (losses) on trading securities	48	(49)	176	(214)
Net recognized investment gains (losses) on equity securities	(3)	(2)	16	2
Derivative gains	620	860	3,493	722
Other gains (losses)	(3)	1	9	33
Investment related gains (losses)	$ 688	$ 816	$ 3,776	$ 578

Proceeds from sales of AFS securities were $852 million and $1,278 million for the three months ended September 30, 2019 and 2018, respectively, and $4,063 million and $4,216 million for the nine months ended September 30, 2019 and 2018, respectively. Proceeds from sales of AFS securities for the three and nine months ended September 30, 2018 have been revised for immaterial misstatements to be comparable to current year balances.

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Trading securities	$ 46	$ (8)	$ 215	$ (118)
Trading securities – related party	3	(12)	(13)	(18)
VIE trading securities – related party	1	—	2	1
Equity securities	—	(2)	20	2
VIE equity securities – related party	—	13	(2)	(26)

Purchased Credit Impaired (PCI) Investments—The following table summarizes our PCI investments:

	Fixed maturity securities		Mortgage loans	
(In millions)	September 30, 2019	December 31, 2018	September 30, 2019	December 31, 2018
Contractually required payments receivable	$ 7,017	$ 8,179	$ 3,591	$ 2,675
Less: Cash flows expected to be collected[1]	(6,178)	(7,195)	(3,519)	(2,628)
Non-accretable difference	$ 839	$ 984	$ 72	$ 47
Cash flows expected to be collected[1]	$ 6,178	$ 7,195	$ 3,519	$ 2,628
Less: Amortized cost	(4,921)	(5,518)	(2,633)	(1,931)
Accretable difference	$ 1,257	$ 1,677	$ 886	$ 697
Fair value	$ 5,376	$ 5,828	$ 2,804	$ 1,933
Outstanding balance	6,090	6,773	2,975	2,210

[1] *Represents the undiscounted principal and interest cash flows expected.*

During the nine months ended September 30, 2019, we acquired PCI investments with the following amounts at the time of purchase:

(In millions)	Fixed maturity securities	Mortgage loans
Contractually required payments receivable	$ 141	$ 1,163
Cash flows expected to be collected	117	1,126
Fair value	105	905

The following table summarizes the activity for the accretable yield on PCI investments:

	Three months ended September 30, 2019		Nine months ended September 30, 2019	
(In millions)	Fixed maturity securities	Mortgage loans	Fixed maturity securities	Mortgage loans
Beginning balance	$ 1,382	$ 860	$ 1,677	$ 697
Purchases of PCI investments, net of sales	(1)	2	5	155
Accretion	(64)	(22)	(236)	(83)
Net reclassification from (to) non-accretable difference	(60)	46	(189)	117
Ending balance at September 30	$ 1,257	$ 886	$ 1,257	$ 886

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, 2019 and December 31, 2018, amounts loaned under reverse repurchase agreements were $190 million and $0 million, respectively, and collateral received was $612 million and $0 million, respectively.

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

(In millions)	September 30, 2019	December 31, 2018
Commercial mortgage loans	$ 9,593	$ 7,217
Commercial mortgage loans under development	108	80
Total commercial mortgage loans	9,701	7,297
Residential mortgage loans	4,417	3,334
Mortgage loans, net of allowances	$ 14,118	$ 10,631

We primarily invest in commercial mortgage loans on income producing properties including office and retail buildings, hotels, industrial properties and apartments. 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 valuation allowances, by property type and geographic region, is as follows:

	September 30, 2019		December 31, 2018	
(In millions, except for percentages)	Net Carrying Value	Percentage of Total	Net Carrying Value	Percentage of Total
Property type				
Office building	$ 2,673	27.6%	$ 2,221	30.5%
Retail	2,167	22.4%	1,660	22.7%
Hotels	1,028	10.6%	1,040	14.3%
Industrial	1,382	14.2%	1,196	16.4%
Apartment	1,749	18.0%	791	10.8%
Other commercial	702	7.2%	389	5.3%
Total commercial mortgage loans	$ 9,701	100.0%	$ 7,297	100.0%
U.S. Region				
East North Central	$ 961	9.9%	$ 855	11.7%
East South Central	435	4.5%	295	4.0%
Middle Atlantic	2,185	22.5%	1,131	15.5%
Mountain	667	6.9%	616	8.4%
New England	346	3.6%	374	5.1%
Pacific	2,400	24.7%	1,540	21.1%
South Atlantic	1,678	17.3%	1,468	20.2%
West North Central	174	1.8%	173	2.4%
West South Central	771	7.9%	845	11.6%
Total U.S. Region	9,617	99.1%	7,297	100.0%
International Region	84	0.9%	—	—%
Total commercial mortgage loans	$ 9,701	100.0%	$ 7,297	100.0%

Our residential mortgage loan portfolio includes first lien residential mortgage loans collateralized by properties and is summarized in the following table:

	September 30, 2019	December 31, 2018
U.S. States		
California	27.9%	30.3%
Florida	12.8%	16.3%
Texas	5.9%	3.3%
New York	3.4%	7.7%
Other[1]	37.5%	42.4%
Total U.S. residential mortgage loan percentage	87.5%	100.0%
International	12.5%	—%
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.*

Mortgage Loan Valuation Allowance—The assessment of mortgage loan impairments and valuation allowances is substantially the same for residential and commercial mortgage loans. The valuation allowance was $2 million as of September 30, 2019 and December 31, 2018. We did not record any material activity in the valuation allowance during the nine months ended September 30, 2019 or 2018.

Residential mortgage loans – The primary credit quality indicator of residential mortgage loans is loan performance. Nonperforming residential mortgage loans are 90 days or more past due and/or are in non-accrual status. As of September 30, 2019 and December 31, 2018, $64 million and $48 million, respectively, of our residential mortgage loans were nonperforming.

Commercial mortgage loans – As of September 30, 2019 and December 31, 2018, none of our commercial loans were 30 days or more past due.

Loan-to-value and debt service coverage ratios are measures we use to assess the risk and quality of commercial mortgage loans other than those under development. Loans under development are not evaluated using these ratios as the properties underlying these loans are generally not yet income-producing and the value of the underlying property significantly fluctuates based on the progress of construction. Therefore, the risk and quality of loans under development are evaluated based on the aging and geographical distribution of such loans as shown above.

The loan-to-value ratio is expressed as a percentage of the amount of the loan relative to the value of the underlying property. A loan-to-value ratio in excess of 100% indicates the unpaid loan amount exceeds the underlying collateral. The following represents the loan-to-value ratio of the commercial mortgage loan portfolio, excluding those under development, net of valuation allowances:

(In millions)	September 30, 2019	December 31, 2018
Less than 50%	$ 2,525	$ 1,883
50% to 60%	2,403	1,988
61% to 70%	3,590	2,394
71% to 80%	1,075	898
81% to 100%	—	54
Commercial mortgage loans	$ 9,593	$ 7,217

The debt service coverage ratio, based upon the most recent financial statements, 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. The following represents the debt service coverage ratio of the commercial mortgage loan portfolio, excluding those under development, net of valuation allowances:

(In millions)	September 30, 2019	December 31, 2018
Greater than 1.20x	$ 8,301	$ 6,576
1.00x – 1.20x	625	474
Less than 1.00x	667	167
Commercial mortgage loans	$ 9,593	$ 7,217

Investment Funds—Our investment fund portfolio consists of funds that employ various strategies and include investments in real estate and other 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 and those owned by consolidated VIEs:

	September 30, 2019		December 31, 2018[1]	
(In millions, except for percentages and years)	Carrying value	Percent of total	Carrying value	Percent of total
Investment funds				
Real estate	$ 254	35.7%	$ 215	30.6%
Credit funds	161	22.6%	172	24.5%
Private equity	231	32.5%	253	36.0%
Real assets	65	9.1%	56	7.9%
Natural resources	1	0.1%	4	0.6%
Other	—	—%	3	0.4%
Total investment funds	712	100.0%	703	100.0%
Investment funds – related parties				
Differentiated investments				
AmeriHome Mortgage Company, LLC (AmeriHome)[2]	469	17.0%	463	20.7%
Catalina Holdings Ltd. (Catalina)	270	9.7%	233	10.4%
Athora Holding Ltd. (Athora)[2]	127	4.6%	105	4.7%
Venerable Holdings, Inc. (Venerable)[2]	94	3.4%	92	4.1%
Other	218	7.9%	196	8.8%
Total differentiated investments	1,178	42.6%	1,089	48.7%
Real estate	721	26.1%	497	22.3%
Credit funds	378	13.7%	316	14.2%
Private equity	69	2.5%	18	0.8%
Real assets	155	5.6%	145	6.5%
Natural resources	162	5.9%	104	4.7%
Public equities	100	3.6%	63	2.8%
Total investment funds – related parties	2,763	100.0%	2,232	100.0%
Investment funds owned by consolidated VIEs				
MidCap FinCo Designated Activity Company (MidCap)[2]	556	89.8%	553	88.6%
Real estate	44	7.1%	30	4.8%
Real assets	19	3.1%	41	6.6%
Total investment funds owned by consolidated VIEs	619	100.0%	624	100.0%
Total investment funds including related parties and funds owned by consolidated VIEs	$ 4,094		$ 3,559	

[1] *Certain reclassifications have been made to conform with current year presentation.*
[2] *See further discussions on AmeriHome, Athora, Venerable and MidCap in Note 9 – Related Parties.*

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, 2019		December 31, 2018	
(In millions)	Carrying Value	Maximum Loss Exposure	Carrying Value	Maximum Loss Exposure
Investment funds	$ 712	$ 1,237	$ 703	$ 1,329
Investment in related parties – investment funds	2,763	5,057	2,232	4,331
Assets of consolidated VIEs – investment funds	619	714	624	727
Investment in fixed maturity securities	22,541	21,888	21,188	21,139
Investment in related parties – fixed maturity securities	2,650	2,707	1,686	1,788
Investment in related parties – equity securities	381	381	120	120
Total non-consolidated investments	$ 29,666	$ 31,984	$ 26,553	$ 29,434

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 4 – 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, 2019			December 31, 2018		
		Fair Value			Fair Value	
(In millions)	Notional Amount	Assets	Liabilities	Notional Amount	Assets	Liabilities
Derivatives designated as hedges						
Foreign currency swaps	2,811	$ 216	$ 17	2,041	$ 83	$ 55
Foreign currency forwards	1,130	9	5	85	—	1
Total derivatives designated as hedges		225	22		83	56
Derivatives not designated as hedges						
Equity options	49,288	2,123	8	49,821	942	11
Futures	8	7	1	4	9	3
Total return swaps	70	—	1	62	—	3
Foreign currency swaps	38	3	—	38	3	2
Interest rate swaps	310	—	2	326	—	1
Credit default swaps	10	—	4	10	—	4
Foreign currency forwards	1,718	28	8	646	6	5
Embedded derivatives						
Funds withheld including related party	—	1,459	35	—	(53)	(1)
Interest sensitive contract liabilities	—	—	10,273	—	—	7,969
Total derivatives not designated as hedges		3,620	10,332		907	7,997
Total derivatives		$ 3,845	$ 10,354		$ 990	$ 8,053

Derivatives Designated as Hedges

Foreign currency swaps – We use foreign currency swaps to convert foreign currency denominated cash flows of an investment to U.S. 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 July 2049. During the three months ended September 30, 2019 and 2018, we had foreign currency swap gains of $124 million and $7 million, respectively, recorded in AOCI. During the nine months ended September 30, 2019 and 2018, we had foreign currency swap gains of $171 million and $52 million, respectively, recorded in AOCI. There were no amounts reclassified to income and no amounts deemed ineffective for the nine months ended September 30, 2019 and 2018. As of September 30, 2019, 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 entered into during the fourth quarter of 2018 are designated and accounted for as fair value hedges. As of September 30, 2019 and December 31, 2018, the carrying amount of the hedged AFS securities was $347 million and $88 million, respectively, and the cumulative amount of fair value hedging adjustments included in the hedged AFS securities included losses of $11 million and gains of $1 million, respectively. The gains and losses on derivatives and the related hedged items in fair value hedge relationships are recorded in investment related gains (losses) on the condensed consolidated statements of income. The derivatives had gains of $13 million during the three months ended September 30, 2019 and $13 million for the nine months ended September 30, 2019, and the related hedged items had losses of $11 million during the three months ended September 30, 2019 and $12 million for the nine months ended September 30, 2019.

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. Certain of these swaps entered into during the fourth quarter of 2016 were designated as fair value hedges. These fair value hedges were dedesignated during the second quarter of 2018 and there was no material impact as a result.

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)	2019	2018	2019	2018
Equity options	$ 77	$ 756	$ 1,365	$ 703
Futures	(3)	1	(17)	(3)
Swaps	8	1	37	(6)
Foreign currency forwards	42	3	47	10
Embedded derivatives on funds withheld	496	99	2,061	18
Amounts recognized in investment related gains (losses)	620	860	3,493	722
Embedded derivatives in indexed annuity products[1]	(265)	(469)	(1,920)	(178)
Total gains (losses) on derivatives not designated as hedges	$ 355	$ 391	$ 1,573	$ 544

[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, 2019						
Derivative assets	$ 2,386	$ (42)	$ (2,323)	$ 21	$ —	$ 21
Derivative liabilities	(46)	42	13	9	—	9
December 31, 2018						
Derivative assets	$ 1,043	$ (52)	$ (969)	$ 22	$ (4)	$ 18
Derivative liabilities	(85)	52	24	(9)	—	(9)

1 *The gross amounts of recognized derivative assets and derivative liabilities are reported on the condensed consolidated balance sheets. As of September 30, 2019 and December 31, 2018, 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. 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, 2019				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Assets					
AFS securities					
U.S. government and agencies	$ 37	$ —	$ 37	$ —	$ —
U.S. state, municipal and political subdivisions	1,492	—	—	1,452	40
Foreign governments	328	—	—	328	—
Corporate	47,045	—	—	46,098	947
CLO	6,871	—	—	6,740	131
ABS	5,111	—	—	3,823	1,288
CMBS	2,765	—	—	2,434	331
RMBS	7,254	—	—	7,254	—
Total AFS securities	70,903	—	37	68,129	2,737
Trading securities					
U.S. government and agencies	6	—	3	3	—
U.S. state, municipal and political subdivisions	140	—	—	140	—
Foreign governments	24	—	—	24	—
Corporate	1,701	—	—	1,701	—
CLO	32	—	—	26	6
ABS	92	—	—	9	83
CMBS	51	—	—	51	—
RMBS	365	—	—	274	91
Total trading securities	2,411	—	3	2,228	180
Equity securities	359	—	45	313	1
Mortgage loans	28	—	—	—	28
Investment funds	156	134	—	—	22
Funds withheld at interest – embedded derivative	804	—	—	—	804
Derivative assets	2,386	—	7	2,379	—
Short-term investments	571	—	54	291	226
Other investments	64	—	—	64	—
Cash and cash equivalents	3,833	—	3,833	—	—
Restricted cash	199	—	199	—	—
Investments in related parties					
AFS securities					
Corporate	24	—	—	24	—
CLO	818	—	—	818	—
ABS	1,526	—	—	532	994
Total AFS securities – related party	2,368	—	—	1,374	994
Trading securities					
CLO	82	—	—	41	41
ABS	224	—	—	—	224
Total trading securities – related party	306	—	—	41	265
Equity securities	381	—	—	—	381
Investment funds	249	122	—	—	127
Funds withheld at interest – embedded derivative	655	—	—	—	655
Reinsurance recoverable	1,954	—	—	—	1,954
Assets of consolidated VIEs					
Trading securities	19	—	—	—	19
Equity securities	6	—	—	—	6
Investment funds	569	556	—	—	13
Cash and cash equivalents	3	—	3	—	—
Total assets measured at fair value	$ 88,224	$ 812	$ 4,181	$ 74,819	$ 8,412

(Continued)

(In millions)	September 30, 2019 Total	NAV	Level 1	Level 2	Level 3
Liabilities					
Interest sensitive contract liabilities					
Embedded derivative	$ 10,273	$ —	$ —	$ —	$ 10,273
Universal life benefits	1,142	—	—	—	1,142
Future policy benefits					
AmerUs Life Insurance Company (AmerUs) Closed Block	1,572	—	—	—	1,572
Indianapolis Life Insurance Company (ILICO) Closed Block and life benefits	797	—	—	—	797
Derivative liabilities	46	—	1	41	4
Funds withheld liability – embedded derivative	35	—	—	35	—
Total liabilities measured at fair value	$ 13,865	$ —	$ 1	$ 76	$ 13,788

(Concluded)

(In millions)	December 31, 2018 Total	NAV	Level 1	Level 2	Level 3
Assets					
AFS securities					
U.S. government and agencies	$ 57	$ —	$ 54	$ 3	$ —
U.S. state, municipal and political subdivisions	1,293	—	—	1,293	—
Foreign governments	161	—	—	161	—
Corporate	37,097	—	—	36,199	898
CLO	5,361	—	—	5,254	107
ABS	4,920	—	—	3,305	1,615
CMBS	2,357	—	—	2,170	187
RMBS	8,019	—	—	7,963	56
Total AFS securities	59,265	—	54	56,348	2,863
Trading securities					
U.S. government and agencies	5	—	3	2	—
U.S. state, municipal and political subdivisions	126	—	—	126	—
Corporate	1,287	—	—	1,287	—
CLO	9	—	—	8	1
ABS	87	—	—	87	—
CMBS	49	—	—	49	—
RMBS	386	—	—	252	134
Total trading securities	1,949	—	3	1,811	135
Equity securities	216	—	40	173	3
Mortgage loans	32	—	—	—	32
Investment funds	182	153	—	—	29
Funds withheld at interest – embedded derivative	57	—	—	—	57
Derivative assets	1,043	—	9	1,034	—
Short-term investments	191	—	66	125	—
Other investments	52	—	—	52	—
Cash and cash equivalents	2,911	—	2,911	—	—
Restricted cash	492	—	492	—	—

(Continued)

	December 31, 2018				
(In millions)	Total	NAV	Level 1	Level 2	Level 3
Investments in related parties					
AFS securities					
CLO	562	—	—	562	—
ABS	875	—	—	547	328
Total AFS securities – related party	1,437	—	—	1,109	328
Trading securities					
CLO	100	—	—	22	78
ABS	149	—	—	—	149
Total trading securities – related party	249	—	—	22	227
Equity securities	120	—	—	—	120
Investment funds	201	96	—	—	105
Funds withheld at interest – embedded derivative	(110)	—	—	—	(110)
Reinsurance recoverable	1,676	—	—	—	1,676
Assets of consolidated VIEs					
Trading securities	35	—	—	—	35
Equity securities	50	—	37	—	13
Investment funds	567	552	—	—	15
Cash and cash equivalents	2	—	2	—	—
Total assets measured at fair value	$ 70,617	$ 801	$ 3,614	$ 60,674	$ 5,528
Liabilities					
Interest sensitive contract liabilities					
Embedded derivative	$ 7,969	$ —	$ —	$ —	$ 7,969
Universal life benefits	932	—	—	—	932
Future policy benefits					
AmerUs Closed Block	1,443	—	—	—	1,443
ILICO Closed Block and life benefits	730	—	—	—	730
Derivative liabilities	85	—	3	78	4
Funds withheld liability – embedded derivative	(1)	—	—	(1)	—
Total liabilities measured at fair value	$ 11,158	$ —	$ 3	$ 77	$ 11,078

(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 U.S. and non-U.S. corporate bonds, U.S. 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.

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 and consolidated VIEs:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Trading securities	$ 48	$ (49)	$ 176	$ (213)
Mortgage loans	—	—	1	—
Investment funds	3	13	3	28
Future policy benefits	(37)	21	(129)	156
Total gains (losses)	$ 14	$ (15)	$ 51	$ (29)

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, 2019	December 31, 2018
Unpaid principal balance	$ 25	$ 30
Mark to fair value	3	2
Fair value	$ 28	$ 32

There were no fair value option mortgage loans 90 days or more past due as of September 30, 2019 and December 31, 2018.

Level 3 Financial Instruments—The following is a reconciliation for all Level 3 assets and liabilities measured at fair value on a recurring basis:

	Three months ended September 30, 2019							
		Total realized and unrealized gains (losses)			Transfers			
(In millions)	Beginning Balance	Included in income	Included in OCI	Net purchases, issuances, sales and settlements	In	(Out)	Ending Balance	Total gains (losses) included in earnings[1]
Assets								
AFS securities								
U.S. state, municipal and political subdivisions	$ 40	$ —	$ —	$ —	$ —	$ —	$ 40	$ —
Corporate	821	(3)	10	189	1	(71)	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	74	(5)	—	(5)	—	(23)	41	—
ABS	218	4	—	2	—	—	224	5
Equity securities	344	6	—	31	—	—	381	—
Investment funds	127	—	—	—	—	—	127	—
Funds withheld at interest – embedded derivative	501	154	—	—	—	—	655	—
Reinsurance recoverable	1,834	120	—	—	—	—	1,954	—
Investments of consolidated VIEs								
Trading securities	21	—	—	(2)	—	—	19	—
Equity securities	6	—	—	—	—	—	6	—
Investment funds	14	(1)	—	—	—	—	13	1
Total Level 3 assets	$ 7,112	$ 369	$ 34	$ 1,236	$ 114	$ (453)	$ 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.*

ATHENE HOLDING LTD.
Notes to Condensed Consolidated Financial Statements *(Unaudited)*

	Three months ended September 30, 2018							
		Total realized and unrealized gains (losses)			Transfers			
(In millions)	Beginning Balance	Included in income	Included in OCI	Net purchases, issuances, sales and settlements	In	(Out)	Ending Balance	Total gains (losses) included in earnings[1]
Assets								
AFS securities								
Corporate	$ 962	$ (1)	$ (3)	$ 110	$ 5	$ (109)	$ 964	$ —
CLO	281	—	(1)	52	8	—	340	—
ABS	1,447	1	1	55	161	(294)	1,371	—
CMBS	197	—	(1)	—	—	(14)	182	—
RMBS	7	—	—	—	—	(7)	—	—
Trading securities								
U.S. state, municipal and political subdivisions	17	—	—	—	—	—	17	—
Corporate	4	—	—	—	—	(4)	—	—
CLO	26	(2)	—	(11)	—	(10)	3	1
ABS	89	1	—	—	—	(90)	—	1
RMBS	304	(19)	—	—	—	—	285	2
Equity securities	2	—	—	—	—	—	2	—
Mortgage loans	38	—	—	(1)	—	—	37	—
Investment funds	31	(1)	—	—	—	—	30	(1)
Funds withheld at interest – embedded derivative	150	1	—	—	—	—	151	—
Investments in related parties								
AFS securities								
CLO	39	—	(1)	—	—	—	38	—
ABS	50	—	—	281	—	—	331	—
Trading securities								
CLO	114	(7)	—	—	—	(31)	76	(5)
ABS	164	(4)	—	(9)	—	—	151	(4)
Investment funds	105	—	—	—	—	—	105	—
Funds withheld at interest – embedded derivative	162	(71)	—	—	—	—	91	—
Short-term investments	10	—	—	—	—	—	10	—
Reinsurance recoverable	1,717	(38)	—	—	—	—	1,679	—
Investments of consolidated VIEs								
Trading securities	48	—	—	—	—	—	48	—
Equity securities	26	(1)	—	—	—	—	25	(1)
Investment funds	1	—	—	14	—	—	15	—
Total Level 3 assets	$ 5,991	$ (141)	$ (5)	$ 491	$ 174	$ (559)	$ 5,951	$ (7)
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	$ (8,088)	$ (469)	$ —	$ (102)	$ —	$ —	$ (8,659)	$ —
Universal life benefits	(943)	42	—	—	—	—	(901)	—
Future policy benefits								
AmerUs Closed Block	(1,490)	21	—	—	—	—	(1,469)	—
ILICO Closed Block and life benefits	(759)	(5)	—	—	—	—	(764)	—
Derivative liabilities	(5)	1	—	—	—	—	(4)	—
Total Level 3 liabilities	$ (11,285)	$ (410)	$ —	$ (102)	$ —	$ —	$ (11,797)	$ —

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

ATHENE HOLDING LTD.
Notes to Condensed Consolidated Financial Statements *(Unaudited)*

	Nine months ended September 30, 2019							
		Total realized and unrealized gains (losses)			Transfers			
(In millions)	Beginning Balance	Included in income	Included in OCI	Net purchases, issuances, sales and settlements	In	(Out)	Ending Balance	Total gains (losses) included in earnings[1]
Assets								
AFS securities								
U.S. state, municipal and political subdivisions	$ —	$ —	$ —	$ 40	$ —	$ —	$ 40	$ —
Corporate	898	(2)	20	164	1	(134)	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	34	(79)	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	78	(6)	—	(14)	18	(35)	41	2
ABS	149	(13)	—	(15)	103	—	224	(13)
Equity securities	120	18	—	243	—	—	381	—
Investment funds	105	3	—	19	—	—	127	3
Funds withheld at interest – embedded derivative	(110)	765	—	—	—	—	655	—
Reinsurance recoverable	1,676	278	—	—	—	—	1,954	—
Investments of consolidated VIEs								
Trading securities	35	(1)	—	(40)	25	—	19	—
Equity securities	13	(3)	—	(4)	—	—	6	(2)
Investment funds	15	(2)	—	—	—	—	13	—
Total Level 3 assets	$ 5,528	$ 1,776	$ 98	$ 1,636	$ 265	$ (891)	$ 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.*

	Nine months ended September 30, 2018							
		Total realized and unrealized gains (losses)			Transfers			
(In millions)	Beginning balance	Included in income	Included in OCI	Net purchases, issuances, sales and settlements	In	Out	Ending balance	Total gains (losses) included in earnings[1]
Assets								
AFS securities								
Corporate	$ 578	$ (3)	$ (12)	$ 385	$ 24	$ (8)	$ 964	$ —
CLO	64	2	—	264	10	—	340	—
ABS	1,457	6	(17)	(56)	161	(180)	1,371	—
CMBS	137	1	(2)	137	—	(91)	182	—
RMBS	301	3	(11)	(26)	—	(267)	—	—
Trading securities								
U.S. state, municipal and political subdivisions	17	—	—	—	—	—	17	—
CLO	17	(5)	—	—	—	(9)	3	(3)
ABS	77	(4)	—	—	—	(73)	—	(2)
RMBS	342	(57)	—	—	—	—	285	4
Equity securities	8	1	—	(7)	—	—	2	1
Mortgage loans	41	—	—	(4)	—	—	37	—
Investment funds	41	(4)	—	(7)	—	—	30	—
Funds withheld at interest – embedded derivative	312	(161)	—	—	—	—	151	—
Investments in related parties								
AFS Securities								
CLO	—	—	—	38	—	—	38	—
ABS	4	—	—	327	—	—	331	—
Trading securities								
CLO	105	(8)	—	(18)	18	(21)	76	(4)
ABS	—	—	—	—	151	—	151	—
Investment funds	—	(3)	—	108	—	—	105	—
Funds withheld at interest – embedded derivative	—	91	—	—	—	—	91	—
Short-term investments	—	—	—	10	—	—	10	—
Reinsurance recoverable	1,824	(145)	—	—	—	—	1,679	—
Investments of consolidated VIEs								
Trading securities	48	1	—	(1)	—	—	48	1
Equity securities	28	(3)	—	—	—	—	25	(3)
Investment funds	21	(3)	—	(3)	—	—	15	(3)
Total Level 3 assets	$ 5,422	$ (291)	$ (42)	$ 1,147	$ 364	$ (649)	$ 5,951	$ (9)
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	$ (7,411)	$ (178)	$ —	$ (1,070)	$ —	$ —	$ (8,659)	$ —
Universal life benefits	(1,005)	104	—	—	—	—	(901)	—
Future policy benefits								
AmerUs Closed Block	(1,625)	156	—	—	—	—	(1,469)	—
ILICO Closed Block and life benefits	(803)	39	—	—	—	—	(764)	—
Derivative liabilities	(5)	1	—	—	—	—	(4)	—
Total Level 3 liabilities	$ (10,849)	$ 122	$ —	$ (1,070)	$ —	$ —	$ (11,797)	$ —

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

The following represents the gross components of purchases, issuances, sales and settlements, net, shown above:

	Three months ended September 30, 2019				
(In millions)	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements
Assets					
AFS securities					
Corporate	$ 199	$ —	$ —	$ (10)	$ 189
CLO	37	—	—	(3)	34
ABS	64	—	(21)	(27)	16
CMBS	251	—	(4)	(52)	195
Trading securities					
ABS	—	—	—	(1)	(1)
RMBS	15	—	—	—	15
Mortgage loans	—	—	—	(4)	(4)
Investment funds	—	—	(2)	—	(2)
Short-term investments	200	—	—	(19)	181
Investments in related parties					
AFS securities, ABS	587	—	—	—	587
Trading securities					
CLO	—	—	(5)	—	(5)
ABS	2	—	—	—	2
Equity securities	31	—	—	—	31
Investments of consolidated VIEs					
Trading securities	—	—	(2)	—	(2)
Total Level 3 assets	$ 1,386	$ —	$ (34)	$ (116)	$ 1,236
Liabilities					
Interest sensitive contract liabilities – embedded derivative	$ —	$ (222)	$ —	$ 119	$ (103)
Total Level 3 liabilities	$ —	$ (222)	$ —	$ 119	$ (103)

	Three months ended September 30, 2018				
(In millions)	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements
Assets					
AFS securities					
Corporate	$ 156	$ —	$ (15)	$ (31)	$ 110
CLO	79	—	(8)	(19)	52
ABS	111	—	—	(56)	55
CMBS	1	—	—	(1)	—
Trading securities, CLO	—	—	(11)	—	(11)
Mortgage loans	—	—	—	(1)	(1)
Investments in related parties					
AFS securities, ABS	281	—	—	—	281
Trading securities, ABS	—	—	—	(9)	(9)
Investments of consolidated VIEs					
Investment funds	14	—	—	—	14
Total Level 3 assets	$ 642	$ —	$ (34)	$ (117)	$ 491
Liabilities					
Interest sensitive contract liabilities – embedded derivative	$ —	$ (213)	$ —	$ 111	$ (102)
Total Level 3 liabilities	$ —	$ (213)	$ —	$ 111	$ (102)

(In millions)	Nine months ended September 30, 2019				
	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements
Assets					
AFS securities					
U.S. state, municipal and political subdivisions	$ 40	$ —	$ —	$ —	$ 40
Corporate	277	—	(2)	(111)	164
CLO	64	—	—	(4)	60
ABS	260	—	(41)	(176)	43
CMBS	252	—	(4)	(94)	154
RMBS	2	—	—	—	2
Trading securities					
ABS	6	—	—	(1)	5
RMBS	15	—	—	—	15
Mortgage loans	—	—	—	(5)	(5)
Investment funds	—	—	(5)	—	(5)
Short-term investments	248	—	—	(22)	226
Investments in related parties					
AFS securities, ABS	757	—	—	(9)	748
Trading securities					
CLO	—	—	(14)	—	(14)
ABS	—	—	—	(15)	(15)
Equity securities	243	—	—	—	243
Investment funds	19	—	—	—	19
Investments of consolidated VIEs					
Trading securities	—	—	(40)	—	(40)
Equity securities	—	—	(4)	—	(4)
Total Level 3 assets	$ 2,183	$ —	$ (110)	$ (437)	$ 1,636
Liabilities					
Interest sensitive contract liabilities – embedded derivative	$ —	$ (756)	$ —	$ 372	$ (384)
Total Level 3 liabilities	$ —	$ (756)	$ —	$ 372	$ (384)

(In millions)	Nine months ended September 30, 2018 Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements
Assets					
AFS securities					
Corporate	$ 460	$ —	$ (29)	$ (46)	$ 385
CLO	314	—	(8)	(42)	264
ABS	353	—	(21)	(388)	(56)
CMBS	138	—	—	(1)	137
RMBS	—	—	—	(26)	(26)
Trading securities, CLO	7	—	(7)	—	—
Equity securities	1	—	(8)	—	(7)
Mortgage loans	—	—	—	(4)	(4)
Investment funds	—	—	—	(7)	(7)
Investments in related parties					
AFS securities					
CLO	38	—	—	—	38
ABS	327	—	—	—	327
Trading securities, CLO	30	—	(48)	—	(18)
Investment funds	108	—	—	—	108
Short-term investments	10	—	—	—	10
Investments of consolidated VIEs					
Trading securities	—	—	(1)	—	(1)
Investment funds	14	—	(17)	—	(3)
Total Level 3 assets	$ 1,800	$ —	$ (139)	$ (514)	$ 1,147
Liabilities					
Interest sensitive contract liabilities – embedded derivative	$ —	$ (1,343)	$ —	$ 273	$ (1,070)
Total Level 3 liabilities	$ —	$ (1,343)	$ —	$ 273	$ (1,070)

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. An increase in the discount rate can lower the fair value; a decrease in the discount rate can increase the fair value. As of September 30, 2019, discounts ranged from 3% to 9%, and as of December 31, 2018, discounts ranged from 5% to 9%. 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 U.S. 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 the embedded derivatives of fixed indexed annuities:

	September 30, 2019				
(In millions, except for percentages)	Fair value	Valuation technique	Unobservable inputs	Input/range of inputs	Impact of an increase in the input on fair value
Interest sensitive contract liabilities – fixed indexed annuities embedded derivatives	$ 10,273	Option budget method	Nonperformance risk	0.0% – 1.3%	Decrease
			Option budget	0.7% – 3.7%	Increase
			Surrender rate	3.4% – 8.1%	Decrease

	December 31, 2018				
(In millions, except for percentages)	Fair value	Valuation technique	Unobservable inputs	Input/range of inputs	Impact of an increase in the input on fair value
Interest sensitive contract liabilities – fixed indexed annuities embedded derivatives	$ 7,969	Option budget method	Nonperformance risk	0.3% – 1.5%	Decrease
			Option budget	0.7% – 3.7%	Increase
			Surrender rate	3.6% – 7.3%	Decrease

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, 2019					
(In millions)	Carrying Value	Fair Value	NAV	Level 1	Level 2	Level 3
Financial assets						
Mortgage loans	$ 13,437	$ 13,918	$ —	$ —	$ —	$ 13,918
Investment funds	556	556	556	—	—	—
Policy loans	466	466	—	—	466	—
Funds withheld at interest	14,476	14,476	—	—	—	14,476
Other investments	66	66	—	—	—	66
Investments in related parties						
Mortgage loans	653	645	—	—	—	645
Investment funds	2,514	2,514	2,514	—	—	—
Funds withheld at interest	12,905	12,905	—	—	—	12,905
Other investments	387	419	—	—	—	419
Assets of consolidated VIEs						
Investment funds	50	50	50	—	—	—
Total financial assets not carried at fair value	$ 45,510	$ 46,015	$ 3,120	$ —	$ 466	$ 42,429
Financial liabilities						
Interest sensitive contract liabilities	$ 56,391	$ 57,241	$ —	$ —	$ —	$ 57,241
Long-term debt	992	1,029	—	—	1,029	—
Funds withheld liability	733	733	—	—	733	—
Total financial liabilities not carried at fair value	$ 58,116	$ 59,003	$ —	$ —	$ 1,762	$ 57,241

	December 31, 2018					
(In millions)	Carrying Value	Fair Value	NAV	Level 1	Level 2	Level 3
Financial assets						
Mortgage loans	$ 10,308	$ 10,424	$ —	$ —	$ —	$ 10,424
Investment funds	521	521	521	—	—	—
Policy loans	488	488	—	—	488	—
Funds withheld at interest	14,966	14,966	—	—	—	14,966
Other investments	70	70	—	—	—	70
Investments in related parties						
Mortgage loans	291	290	—	—	—	290
Investment funds	2,031	2,031	2,031	—	—	—
Funds withheld at interest	13,687	13,687	—	—	—	13,687
Other investments	386	361	—	—	—	361
Assets of consolidated VIEs						
Investment funds	57	57	57	—	—	—
Total financial assets not carried at fair value	$ 42,805	$ 42,895	$ 2,609	$ —	$ 488	$ 39,798
Financial liabilities						
Interest sensitive contract liabilities	$ 54,655	$ 51,655	$ —	$ —	$ —	$ 51,655
Long-term debt	991	910	—	—	910	—
Funds withheld liability	722	722	—	—	722	—
Total financial liabilities not carried at fair value	$ 56,368	$ 53,287	$ —	$ —	$ 1,632	$ 51,655

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 and funds withheld at interest and liability, 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.

5. 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, 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

(In millions)	DAC	DSI	VOBA	Total
Balance at December 31, 2017	$ 1,375	$ 520	$ 1,077	$ 2,972
Additions	1,791	197	—	1,988
Unlocking	21	7	54	82
Amortization	(146)	(73)	(136)	(355)
Impact of unrealized investment (gains) losses	113	48	158	319
Balance at September 30, 2018	$ 3,154	$ 699	$ 1,153	$ 5,006

6. Debt

Short-term Borrowing—In the fourth quarter of 2019, we borrowed $300 million from the Federal Home Loan Bank (FHLB) through their variable rate short-term federal funds program. The borrowing matures on May 4, 2020 and carries an interest rate of 1.79%, with interest due at maturity. In connection with such borrowing, the FHLB requires the borrower to purchase member stock and post sufficient collateral to secure the borrowing. See *Note 10 – Commitments and Contingencies* for further discussion regarding existing collateral posting with the FHLB.

7. 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, 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	$ 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

	Three months ended September 30, 2018					
(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	$ 519	$ 80	$ 11	$ 3	$ 3	$ 7
Basic weighted average shares outstanding	164.5	25.5	3.4	0.8	1.0	2.1
Dilutive effect of stock compensation plans	0.5	—	—	—	—	0.6
Diluted weighted average shares outstanding	165.0	25.5	3.4	0.8	1.0	2.7
Earnings per share						
Basic	$ 3.16	$ 3.16	$ 3.16	$ 3.16	$ 3.16	$ 3.16
Diluted	$ 3.15	$ 3.16	$ 3.16	$ 3.16	$ 3.16	$ 2.42

	Nine 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	$ 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

	Nine months ended September 30, 2018					
(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	$ 934	$ 180	$ 20	$ 5	$ 6	$ 12
Basic weighted average shares outstanding	159.3	30.6	3.4	0.8	1.0	2.1
Dilutive effect of stock compensation plans	0.5	—	—	—	—	0.7
Diluted weighted average shares outstanding	159.8	30.6	3.4	0.8	1.0	2.8
Earnings per share						
Basic	$ 5.86	$ 5.86	$ 5.86	$ 5.86	$ 5.86	$ 5.86
Diluted	$ 5.85	$ 5.86	$ 5.86	$ 5.83	$ 5.83	$ 4.36

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 32.0 million and 35.1 million shares, restricted stock units and options as of September 30, 2019 and 2018, respectively.

8. Equity

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 (Series A). During the third quarter of 2019, we declared and paid dividends of $485.07 per Series A share and $17 million in the aggregate.

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 (Series B).

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 liquidation preference.

Share Repurchase Authorization—In December 2018, our board of directors approved an authorization of $250 million for the repurchase of our Class A shares under our repurchase program. In the first quarter of 2019, our board of directors approved an additional authorization of $247 million, which was conditioned upon the further approval by a committee of our board of directors. Such further approval was granted during the second quarter of 2019. In connection with the offering of the Series A preferred stock described above, during the second quarter of 2019, our board of directors authorized a $120 million increase in our authority to repurchase our Class A common shares to offset any near-term earnings dilution from the issuance of the Series A preferred stock. During the third quarter of 2019, our board of directors authorized a $350 million increase in our share repurchase authorization. During the fourth quarter of 2019, our board of directors authorized a $600 million increase in our share repurchase authorization in connection with the Apollo Share Exchange and Related Transactions. See *Note 9 – Related Parties* for further discussion on these transactions.

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:

(In millions)		
Initial authorization	$	250
Repurchases		(100)
Remaining authorization at December 31, 2018		150
First additional authorization		247
Second additional authorization		120
Third additional authorization		350
Repurchases		(544)
Remaining authorization at September 30, 2019		323
Fourth additional authorization		600
Repurchases		(283)
Remaining authorization at November 5, 2019	$	640

Accumulated Other Comprehensive Income (Loss)—The following provides the details of AOCI and changes in AOCI:

(In millions)		September 30, 2019		December 31, 2018
AFS securities	$	4,099	$	(766)
DAC, DSI, VOBA and future policy benefits adjustments on AFS securities		(1,227)		154
Noncredit component of OTTI losses on AFS securities		(30)		(19)
Hedging instruments		222		51
Pension adjustments		(3)		(2)
Foreign currency translation adjustments		(4)		(3)
Accumulated other comprehensive income (loss), before taxes		3,057		(585)
Deferred income taxes		(615)		113
Accumulated other comprehensive income (loss)	$	2,442	$	(472)

ATHENE HOLDING LTD.
Notes to Condensed Consolidated Financial Statements *(Unaudited)*

Changes in AOCI are presented below:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Unrealized investment gains (losses) on AFS securities				
Unrealized investment gains (losses) on AFS securities	$ 1,141	$ (191)	$ 4,899	$ (2,362)
Change in DAC, DSI, VOBA and future policy benefits adjustment	(390)	57	(1,381)	665
Less: Reclassification adjustment for gains (losses) realized in net income[1]	7	6	34	36
Less: Income tax expense (benefit)	152	(24)	694	(328)
Net unrealized investment gains (losses) on AFS securities	592	(116)	2,790	(1,405)
Noncredit component of OTTI losses on AFS securities				
Noncredit component of OTTI losses on AFS securities	(9)	(4)	(10)	(4)
Less: Reclassification adjustment for losses realized in net income[1]	—	—	1	—
Less: Income tax benefit	(2)	(1)	(2)	(1)
Net noncredit component of OTTI losses on AFS securities	(7)	(3)	(9)	(3)
Unrealized gains (losses) on hedging instruments				
Unrealized gains (losses) on hedging instruments	124	7	171	52
Less: Income tax expense	26	2	36	11
Net unrealized gains (losses) on hedging instruments	98	5	135	41
Pension adjustments	—	—	(1)	3
Foreign currency translation adjustments	(1)	—	(1)	(10)
Change in AOCI from other comprehensive income (loss)	682	(114)	2,914	(1,374)
Adoption of accounting standards	—	—	—	(42)
Change in AOCI	$ 682	$ (114)	$ 2,914	$ (1,416)

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

9. 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 wholly owned subsidiary, Athene Asset Management LLC (AAM, now known as Apollo Insurance Solutions Group LLC (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, 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 (Incremental 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 U.S. 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, U.S. treasuries, non-preferred equities and alternatives.

The following represents assets based on the above sub-allocation structure:

(In millions, except for percentages)	September 30, 2019	Percent of Total
Core	$ 33,514	26.8%
Core Plus	31,770	25.4%
Yield	46,081	36.8%
High Alpha	4,347	3.5%
Other	9,426	7.5%
Total sub-allocation assets	$ 125,138	100.0%

Additionally, the Fee Agreement provides for a possible payment by Apollo to us, or a possible payment by us to Apollo, equal to 0.025% of the Incremental Value as of the end of each year, beginning on December 31, 2019, depending upon the percentage of our investments that consist of Core and Core Plus assets. If more than 60% of our invested assets that are subject to the sub-allocation fees are invested in Core and Core Plus assets, we will receive a 0.025% fee reduction on the Incremental Value. If less than 50% of our invested assets that are subject to the sub-allocation fee are invested in Core and Core Plus assets, we will pay an additional fee of 0.025% on Incremental Value. Under the Fee Agreement, fees payable to Apollo for sub-advisory services are encompassed within the current fee structure and are no longer paid separately as sub-advisory fees (as defined below). See *–Historical fee structure* below for further discussion of the prior fee structure.

During the three months ended September 30, 2019 and 2018, we incurred management fees of $127 million and $88 million, respectively. During the nine months ended September 30, 2019 and 2018, we incurred management fees of $313 million and $257 million, respectively. Management fees are included within net investment income on the condensed consolidated statements of income. As of September 30, 2019 and December 31, 2018, management fees payable were $81 million and $54 million, respectively, and are included in other liabilities on the condensed consolidated balance sheets.

Historical fee structure – Prior to January 1, 2019, we paid AAM an annual fee of 0.40%, subject to certain discounts and exceptions, on all assets that AAM managed in accounts owned by us in the U.S. and Bermuda or in accounts supporting reinsurance ceded to our U.S. and Bermuda subsidiaries by third-party insurers (North American Accounts) up to $65,846 million and 0.30% per year on assets managed in excess of such amount. Additionally, for certain assets which required specialized sourcing and underwriting capabilities, AAM had chosen to mandate sub-advisors rather than build out in-house capabilities. AAM entered into Master Sub-Advisory Agreements (MSAAs) with certain Apollo affiliates to sub-advise AAM with respect to a portion of our assets, with the fees recharged to us, in addition to the gross fee paid to AAM as described above.

The MSAAs covered services rendered by Apollo-affiliated sub-advisors relating to the following investments:

(In millions, except for percentages)	December 31, 2018
AFS securities	
Foreign governments	$ 153
Corporate	3,398
CLO	5,703
ABS	663
CMBS	880
Trading securities	87
Equity securities	2
Mortgage loans	3,507
Investment funds	157
Funds withheld at interest	4,126
Other investments	70
Total assets sub-advised by Apollo affiliates	$ 18,746
Percent of assets sub-advised by Apollo affiliates to total AAM-managed assets	18%

AAM paid Apollo 0.40% per year on all assets in the North American Accounts explicitly sub-advised by Apollo up to $10,000 million, 0.35% per year on all assets in such accounts explicitly sub-advised by Apollo in excess of $10,000 million up to $12,441 million, 0.40% per year on all assets in such accounts explicitly sub-advised by Apollo in excess of $12,441 million up to $16,000 million, and 0.35% per year on all assets in such accounts explicitly sub-advised by Apollo in excess of $16,000 million, subject to certain exceptions (sub-advisory fees).

Investment management agreement (IMA) termination – Our bye-laws currently provide that we may not, and will cause our subsidiaries not to, terminate any IMA among us or any of our subsidiaries, on the one hand, and the applicable Apollo subsidiary, on the other hand, other than on June 4, 2023 or any two year anniversary of such date (each such date, an IMA Termination Election Date) and any termination on an IMA Termination Election Date requires (i) the approval of two-thirds of our Independent Directors (as defined in the bye-laws) and (ii) prior written notice to the applicable Apollo subsidiary of such termination at least 30 days, but not more than 90 days, prior to an IMA Termination Election Date. If our Independent Directors make such election to terminate and notice of such termination is delivered, the termination will be effective no earlier than the second anniversary of the applicable IMA Termination Election Date (IMA Termination Effective Date). Notwithstanding the foregoing, (A) except as set forth in clause (B) below, our board of directors may only elect to terminate an IMA on an IMA Termination Election Date if two-thirds of our Independent Directors determine, in their sole discretion and acting in good faith, that either (i) there has been unsatisfactory long-term performance materially detrimental to us by the applicable Apollo subsidiary or (ii) the fees being charged by the applicable Apollo subsidiary are unfair and excessive compared to a comparable asset manager (provided, that in either case such Independent Directors must deliver notice of any such determination to the applicable Apollo subsidiary and the applicable Apollo subsidiary will have until the applicable IMA Termination Effective Date to address such concerns, and provided, further, that in the case of such a determination that the fees being charged by the applicable Apollo subsidiary are unfair and excessive, the applicable Apollo subsidiary has the right to lower its fees to match the fees of such comparable asset manager) and (B) upon the determination by two-thirds of our Independent Directors, we or our subsidiaries may also terminate an IMA with the applicable Apollo subsidiary, on a date other than an IMA Termination Effective Date, as a result of either (i) a material violation of law relating to the applicable Apollo subsidiary's advisory business, or (ii) the applicable Apollo subsidiary's gross negligence, willful misconduct or reckless disregard of its obligations under the relevant agreement, in each case of this clause (B), that is materially detrimental to us, and in either case of this clause (B), subject to the delivery of written notice at least 30 days prior to such termination; provided, that in connection with an event described in clause (B)(i) or (B)(ii), the applicable Apollo subsidiary shall have the right to dispute such determination of the Independent Directors within 30 days after receiving notice from us of such determination, in which case the matter will be submitted to binding arbitration and such IMA shall continue to remain in effect during the period of the arbitration (the events described in the foregoing clauses (A) and (B) are referred to in more detail in our bye-laws as "AHL Cause").

Governance – We have a management investment committee, which includes members of our senior management and reports to the risk committee of our board of directors. The committee focuses on strategic decisions involving our investment portfolio, such as approving investment limits, new asset classes and our allocation strategy, reviewing large asset transactions, as well as monitoring our credit risk, and the management of our assets and liabilities.

A significant voting interest in the Company is held by shareholders who are members of the Apollo Group, as defined in our bye-laws. Also, James Belardi, our Chief Executive Officer, is also an employee of ISG, receives remuneration from acting as Chief Executive Officer of ISG, and owns a profits interest in ISG. Additionally, six of the fifteen 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 Opportunities, L.P. (*A-A Mortgage)* – We have an equity method investment of $469 million and $463 million as of September 30, 2019 and December 31, 2018, 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 $254 million and $722 million of residential mortgage loans under this agreement during the nine months ended September 30, 2019 and 2018, respectively. Additionally, we hold ABS securities issued by AmeriHome affiliates of $124 million and $121 million as of September 30, 2019 and December 31, 2018, 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 $169 million as of September 30, 2019.

MidCap – AAA Investment (Co Invest VII), L.P. (CoInvest VII) holds a significant investment in MidCap, which is included in investment funds of consolidated VIEs on the condensed consolidated balance sheets. We have also advanced amounts under a subordinated debt facility to Midcap and, as of September 30, 2019 and December 31, 2018, the principal balance was $245 million, which is included in other related party investments on the condensed consolidated balance sheets. Our total investment in MidCap, including amounts advanced under credit facilities, was $795 million and $792 million as of September 30, 2019 and December 31, 2018, respectively. Additionally, we hold ABS and CLO securities issued by MidCap affiliates of $620 million and $226 million as of September 30, 2019 and December 31, 2018, 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) 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 United Kingdom. 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, 2019, 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 $127 million and $105 million as of September 30, 2019 and December 31, 2018, respectively. Additionally, as of September 30, 2019 and December 31, 2018, we had $158 million and $166 million, respectively, of funding agreements outstanding to Athora. We also have commitments to make additional equity investments in Athora of $443 million as of September 30, 2019.

Venerable – In connection with our coinsurance and modco agreements with Voya Insurance and Annuity Company (VIAC), we have a minority equity investment in VA Capital Company LLC (VA Capital), which was $94 million and $92 million as of September 30, 2019 and December 31, 2018, 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, as of September 30, 2019, we have a $148 million, 15-year term loan receivable from Venerable, which is held at amortized cost and included in related party other investments on the condensed consolidated balance sheets. While management views the overall transactions with VIAC and 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 Voya reinsurance transactions.

Strategic Partnership – On October 24, 2018, we entered into an agreement pursuant to which we may invest up to $2.5 billion over three years in funds managed by Apollo entities (Strategic Partnership). This arrangement is intended to permit us to invest across the Apollo alternatives platform into credit-oriented, strategic and other alternative investments in a manner and size that is consistent with our existing investment strategy. Fees for such investments payable by us to Apollo would be more favorable to us than market rates, and consistent with our existing alternative investments, investments made under the Strategic Partnership require approval of ISG and remain subject to our existing governance processes, including approval by our conflicts committee where applicable. As of September 30, 2019 and December 31, 2018, we had $32 million and $16 million, respectively, of investments under the Strategic Partnership and these investments are classified as investment funds of consolidated VIEs.

PK AirFinance – During the third quarter of 2019, we, Apollo and GE Capital (GE) entered into an agreement, pursuant to which we and Apollo agreed to purchase PK AirFinance (PK), an aviation lending business, including PK's in force loan portfolio (Aviation Loans), from GE's Aviation Services Unit. The Aviation Loans are generally fully secured by aircraft leases and aircraft. In connection with such transaction, Apollo is expected to acquire from GE the PK loan origination platform, including personnel and systems and, pursuant to certain agreements expected to be entered into between us, Apollo, and certain entities managed by Apollo (collectively, PK Transaction Agreements), the existing Aviation Loans will be acquired and securitized by a newly formed SPV for which Apollo will act as ABS manager (ABS-SPV). The ABS-SPV is expected to issue tranches of senior notes and subordinated notes, which will be secured by the Aviation Loans. Subject to customary closing conditions, we currently expect this agreement to close during the fourth quarter of 2019.

In connection with the acquisition of the existing Aviation Loans by the ABS-SPV, it is expected that (i) a tranche of senior notes will be acquired by third-party investors and (ii) certain of our subsidiaries are expected to purchase mezzanine tranches of the senior notes and the subordinated notes.

In addition to the investment in the senior notes and subordinated notes, it is expected that we will 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 will be 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 expect to pay the following fees to Apollo or certain service providers that are affiliates of, or are companies managed by, Apollo in connection with the PK Transaction Agreements:

(A) To Apollo, sub-allocation fees on the senior notes based on the rates applicable to Yield assets and sub-allocation fees on the subordinated notes based on the rates applicable to High Alpha assets.

(B) To Redding Ridge Asset Management LLC, a company in which certain funds managed by Apollo have an interest, as consideration for assistance with the structuring, monitoring, support and maintenance of the securitization transactions, a one-time structuring fee, as well as ongoing support fees equal to 1.5 bps on the total capitalization amount and certain other fees, which may become due upon the occurrence of certain events; and

(C) To Merx Aviation Servicing Limited, a company externally managed by Apollo Investment Management, L.P., with respect to certain diligence, technical support and enforcement, remarketing and restructuring services with respect to the existing Aviation Loans and the Forward Flow Loans, a one-time servicing fee, as well as certain special situations fees, which may become due upon the occurrence of certain events.

Apollo/Athene Dedicated Investment Program (ADIP) – On October 1, 2019, we sold 67% of our economic interests in our subsidiary, Athene Co-Invest Reinsurance Affiliate 1A Ltd. (ACRA), to ADIP, which is managed by AGM, for $575 million.

Apollo Share Exchange and Related Transactions – On October 27, 2019 we entered into a transaction agreement (Transaction Agreement) with AGM and certain affiliates of AGM which comprise the Apollo Operating Group (collectively, the AOG), pursuant to which, among other things, (i) we agreed to sell 27,959,184 new Class A common shares to the AOG for 29,154,519 new AOG units valued at approximately $1.2 billion (based on the closing market price of AGM's Class A common shares on October 25, 2019 and representing a 2.3% premium to the closing price of our Class A common shares on October 25, 2019), (ii) we agreed to sell 7,575,758 new Class A common shares to the AOG for $350 million in cash (representing a 10% premium to the closing price of our Class A common shares on October 25, 2019) (collectively, (i) and (ii), Share Issuance), (iii) we agreed to grant AGM the right to purchase additional Class A common shares from the closing date of the Share Issuance (Closing Date) until 180 days thereafter 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, (iv) AMH (as defined below) will have 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, and (v) we will make certain amendments to our bye-laws to, among other things, eliminate our current multi-class share structure.

The proposed transaction is subject to customary closing conditions, including approval of our shareholders, the receipt of all necessary regulatory and governmental approvals and certain other closing conditions. Subject to certain assumptions, including those regarding the volume of share repurchases and the prices at which those repurchases occur, and taking into consideration certain voting proxies (as described below), AGM and certain of its related parties and employees are expected to control equity interests approximating 35% of our voting power and economic interest as compared to the 45% voting power and approximately 17% economic interest that AGM and certain of its related parties and employees hold today.

Concurrently with the entry into the Transaction Agreement, Apollo Management Holdings, L.P. (AMH), James Belardi, our Chief Executive Officer, and William Wheeler, our President (each an "Other Shareholder"), entered into a Voting Agreement (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.

In addition, Messrs. Belardi and Wheeler have each entered into a letter agreement with us, pursuant to which they have agreed to vote their Class M common shares in favor of the proposals on which holders of our Class M common shares are entitled to vote at our shareholder meeting (including the proposal to approve the amendments to our bye-laws that eliminate the Class M common shares).

10. 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 $3,536 million and $3,036 million as of September 30, 2019 and December 31, 2018, 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, 2019 and December 31, 2018, we had $1,226 million and $926 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 up to $10 billion of 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, 2019 and December 31, 2018, we had $3,200 million and $2,700 million, respectively, of FABN funding agreements outstanding.

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, 2019	December 31, 2018
AFS securities	$ 7,766	$ 5,439
Trading securities	368	68
Equity securities	18	2
Mortgage loans	2,565	1,830
Investment funds	67	53
Derivative assets	95	24
Short-term investments	32	77
Other investments	59	47
Restricted cash	199	492
Total restricted assets	$ 11,169	$ 8,032

The restricted assets are primarily related to reinsurance trusts established in accordance with coinsurance agreements, and the FHLB funding agreements described above.

Letter of Credit—We have an undrawn letter of credit for $195 million as of September 30, 2019. This letter of credit was issued for our reinsurance program and expires by December 31, 2020.

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, 2019, had an asset value of $380 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, which the defendants have moved to dismiss. The court heard oral arguments on February 13, 2019 and has taken the matter under advisement. The court issued an opinion on July 31, 2019 that did not address the merits, but found that 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. The motion to dismiss will be argued on December 18, 2019. 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 value of the guarantees included within the asset value reflected above is $187 million as of September 30, 2019.

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

As a result of the difficulties experienced with respect to the administration of such policies, we have received notifications from several state regulators, including but not limited to the 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 U.S. insurance subsidiary relating to the treatment of policyholders subject to our reinsurance agreements with affiliates of Global Atlantic and the conversion of such annuity policies, including the administration of such blocks by AllianceOne. On June 28, 2018 we entered into a consent order with the NYSDFS resolving that matter in a manner that, when considering the indemnification received from affiliates of Global Atlantic, did not have a material impact on our financial condition, results of operations or cash flows. Global Atlantic is currently in negotiation with the CDI to resolve the pending action related to the converted life insurance policies. We do not expect any settlement to be material to our financial condition, results of operations or cash flows.

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

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

On January 23, 2019, we received a letter from the NYSDFS, with respect to a recent 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. We are currently in discussions with the NYSDFS to resolve its concerns.

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 sought leave to appeal this decision to the Judicial Committee of the Privy Council, the court of final appeal for matters litigated in Bermuda.

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 the matter is fully briefed and argued. We believe we have meritorious defenses to the claims and intend to vigorously defend the litigation. In light of the inherent uncertainties involved in this matter, reasonably possible losses, if any, cannot be estimated at this time.

Central Laborers' Pension Fund (CLPF) and Cambria County Employees' Retirement System (Cambria) – On June 18, 2019 and July 25, 2019, CLPF and Cambria, respectively, filed derivative actions against AAM and AGM, as defendants, and us, as a nominal defendant, in New York State Court (the New York Actions). CLPF and Cambria, both purporting to be our shareholders, each allege that AAM and AGM injured us by causing us to pay excessive management fees to AAM and AGM. The complaints do not name any of our directors as defendants, but allege certain breaches of fiduciary duty. Both complaints seek forms of injunctive relief and disgorgement, but neither complaint seeks monetary relief from us.

On July 5, 2019 and July 29, 2019, the Supreme Court of Bermuda enjoined CLPF and Cambria, respectively, from taking any further steps to advance or otherwise positively participate in its respective New York Action in light of the exclusive jurisdiction provision in our bye-laws. On July 31, 2019, CLPF and Cambria each filed a notice that it was dismissing its claims in its respective New York Action. We moved for default judgments in the Supreme Court of Bermuda and, on October 15, 2019, the Court granted our applications and permanently enjoined CLPF and Cambria from taking any further steps in the New York Actions. We are now seeking costs.

11. 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 U.S. 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. Included in Corporate and Other are 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 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 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;
- VIE expenses and noncontrolling interest; 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)	2019	2018	2019	2018
Retirement Services	$ 4,096	$ 1,771	$ 9,650	$ 4,901
Corporate and Other	28	18	84	71
Non-operating adjustments				
Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets	84	884	1,490	823
Investment gains (losses), net of offsets	373	(89)	1,768	(344)
VIE expenses and noncontrolling interest	—	(1)	—	1
Other adjustments to revenues	(80)	(7)	(161)	(63)
Total revenues	$ 4,501	$ 2,576	$ 12,831	$ 5,389

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)	2019	2018	2019	2018
Retirement Services	$ 256	$ 379	$ 918	$ 905
Corporate and Other	(13)	(8)	(18)	(5)
Non-operating adjustments				
Investment gains (losses), net of offsets	166	(53)	1,041	(160)
Change in fair values of derivatives and embedded derivatives – index annuities, net of offsets	(117)	376	(201)	530
Integration, restructuring and other non-operating expenses	(34)	(2)	(46)	(18)
Stock-based compensation, excluding LTIP	(3)	(3)	(9)	(8)
Income tax (expense) benefit – non-operating	21	(66)	19	(87)
Net income available to Athene Holding Ltd. common shareholders	$ 276	$ 623	$ 1,704	$ 1,157

The following represents total assets by segment:

(In millions)	September 30, 2019	December 31, 2018
Retirement Services	$ 141,501	$ 123,498
Corporate and Other	2,701	2,007
Total assets	$ 144,202	$ 125,505

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, 2019, have an expected Retirement Services annual net investment spread, which measures our investment performance less the total cost of our liabilities, of 1–2% over the 9.4 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 U.S. 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, 2019 and the year ended December 31, 2018 was 20.8% and 12.1%, respectively, and our consolidated annualized adjusted operating ROE was 13.3% and 13.9%, respectively. For the nine months ended September 30, 2019 and the year ended December 31, 2018, in our Retirement Services segment, we generated an annualized net investment spread of 1.38% and 1.70%, respectively, and an annualized adjusted operating ROE of 16.0% and 18.4%, respectively. Our Retirement Services segment generated an annualized investment margin on deferred annuities of 2.40% and 2.65% for the nine months ended September 30, 2019 and the year ended December 31, 2018, respectively. As of September 30, 2019, our deferred annuities had a weighted-average life of 8.8 years and made up a significant portion of our reserve liabilities. We currently maintain what we believe to be high capital ratios for our rating and, as of September 30, 2019, hold approximately $1.8 billion of excess capital, which we view as strategic capital available to reinvest into organic and inorganic growth opportunities.

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)	2019	2018	2019	2018
Retail sales	$ 1,921	$ 2,200	$ 5,646	$ 5,524
Flow reinsurance	609	610	2,754	1,287
Funding agreements	503	—	802	425
Pension risk transfer	2,604	476	5,233	796
Total organic deposits	5,637	3,286	14,435	8,032
Inorganic deposits	—	—	—	19,104
Total deposits	$ 5,637	$ 3,286	$ 14,435	$ 27,136

Our organic channels, including retail, flow reinsurance and institutional products, provided deposits of $14.4 billion and $8.0 billion in the nine months ended September 30, 2019 and 2018, respectively. 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 $8.5 billion and $5.7 billion for the nine months ended September 30, 2019 and 2018, respectively. We believe that our improving 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 and scale to position us for continued growth.

Within our retail channel, we had fixed annuity sales of $5.6 billion and $5.5 billion for the nine months ended September 30, 2019 and 2018, respectively. The increase in our retail channel was driven by growth in our bank and broker-dealer channel including the addition of new partners and new product introductions. We aim to grow our retail channel by deepening our relationships with our approximately 50 independent marketing organizations (IMO); approximately 45,000 independent agents; and our growing network of 12 small and mid-sized banks and 83 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 improving 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. We have recently implemented a new technology platform for our retail business to expand operational capabilities. Additionally, we focus on hiring and training a specialized sales force and creating products to capture new potential distribution opportunities.

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

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 long-term liabilities with attractive crediting rates. We generated deposits through our flow reinsurance channel of $2.8 billion and $1.3 billion for the nine months ended September 30, 2019 and 2018, respectively. The increase in our flow reinsurance channel was driven by the addition of new partners in the second half of 2018 and new product launches by our partners. We expect that our improving 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 $6.0 billion and $1.2 billion for the nine months ended September 30, 2019 and 2018, respectively. The increase in our institutional channel is driven by higher PRT deposits. During the nine months ended September 30, 2019, we closed four PRT transactions and issued group annuity contracts in the aggregate principal amount of $5.2 billion, compared to $796 million during the nine months ended September 30, 2018. Since entering the PRT channel in 2017 through September 30, 2019, we have closed 15 deals involving more than 168,000 plan participants resulting in the issuance of group annuities of $10.1 billion. We issued funding agreements of $802 million and $425 million for the nine months ended September 30, 2019 and 2018, respectively. While unfavorable market conditions limited our issuances of funding agreements early in 2019, a more favorable rate environment recently has led to the issuance of two funding agreements under our FABN program in June and August as well as one funding agreement under our FHLB program in July. 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 and in 2018, we generated $27.0 billion of deposits driven by two block reinsurance transactions. On June 1, 2018, we closed on the Voya reinsurance transaction pursuant to which we entered into coinsurance and modco agreements with VIAC and ReliaStar Life Insurance Company (RLI) to reinsure a block of fixed and fixed indexed annuities providing $19.1 billion of deposits. On December 7, 2018, we entered into a modified coinsurance agreement with Lincoln, with an effective date of October 1, 2018, to reinsure an 80% quota share of fixed deferred and fixed indexed annuities providing $7.9 billion of deposits. We expect that our inorganic channels will continue to be important sources 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 our relationship with Apollo, we are a solutions provider with a proven track record to close transactions, which we believe makes us the ideal partner to insurance companies seeking to restructure their business.

In order to support our growth aspirations and capital deployment opportunities, we established ACRA as a long-duration, on-demand capital vehicle. On October 1, 2019, ADIP purchased 67% of the economic interests in ACRA for approximately $575 million. ACRA is expected to participate in qualifying transactions and certain other transactions by drawing two-thirds of the required capital for such transactions from third-party investors. See *–Recent Developments* for further information on qualifying transactions. As of October 31, 2019, ADIP has raised $3 billion in capital commitments, of which approximately $2.4 billion remained uncalled, and additional commitments are expected to close over the coming months. 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 balance sheet position.

Industry Trends and Competition

Market Conditions

The U.S. Federal Reserve continued its accommodative policy with the recent rate cuts announced at its meetings on September 18, 2019 and October 30, 2019. Consequently, the yield curve transitioned to being more flat than inverted in the short to medium term sections of the curve. While current economic fundamentals appear strong, uncertainty about future fiscal policy, the scope of potential deregulation, the imposition of tariffs or other barriers to international trade and levels of global trade, the future path of the Federal Reserve's quantitative tightening or easing, along with uncertainty about the Federal Reserve's ability to manage its normalization process and the impact on inflation and wage growth, may trigger continued volatility across financial markets, and specifically equity market volatility, which may adversely affect the hedging costs of our liability policy hedging program. Credit market volatility, which may widen credit spreads, generally benefits our investment purchases but may negatively affect the valuations of our in-force investment portfolio.

A volatile market environment may affect our ability to produce liability products that are profitable, have our desired risk profile, and are desirable to consumers. As a company with strong retirement, investment management and insurance capabilities, we expect that over the long term, market conditions resulting in higher Treasury yields and credit spreads will enhance the attractiveness of our portfolio of annuity products. We continue to monitor the behavior of our customers and other factors that react to market conditions, including annuitization rates and lapse rates, in order to best serve our customers and generate strong profitability to our shareholders.

Interest Rate Environment

As a retirement services company focused on issuing and reinsuring fixed annuities, we are affected by the monetary policy of the Federal Reserve in the United States as well as other central banks around the world. In both September and October, the Federal Reserve decreased the federal funds rate for the second and third time this year, pushing yields on short to mid term treasuries lower. Interest rates in the United States remain lower than historical levels.

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. We address interest rate risk through managing the duration of the liabilities we source with assets we acquire through asset liability management (ALM) modeling. As part of our investment strategy, we purchase floating rate investments, which we expect will perform well in a rising interest rate environment, but may not perform as well in a declining rate environment. Our investment portfolio includes $20.6 billion of floating rate investments, or 17% of our total invested assets as of September 30, 2019.

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, 2019, most of our products were fixed annuities with 23% of our FIAs at the minimum guarantees and 41% of our fixed rate annuities at the minimum crediting rates. As of September 30, 2019, minimum guarantees on all of our deferred annuities, including those with crediting rates already at their minimum guarantees, were, on average, 100 to 110 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 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 2018 Annual Report, which includes a discussion regarding interest rate and other significant risks and our strategies for managing these risks.

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 $76.2 billion for the six months ended June 30, 2019, a 23.5% increase over 2018. In the total fixed annuity market, for the six months ended June 30, 2019 (the most recent period for which specific market share data is available), we were the 6th largest company based on sales of $3.7 billion, translating to a 4.9% market share. For the six months ended June 30, 2018, our market share was 5.5% with sales of $3.3 billion.

FIAs have been one of the fastest growing annuity products, having grown from $27.3 billion in sales for the year ended December 31, 2005 to $69.6 billion in sales for the year ended December 31, 2018. According to LIMRA data, for the six months ended June 30, 2019 (the most recent period for which specific market share data is available), we were the 2nd largest provider of FIAs based on sales of $3.4 billion, and our market share for the same period was 8.9%. For the six months ended June 30, 2018, we were the 2nd largest provider of FIAs based on sales of $2.9 billion, translating to an 9.1% market share.

Recent Developments

Strategic Transaction with Apollo – On October 27, 2019 we entered into a Transaction Agreement with the AOG which is expected to close in the first quarter of 2020, subject to regulatory and Athene shareholder approvals. See *Note 9 – Related Parties* to the condensed consolidated financial statements for further discussion regarding the Transaction Agreement.

*Apollo/Athene Dedicated Investment Program (ADIP) –*ACRA was initially formed as a wholly owned subsidiary of ALRe with the objective of raising third-party capital for the purpose of pursuing Qualifying Transactions (as defined below). On September 11, 2019, ALRe entered into a master framework agreement (Framework Agreement) and related transaction documents with ACRA. Pursuant to the Framework Agreement and related transaction documents, ACRA received capital commitments from ALRe and ADIP.

On October 1, 2019, ALRe sold 67% of its economic interests in ACRA to ADIP for $575 million. The shares held by ADIP are non-voting. The shares held by ALRe represent 100% of the voting power and 33% of the economic interests in ACRA. In connection with the sale of ACRA economic interests to ADIP, ALRe entered into a shareholders agreement (Shareholders Agreement) with ACRA and ADIP. The terms of the Shareholders Agreement were approved by the disinterested members of our board of directors, acting under authority granted by our board of directors.

Pursuant to the Framework Agreement, for a period expiring approximately three years following the one-year anniversary of the first ADIP fund closing (subject to two one-year extension periods exercisable by ADIP, the Commitment Period), ACRA has the right to participate (through itself or other legal entities formed pursuant to the Framework Agreement for purposes of entering into such transactions) in substantially all legal entity acquisition transactions, third-party block reinsurance transactions and pension risk transfer transactions, as well as certain flow reinsurance transactions with third-party counterparties (each, a Qualifying Transaction). ALRe may also offer ACRA the right to participate in flow reinsurance transactions with existing third-party counterparties and reinsurance transactions involving new funding agreements from time to time, subject to certain conditions. ACRA’s election to participate in Qualifying Transactions is determined by the Transaction Committee of ACRA, which is a committee of the board of directors of ACRA comprised of our representatives and those of AGM. If ACRA elects not to participate in a Qualifying Transaction, we will have the right to pursue the Qualifying Transaction without ACRA. ACRA’s right to participate in Qualifying Transactions is subject to capital requirements applicable to ACRA and other terms and conditions.

In connection with each transaction in which ACRA elects to participate (each, a Participating Transaction), subject to the applicable terms and conditions of the Framework Agreement and related transaction documents, ACRA will pay ALRe a fee (Wrap Fee) expected to be approximately 15 basis points per annum multiplied by the total reserves with respect to the assumed or acquired business, under a schedule where the Wrap Fee increases from 10 basis points as business assumed or acquired by ACRA increases.

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

As of September 30, 2019, ALRe had retroceded to ACRA 100% of approximately $6.6 billion of certain fixed deferred and fixed indexed annuities and 100% of approximately $2.5 billion of group annuities. In connection with future Participating Transactions, ACRA will draw from ADIP and from ALRe their respective share of the amount of capital necessary to consummate such Participating Transactions.

In addition, ACRA pays a monthly fee to Apollo for asset management services in an amount equal to the marginal base investment management fees and sub-allocation fees we pay to Apollo pursuant to the Fee Agreement. See *Note 9 – Related Parties* to the condensed consolidated financial statements for further discussion regarding the Fee Agreement.

Key Operating and Non-GAAP Measures

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

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income 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 available to common shareholders equals net income available to AHL common shareholders adjusted to eliminate the impact of the following (collectively, the "non-operating adjustments"):

- **Investment Gains (Losses), Net of Offsets—**Investment gains (losses), net of offsets, consist of the realized gains and losses on the sale of AFS securities, the change in fair value of reinsurance assets, unrealized gains and losses, impairments, and other investment gains and losses. Unrealized, impairments 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 net other-than-temporary impairment (OTTI) impacts 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—**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 "value 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—**Integration, restructuring, and other non-operating expenses consist 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—**Stock compensation expenses associated with our share incentive plans, excluding our long-term incentive plan, are not related to our underlying profitability drivers and fluctuate from time to time due to the structure of our plans.

- **Bargain Purchase Gain—**Bargain purchase gains associated with acquisitions are adjustments to net income available to AHL common shareholders as they are not related to our underlying profitability drivers.

- **Income Tax (Expense) Benefit – Non-operating—**The non-operating income tax expense represents 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 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 available to AHL common shareholders, we believe adjusted operating income available to common shareholders provides a meaningful financial metric that helps investors understand our underlying results and profitability. Adjusted operating income available to common shareholders should not be used as a substitute for net income available to AHL common shareholders.

Adjusted ROE, Adjusted Operating ROE and Adjusted Net Income Available to AHL Common Shareholders

Adjusted ROE, adjusted operating ROE and adjusted net income available to AHL common shareholders are non-GAAP measures 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, in each case net of DAC, DSI, rider reserve and tax offsets. Adjusted ROE is calculated as adjusted net income available to AHL common shareholders, divided by average adjusted common shareholders’ equity. Adjusted common shareholders’ equity is calculated as the ending 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 available to common shareholders, divided by average adjusted common shareholders’ equity. Adjusted net income available to AHL common shareholders is calculated as net income available to AHL common shareholders excluding the change in fair value of funds withheld and modco reinsurance assets, net of DAC, DSI, rider reserve and tax offsets. 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 ROE, adjusted operating ROE and adjusted net income available to AHL common shareholders should not be used as a substitute for ROE and net income available to AHL common shareholders. However, we believe the adjustments to equity are significant to gaining an understanding of our overall financial performance.

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

Adjusted operating earnings 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 represents an economic view of our share counts and provides a simplified and consistent view of our outstanding shares. Adjusted operating earnings per common share is calculated as the adjusted operating income available to common shareholders, over the weighted average common shares outstanding – adjusted operating. Adjusted book value per common share is calculated as the adjusted common shareholders’ equity divided by the adjusted operating common shares outstanding. Our Class B common shares are economically equivalent to Class A common shares and can be converted to Class A common shares on a one-for-one basis at any time. Our Class M common shares are in the legal form of shares but economically function as options as they are convertible into Class A shares after vesting and payment of the conversion price. In calculating Class A diluted earnings per share on a GAAP basis, we are required to apply sequencing rules to determine the dilutive impacts, if any, of our Class B common shares, Class M common shares and any other stock-based awards. To the extent our Class B common shares, Class M common shares and/or any other stock-based awards are not dilutive, after considering the dilutive effects of the more dilutive securities in the sequence, they are 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 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 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 excluding consolidated variable interest entities (VIEs) divided by adjusted 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 financial health of our Retirement Services profitability. 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 reserve liabilities.

Net investment earned rate is a non-GAAP measure we use to evaluate the performance of our invested assets that does not correspond to GAAP net investment income. Net investment earned rate is computed as the income from our invested assets divided by the average invested assets 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 alternative investment gains and losses, gains and losses related to trading securities for CLOs, net VIE impacts (revenues, expenses and noncontrolling interest) and the change in fair value of reinsurance assets. 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. Cost of funds is computed as the total liability costs divided by the average invested assets 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 invested assets for the relevant periods. Cost of crediting on deferred annuities is computed as the interest credited on fixed strategies and option costs on indexed annuity strategies divided by the average 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 institutional reserve liabilities. Our average invested assets, account values and 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.

Invested Assets

In managing our business we analyze invested assets, which does not correspond to total investments, including investments in related parties, as disclosed in our consolidated financial statements and notes thereto. Invested assets represents the investments that directly back our reserve liabilities as well as surplus assets. Invested assets is used in the computation of net investment earned rate, which allows us to analyze the profitability of our investment portfolio. 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) the consolidated VIE assets, liabilities and noncontrolling interest, (f) net investment payables and receivables and (g) policy loans ceded (which offset the direct policy loans in total investments). 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 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. Our invested assets are averaged over the number of quarters in the relevant period to compute our net investment earned rate for such period.

Reserve Liabilities

In managing our business we also analyze reserve liabilities, which does not correspond to total liabilities as disclosed in our consolidated financial statements and notes thereto. Reserve liabilities represents our policyholder liability obligations net of reinsurance and is used to analyze the costs of our liabilities. Reserve liabilities includes (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. 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.

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).

Consolidated Results of Operations

The following summarizes the consolidated results of operations:

(In millions, except percentages)	Three months ended September 30, 2019	Three months ended September 30, 2018	Nine months ended September 30, 2019	Nine months ended September 30, 2018
Revenues	$ 4,501	$ 2,576	$ 12,831	$ 5,389
Benefits and expenses	4,222	1,897	11,062	4,067
Income before income taxes	279	679	1,769	1,322
Income tax expense (benefit)	(14)	56	48	165
Net income	293	623	1,721	1,157
Less: Preferred stock dividends	17	—	17	—
Net income available to AHL common shareholders	$ 276	$ 623	$ 1,704	$ 1,157
ROE	8.5%	28.6%	20.8%	17.0%
Adjusted ROE	8.3%	30.8%	13.4%	21.7%

Three Months Ended September 30, 2019 Compared to the Three Months Ended September 30, 2018

In this section, references to 2019 refer to the three months ended September 30, 2019 and references to 2018 refer to the three months ended September 30, 2018.

Net Income Available to AHL Common Shareholders

Net income available to Athene Holding Ltd. common shareholders decreased by $347 million, or 56%, to $276 million in 2019 from $623 million in 2018. ROE decreased to 8.5% from 28.6% in 2018, and adjusted ROE decreased to 8.3% from 30.8% in 2018. The decrease in net income available to Athene Holding Ltd. common shareholders was driven by an increase of $2.3 billion in benefits and expenses, partially offset by a $1.9 billion increase in revenues and a $70 million decrease in income tax expenses.

Revenues

Revenues increased by $1.9 billion to $4.5 billion in 2019 from $2.6 billion in 2018. The increase was driven by an increase in premiums, partially offset by a decrease in investment related gains and losses, higher other-than-temporary impairments of $22 million and lower VIE investment related gains and losses.

Premiums increased by $2.1 billion to $2.6 billion in 2019 from $526 million in the prior year, driven by higher PRT premiums in 2019.

Investment related gains and losses decreased by $128 million to $688 million in 2019 from $816 million in the prior year, primarily due to the change in fair value of FIA hedging derivatives, partially offset by the change in fair value of reinsurance assets and the change in fair value of trading securities. The change in fair value of FIA hedging derivatives decreased $679 million 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 1.2% in 2019, compared to an increase of 7.2% in 2018. The change in fair value of reinsurance assets increased by $397 million primarily driven by the change in the value of the underlying assets related to the decrease in U.S. Treasury rates and credit spreads tightening. The favorable change in fair value of trading securities of $97 million was comprised primarily of an increase in AmerUs Closed Block assets of $55 million related to higher gains resulting from a decrease in U.S. Treasury rates and credit spreads tightening.

VIE investment related gains and losses decreased by $21 million to $2 million in 2019 from $23 million in the prior year, primarily driven by gains in 2018 attributed to NCL Athene LLC (NCL LLC) and MidCap.

Benefits and Expenses

Benefits and expenses increased by $2.3 billion to $4.2 billion in 2019 from $1.9 billion in 2018. The increase was driven by an increase in future policy benefits, an increase in amortization of DAC, DSI and VOBA and an increase in interest sensitive contract benefits. Our annual unlocking of assumptions resulted in an increase in benefits and expenses of $165 million, compared to a decrease of $179 million in 2018. The unlocking was driven by an increase of $76 million in FIA embedded derivative liabilities and an increase of $89 million related to DAC, DSI, VOBA and rider reserves, compared to a decrease of $309 million in FIA embedded derivative liability and an increase of $130 million related to DAC, DSI, VOBA and rider reserves in 2018.

Future policy and other policy benefits increased by $1.9 billion to $2.9 billion in 2019 from $928 million in 2018, primarily attributable to higher PRT obligations and an increase in the change in AmerUs Closed Block fair value liability, partially offset by lower rider reserves. The unfavorable change in the AmerUs Closed Block fair value liability of $57 million was primarily driven by the increase in unrealized gains on the underlying investments related to the decrease in U.S. Treasury rates compared to prior year and credit spreads tightening. The decrease in rider reserves of $244 million was primarily driven by a decrease related to our annual unlocking of assumptions of $273 million and a decrease related to the net change in FIA derivatives, partially offset by growth in the block of business. Unlocking in 2019 was favorable by $61 million related to changes in lapse assumptions, partially offset by changes in the long-term net investment earned rate assumption. The 2018 unlocking impacts were unfavorable by $212 million related to changes in lapse assumptions partially offset by utilization of certain rider benefits.

DAC, DSI and VOBA amortization increased by $284 million to $343 million in 2019 from $59 million in 2018, primarily due to an unfavorable increase to our annual unlocking of assumptions of $232 million, the favorable change in investment related gains and losses as a result of a favorable change in reinsurance embedded derivatives and growth in the block of business, partially offset by the unfavorable net change in FIA derivatives. Unlocking in 2019 was unfavorable by $150 million, primarily related to changes in the long-term net investment earned rate and lapse assumptions, while 2018 unlocking was favorable by $82 million related to changes in lapse assumptions.

Interest sensitive contract benefits increased by $59 million to $801 million in 2019 from $742 million in 2018, driven by an increase in FIA fair value embedded derivatives of $14 million and growth in the block of business. The change in the FIA fair value embedded derivatives was primarily due to the unfavorable change in discount rates used in our embedded derivative calculations as the current quarter experienced a decrease in discount rates compared to 2018, which experienced an increase in discount rates, as well as an unfavorable impact of our annual unlocking of assumptions of $385 million. This was partially offset by the performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, which experienced an increase of 1.2% in 2019, compared to an increase of 7.2% in 2018. The FIA fair value embedded derivatives unlocking was unfavorably impacted by an increase of $76 million in 2019 compared to a decrease of $309 million in 2018, both of which were mainly attributed to changes in lapse assumptions.

Taxes

Income tax expense (benefit) decreased by $70 million to $(14) million in 2019 from $56 million in 2018. The income tax benefit for 2019 was primarily driven by lower taxable income resulting from the unfavorable net change in FIA derivatives and unfavorable unlocking. Income tax expense in 2018 included a benefit resulting from the reversal of previously accrued taxes during the first six months of 2018, which was triggered by the retroactive implementation of reinsurance arrangements common in the insurance industry.

Our effective tax rate in the third quarter of 2019 was (5)% and 8% in 2018. 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.

Preferred Stock Dividends

Preferred stock dividends increased by $17 million to $17 million in 2019 from $0 million in 2018, driven by our issuance of preferred stock in 2019.

Nine Months Ended September 30, 2019 Compared to the Nine Months Ended September 30, 2018

In this section, references to 2019 refer to the nine months ended September 30, 2019 and references to 2018 refer to the nine months ended September 30, 2018.

Net Income Available to Athene Holding Ltd. Common Shareholders

Net income available to Athene Holding Ltd. common shareholders increased by $547 million, or 47%, to $1.7 billion in 2019 from $1.2 billion in 2018. ROE increased to 20.8% from 17.0% in 2018, and adjusted ROE decreased to 13.4% from 21.7% in 2018. The increase in net income available to Athene Holding Ltd. common shareholders was driven by a $7.4 billion increase in revenues, partially offset by an increase of $7.0 billion in benefits and expenses.

Revenues

Revenues increased by $7.4 billion to $12.8 billion in 2019 from $5.4 billion in 2018. The increase was driven by an increase in premiums, an increase in investment related gains and losses, higher net investment income and higher product charges.

Premiums increased by $3.8 billion to $5.3 billion in 2019 from $1.5 billion in the prior year, driven by higher PRT premiums and an increase in premiums from flow reinsurance, partially offset by the 2018 Voya reinsurance premiums at inception.

Investment related gains and losses increased by $3.2 billion to $3.8 billion in 2019 from $578 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, the change in fair value of trading securities and the change in realized gains on AFS securities. The change in fair value of reinsurance assets increased by $2.0 billion primarily driven by the favorable change in the value of the underlying assets related to the decrease in U.S. Treasury rates and credit spreads tightening. The change in fair value of FIA hedging derivatives increased $662 million driven by the strong 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 18.7% in 2019, compared to an increase of 9.0% in 2018. The favorable change in fair value of trading securities of $390 million was comprised primarily by an increase in AmerUs Closed Block assets of $256 million related to higher gains resulting from a decrease in U.S. Treasury rates and credit spreads tightening. The favorable change in realized gains on AFS securities of $47 million was driven by a higher level of sales favorably impacted by the lower interest rate environment.

Net investment income increased by $414 million to $3.3 billion in 2019 from $2.9 billion in 2018, primarily driven by growth in our investment portfolio attributed to the Voya and Lincoln reinsurance transactions, a strong increase in deposits over the prior twelve months and earnings on the proceeds of preferred stock issuances. Additionally, net investment income increased due to higher floating rate investment income related to higher short-term interest rates throughout 2019 compared to prior year.

Product charges increased by $71 million to $392 million in 2019 from $321 million in 2018, primarily driven by growth in the block of business and charges related to the addition of the Voya and Lincoln reinsurance liabilities.

Benefits and Expenses

Benefits and expenses increased by $7.0 billion to $11.1 billion in 2019 from $4.1 billion in 2018. The increase was driven by an increase in future policy benefits, an increase in interest sensitive contract benefits, an increase in amortization of DAC, DSI and VOBA, and an increase in policy and other operating expenses. Our annual unlocking of assumptions resulted in an increase in benefits and expenses of $165 million, compared to a decrease of $179 million in 2018. The unlocking was driven by an increase of $76 million in FIA embedded derivative liabilities and an increase of $89 million related to DAC, DSI, VOBA and rider reserves, compared to a decrease of $309 million in FIA embedded derivative liability and an increase of $130 million related to DAC, DSI, VOBA and rider reserves in 2018.

Future policy and other policy benefits increased by $4.0 billion to $6.2 billion in 2019 from $2.2 billion in 2018, primarily attributable to higher PRT obligations, higher benefits for payout annuities with life contingencies due to the Voya reinsurance transaction, and an increase in the change in AmerUs Closed Block fair value liability, partially offset by the 2018 Voya reinsurance policyholder obligations at inception and the change in rider reserves. The change in the AmerUs Closed Block fair value liability of $284 million was primarily driven by the increase in unrealized gains on the underlying investments related to the change in U.S. Treasury rates compared to prior year and credit spreads tightening. The change in rider reserve of $169 million was primarily due to the unfavorable net change in FIA derivatives, favorable unlocking of assumptions of $273 million, partially offset by the favorable change in reinsurance embedded derivatives and growth in the block of business. Unlocking in 2019 was favorable by $61 million related to changes in lapse assumptions, partially offset by changes in the long-term net investment earned rate assumption. The 2018 unlocking impacts were unfavorable by $212 million related to changes in lapse assumptions partially offset by utilization of certain rider benefits.

Interest sensitive contract benefits increased by $2.3 billion to $3.4 billion in 2019 from $1.1 billion in 2018, driven by an increase in FIA fair value embedded derivatives of $2.1 billion and growth in the block of business. The change in the FIA fair value embedded derivatives was due to the performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, which experienced an 18.7% increase in 2019, compared to an increase of 9.0% in 2018, as well as an unfavorable change in discount rates used in our embedded derivative calculations as the current year experienced a decrease in discount rates compared to 2018, which experienced an increase in discount rates. Additionally, the change in FIA fair value embedded derivatives was due to an unfavorable impact of our annual unlocking of assumptions of $385 million. Unlocking was unfavorably impacted by an increase of $76 million in 2019 compared to a decrease of $309 million in 2018, both of which were mainly attributed to changes in lapse assumptions.

DAC, DSI and VOBA amortization increased by $580 million to $853 million in 2019 from $273 million in 2018, primarily due to unfavorable unlocking of assumptions of $232 million, favorable change in investment related gains and losses as a result of a favorable change in reinsurance embedded derivatives and growth in the block, partially offset by the favorable net change in FIA derivatives. Unlocking in 2019 was unfavorable $150 million, primarily related to changes in the long-term net investment earned rate and lapse assumptions, while the 2018 unlocking impacts were favorable $82 million related to changes in lapse assumptions.

Policy and other operating expenses increased by $90 million to $544 million in 2019 from $454 million in 2018, primarily driven by growth in our business including the Voya and Lincoln transactions and costs related to ACRA.

Taxes

Income tax expense decreased by $117 million to $48 million in 2019 from $165 million in 2018. Income tax expense for 2019 was primarily driven by lower taxable income resulting from the unfavorable net change in FIA derivatives and unfavorable unlocking.

Our effective tax rate in 2019 was 3% and 12% in 2018. 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.

Preferred Stock Dividends

Preferred stock dividends increased by $17 million to $17 million in 2019 from $0 million in 2018, driven by our issuance of preferred stock in 2019.

Results of Operations by Segment

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions, except percentages)	2019	2018	2019	2018
Net income available to Athene Holding Ltd. common shareholders	$ 276	$ 623	$ 1,704	$ 1,157
Non-operating adjustments				
Realized gains (losses) on sale of AFS securities	46	5	99	33
Unrealized, impairments and other investment gains (losses)	(31)	6	8	22
Change in fair value of reinsurance assets	314	(95)	1,500	(302)
Offsets to investment gains (losses)	(163)	31	(566)	87
Investment gains (losses), net of offsets	166	(53)	1,041	(160)
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	(117)	376	(201)	530
Integration, restructuring and other non-operating expenses	(34)	(2)	(46)	(18)
Stock compensation expense	(3)	(3)	(9)	(8)
Income tax (expense) benefit – non-operating	21	(66)	19	(87)
Less: Total non-operating adjustments	33	252	804	257
Adjusted operating income available to common shareholders	$ 243	$ 371	$ 900	$ 900
Adjusted operating income available to common shareholders				
Retirement Services	$ 256	$ 379	$ 918	$ 905
Corporate and Other	(13)	(8)	(18)	(5)
Adjusted operating income available to common shareholders	$ 243	$ 371	$ 900	$ 900
Adjusted operating ROE	10.6%	17.2%	13.3%	14.5%
Retirement Services adjusted operating ROE	13.5%	23.2%	16.0%	19.7%

Three Months Ended September 30, 2019 Compared to the Three Months Ended September 30, 2018

Adjusted operating income available to common shareholders decreased by $128 million, or 35%, to $243 million in 2019 from $371 million in 2018. Adjusted operating ROE was 10.6%, down from 17.2% in 2018. The decrease in adjusted operating income available to common shareholders was primarily driven by a decrease in our Retirement Services segment of $123 million, while Corporate and Other decreased $5 million.

Our consolidated net investment earned rate was 4.35% in 2019, a decrease from 4.52% in 2018, due to the lower fixed income and other investment performance, partially offset by higher alternative investment performance. Fixed and other net investment earned rate was 4.11% in 2019, a decrease from 4.33% in 2018, driven by lower RMBS returns and floating rate investment income. Alternative net investment earned rate was 9.26% in 2019, an increase from 9.13% in 2018, driven by an increase in Catalina and Athora income, as well as an increase in the market value of a public equity position in OneMain Holdings, Inc. (OneMain).

Non-operating Adjustments

Non-operating adjustments decreased by $219 million to $33 million in 2019 from $252 million in 2018. The decrease in non-operating adjustments was primarily driven by the unfavorable change in net FIA derivatives, partially offset by the favorable change in fair value of reinsurance assets and a favorable tax benefit primarily due to the unfavorable change in net FIA derivatives. Net FIA derivatives were unfavorable by $493 million primarily due to $261 million of unfavorable unlocking net of offsets, less favorable performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index, and an unfavorable change in discount rates used in our embedded derivative calculations as the current quarter experienced a decrease in discount rates compared to 2018. Unlocking, net of DAC and rider reserve offsets, was unfavorably impacted by $65 million in 2019 compared to favorable $196 million in 2018, both of which were mainly attributed to changes in lapse assumptions. The change in fair value of reinsurance assets impacts were favorable by $409 million due to a decrease in U.S. Treasury rates, credit spreads tightening, and growth in the reinsurance block from the Voya and Lincoln transactions.

Nine Months Ended September 30, 2019 Compared to the Nine Months Ended September 30, 2018

Adjusted operating income available to common shareholders of $900 million in 2019 was in line with 2018. Adjusted operating ROE was 13.3%, down from 14.5% in 2018. The change in adjusted operating income available to common shareholders was primarily driven by an increase in our Retirement Services segment of $13 million, while Corporate and Other decreased $13 million.

Our consolidated net investment earned rate was 4.43% in 2019, a decrease from 4.61% in 2018, primarily due to the lower fixed income and other investment performance. Fixed and other net investment earned rate was 4.21% in 2019, a decrease from 4.38% in 2018, primarily driven by lower RMBS returns and run-off of higher yielding assets, as well as the unfavorable impact of the lower interest rate environment on new investment purchases in 2019, partially offset by higher floating rate investment income. Alternative net investment earned rate was 9.30% in 2019, a decrease from 9.57% in 2018, primarily driven by lower credit and real asset fund income, offset by an increase in market value of the equity position in OneMain and the unfavorable 2018 change in market value of an equity position in Caesars Entertainment Corporation (Caesars).

Non-operating Adjustments

Non-operating adjustments increased by $547 million to $804 million in 2019 from $257 million in 2018. The increase in non-operating adjustments was primarily driven by the favorable change in fair value of reinsurance assets and a favorable tax benefit primarily due to the unfavorable change in net FIA derivatives, partially offset by unfavorable net FIA derivatives. Change in fair value of reinsurance assets impacts were favorable by $1.8 billion due to a decrease in U.S. Treasury rates, credit spreads tightening, and growth in the reinsurance block from the Voya and Lincoln transactions. Net FIA derivatives were unfavorable by $731 million due to an unfavorable change in discount rates used in our embedded derivative calculations as the current year experienced a decrease in discount rates compared to an increase in discount rates in 2018, as well as $261 million of unfavorable unlocking net of offsets, partially offset by the performance of the equity indices to which our FIA policies are linked, primarily the S&P 500 index. Unlocking, net of DAC and rider reserve offsets, was unfavorably impacted by $65 million in 2019 compared to favorable $196 million in 2018, both of which were 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, 2019 Compared to the Three Months Ended September 30, 2018

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders decreased by $123 million, or 32%, to $256 million in 2019, from $379 million in 2018. Adjusted operating ROE was 13.5%, down from 23.2% in the prior period. The decrease in adjusted operating income available to common shareholders was driven by higher cost of funds and higher operating taxes, partially offset by higher net investment earnings. Cost of funds were $260 million higher related to growth in the block of business, unfavorable rider reserves and DAC amortization related to actuarial experience and equity market impacts and unfavorable unlocking of $35 million. Unlocking in 2019 was unfavorable by $48 million reflecting changes in long term net investment earned rate and lapse assumptions, while 2018 unlocking was unfavorable $13 million reflecting changes in lapse assumptions partially offset by utilization of certain rider benefits. Taxes increased $17 million primarily driven by a 2018 tax benefit resulting from the reversal of previously accrued taxes during the first six months of 2018, which was triggered by the retroactive implementation of reinsurance arrangements common in the industry, partially offset by lower taxable earnings in 2019. Net investment earnings increased $156 million primarily driven by $20.8 billion of growth in our invested assets attributed to strong deposits over the prior twelve months, partially offset by lower RMBS income from lower pre-payments than expected and runoff of higher yielding assets.

Net Investment Spread

	Three months ended September 30,	
	2019	2018
Net investment earned rate	4.31%	4.55%
Cost of funds	3.18%	2.77%
Net investment spread	1.13%	1.78%

Net investment spread, which measures the spread on our investment performance less the total cost of our liabilities, decreased 65 basis points to 1.13% in 2019 from 1.78% in 2018. Net investment earned rate decreased due to a decline in our fixed and other net investment earned rate and a decline in the alternative net investment earned rate. The fixed and other net investment earned rate decreased in 2019 to 4.11% from 4.33% in 2018, primarily attributed to lower RMBS returns and lower floating rate income. The alternative net investments earned rate decreased in 2019 to 8.90% from 10.65% in 2018, driven by lower real estate fund income and slightly lower income from MidCap related to favorable 2018 returns, partially offset by an increase in Catalina income.

Cost of funds increased by 41 basis points to 3.18% in 2019, from 2.77% in 2018, primarily driven by growth in our institutional channel at a higher rate, unfavorable rider reserves and DAC amortization related to actuarial experience and equity market impacts, as well as unfavorable unlocking of assumptions.

Investment Margin on Deferred Annuities

	Three months ended September 30,	
	2019	2018
Net investment earned rate	4.31%	4.55%
Cost of crediting on deferred annuities	1.98%	1.98%
Investment margin on deferred annuities	2.33%	2.57%

Investment margin on deferred annuities, which measures our investment performance less the cost of crediting for our deferred annuities, decreased by 24 basis points to 2.33% in 2019, from 2.57% in 2018, driven by a decrease in the net investment earned rate, while the cost of crediting on deferred annuities was consistent with prior year. 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, 2019 Compared to the Nine Months Ended September 30, 2018

Adjusted Operating Income Available to Common Shareholders

Adjusted operating income available to common shareholders increased by $13 million, or 1%, to $918 million in 2019, from $905 million in 2018. Adjusted operating ROE was 16.0% in 2019, down from 19.7% in the prior period. The increase in adjusted operating income available to common shareholders was primarily driven by higher net investment earnings and favorable taxes, partially offset by higher cost of funds and operating expense attributed to growth in our business. Net investment earnings was higher primarily driven by $20.8 billion of growth in our invested assets primarily attributed to the Voya and Lincoln reinsurance transactions, strong deposits over the prior twelve months and higher floating rate income related to higher short-term interest rates throughout 2019 compared to prior year, partially offset by lower RMBS income from lower pre-payments than expected and runoff of higher yielding assets. Cost of funds was higher primarily due to growth in the block of business, unfavorable rider reserves and DAC amortization related to actuarial experience and equity market impacts and unfavorable unlocking of $35 million.

Net Investment Spread

	Nine months ended September 30,	
	2019	2018
Net investment earned rate	4.38%	4.63%
Cost of funds	3.00%	2.81%
Net investment spread	1.38%	1.82%

Net investment spread, which measures the spread on our investment performance less the total cost of our liabilities, decreased 44 basis points to 1.38% in 2019 from 1.82% in 2018. Net investment earned rate decreased primarily due to a decline in our fixed and other net investment earned rate as well as a decline in the alternative net investment earned rate. The fixed and other net investment earned rate decreased in 2019, to 4.21% from 4.38% in 2018 primarily attributed to lower RMBS returns and run-off of higher yielding assets, as well as the unfavorable impact of the lower interest rate environment on new investment purchases in 2019, partially offset by higher floating rate returns. The alternative net investment earned rate decreased in 2019 to 8.63% from 11.30% in 2018, primarily driven by lower credit fund income as 2018 benefited from gains in one of our funds, as well as lower returns on real asset and private equity funds.

Cost of funds increased by 19 basis points to 3.00% in 2019, from 2.81% in 2018, primarily driven by growth in our institutional channel at a higher rate, unfavorable rider reserves and DAC amortization related to actuarial experience and equity market impacts and unlocking of assumptions.

Investment Margin on Deferred Annuities

	Nine months ended September 30,	
	2019	2018
Net investment earned rate	4.38%	4.63%
Cost of crediting on deferred annuities	1.98%	1.93%
Investment margin on deferred annuities	2.40%	2.70%

Investment margin on deferred annuities, which measures our investment performance less the cost of crediting for our deferred annuities, decreased by 30 basis points to 2.40% in 2019 from 2.70% in 2018, driven by a decrease in net investment earned rate, as well as an increase in cost of crediting on deferred annuities. Cost of crediting on deferred annuities increased 5 basis points primarily due to higher option costs as a result of higher volatility and short-term interest rates for business renewing through 2018, as well as higher rates on new business.

Corporate and Other

Corporate and Other includes certain other operations related to our corporate activities. Included in Corporate and Other are 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 Income (Loss) Available to Common Shareholders

Adjusted operating income (loss) available to common shareholders decreased by $5 million to $(13) million in the three months ended September 30, 2019, from $(8) million in the three months ended September 30, 2018. The change was primarily driven by preferred stock dividends, partially offset by favorable alternative investment income attributed to an increase in market value of the equity position in OneMain and the unfavorable 2018 change in market value of an equity position in Caesars.

Adjusted operating income (loss) available to common shareholders decreased by $13 million to $(18) million in the nine months ended September 30, 2019, from $(5) million in the nine months ended September 30, 2018. The change was primarily driven by lower earnings from a decrease in excess capital and preferred stock dividends, partially offset by favorable alternative investment income attributed to an increase in market value of the equity position in OneMain.

Consolidated Investment Portfolio

We had consolidated investments, including related parties, of $127.1 billion and $107.6 billion as of September 30, 2019 and December 31, 2018, 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 managers focus 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. Apollo provides a full suite of services for our investment portfolio, including direct investment management, asset allocation, mergers and acquisition asset diligence, and certain operational support services, including investment compliance, tax, legal and risk management support. Our relationship with Apollo 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 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 5–10% of our portfolio to alternative investments where we primarily focus on fixed income-like, cash flow-based investments.

Our invested assets, which are those that directly back our reserve liabilities as well as surplus assets (as previously discussed in *Key Operating and Non-GAAP Measures*), were $121.1 billion and $111.0 billion as of September 30, 2019 and December 31, 2018, respectively. Apollo managed, directly and indirectly, substantially all of our invested assets as of September 30, 2019, comprising a diversified portfolio of fixed maturity and other securities. Apollo's knowledge of our funding structure and regulatory requirements allows it to design customized strategies and investments for our portfolio.

Our asset portfolio is managed within the limits and constraints set forth in our Investment and Credit Risk Policy. Under this policy, we set limits on investments in our portfolio by asset class, such as corporate bonds, emerging markets securities, municipal bonds, non-agency RMBS, 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, 2019		December 31, 2018	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
AFS securities, at fair value	$ 70,903	55.8%	$ 59,265	55.1%
Trading securities, at fair value	2,411	1.9%	1,949	1.8%
Equity securities, at fair value	359	0.3%	216	0.2%
Mortgage loans, net of allowances	13,465	10.6%	10,340	9.6%
Investment funds	712	0.5%	703	0.6%
Policy loans	466	0.4%	488	0.4%
Funds withheld at interest	15,280	12.0%	15,023	14.0%
Derivative assets	2,386	1.9%	1,043	1.0%
Short-term investments, at fair value	571	0.4%	191	0.2%
Other investments	130	0.1%	122	0.1%
Total investments	106,683	83.9%	89,340	83.0%
Investment in related parties				
AFS securities, at fair value	2,368	1.9%	1,437	1.3%
Trading securities, at fair value	306	0.2%	249	0.2%
Equity securities, at fair value	381	0.3%	120	0.1%
Mortgage loans	653	0.5%	291	0.3%
Investment funds	2,763	2.2%	2,232	2.1%
Funds withheld at interest	13,560	10.7%	13,577	12.6%
Other investments	387	0.3%	386	0.4%
Total related party investments	20,418	16.1%	18,292	17.0%
Total investments including related party	$ 127,101	100.0%	$ 107,632	100.0%

The increase in our total investments, including related party, as of September 30, 2019 of $19.5 billion compared to December 31, 2018 was mainly driven by growth from organic deposits of $14.4 billion less liability outflows of $8.5 billion, an increase in unrealized gains and losses on AFS securities of $4.9 billion attributed to the decrease in U.S. Treasury rates and credit spreads tightening, an increase in derivatives assets due to favorable equity market performance, investment of proceeds from our preferred stock issuances and reinvestment of earnings.

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 a small amount of 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 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 to a lesser extent, 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 do not expect the counterparties to fail to meet 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 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 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. Declines in fair value that are other than temporary are recorded as realized losses in the condensed consolidated statements of income, net of any applicable non-credit component of the loss, which is recorded as an adjustment to other comprehensive income.

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

	September 30, 2019				
(In millions, except percentages)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Percent of Total
AFS securities					
U.S. government and agencies	$ 36	$ 1	$ —	$ 37	0.1%
U.S. state, municipal and political subdivisions	1,233	260	(1)	1,492	2.0%
Foreign governments	301	27	—	328	0.4%
Corporate	43,948	3,415	(318)	47,045	64.2%
CLO	7,044	15	(188)	6,871	9.4%
ABS	4,967	164	(20)	5,111	7.0%
CMBS	2,639	130	(4)	2,765	3.8%
RMBS	6,698	565	(9)	7,254	9.9%
Total AFS securities	66,866	4,577	(540)	70,903	96.8%
AFS securities – related party					
Corporate	23	1	—	24	0.0%
CLO	834	1	(17)	818	1.1%
ABS	1,490	36	—	1,526	2.1%
Total AFS securities – related party	2,347	38	(17)	2,368	3.2%
Total AFS securities including related party	$ 69,213	$ 4,615	$ (557)	$ 73,271	100.0%

	December 31, 2018				
(In millions, except percentages)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Percent of Total
AFS securities					
U.S. government and agencies	$ 57	$ —	$ —	$ 57	0.1%
U.S. state, municipal and political subdivisions	1,183	117	(7)	1,293	2.1%
Foreign governments	162	2	(3)	161	0.3%
Corporate	38,018	394	(1,315)	37,097	61.1%
CLO	5,658	2	(299)	5,361	8.8%
ABS	4,915	53	(48)	4,920	8.1%
CMBS	2,390	27	(60)	2,357	3.9%
RMBS	7,642	413	(36)	8,019	13.2%
Total AFS securities	60,025	1,008	(1,768)	59,265	97.6%
AFS securities – related party					
CLO	587	—	(25)	562	0.9%
ABS	875	4	(4)	875	1.5%
Total AFS securities – related party	1,462	4	(29)	1,437	2.4%
Total AFS securities including related party	$ 61,487	$ 1,012	$ (1,797)	$ 60,702	100.0%

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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, 2019		December 31, 2018	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
Corporate				
Industrial other[1]	$ 14,785	20.2%	$ 11,706	19.3%
Financial	15,165	20.7%	11,809	19.5%
Utilities	11,457	15.6%	9,055	14.9%
Communication	2,752	3.8%	2,313	3.8%
Transportation	2,910	4.0%	2,214	3.6%
Total corporate	47,069	64.3%	37,097	61.1%
Other government-related securities				
U.S. state, municipal and political subdivisions	1,492	2.0%	1,293	2.1%
Foreign governments	328	0.4%	161	0.3%
U.S. government and agencies	37	0.1%	57	0.1%
Total non-structured securities	48,926	66.8%	38,608	63.6%
Structured securities				
CLO	7,689	10.5%	5,923	9.8%
ABS	6,637	9.0%	5,795	9.5%
CMBS	2,765	3.8%	2,357	3.9%
RMBS				
Agency	18	0.0%	59	0.1%
Non-agency	7,236	9.9%	7,960	13.1%
Total structured securities	24,345	33.2%	22,094	36.4%
Total AFS securities including related party	$ 73,271	100.0%	$ 60,702	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 $73.3 billion and $60.7 billion as of September 30, 2019 and December 31, 2018, respectively. The increase was mainly driven by strong growth in deposits over liability outflows, the change in unrealized gains and losses on AFS securities, investment of proceeds from our preferred stock issuances and reinvestment of earnings. Unrealized gains and losses on AFS securities increased attributed to the decrease in U.S. Treasury rates and credit spreads tightening.

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 Blank. The SVO conducts credit analysis on these securities for the purpose of assigning an NAIC designation and/or unit price. Subject to the important exceptions discussed below, if a security has been rated by a Nationally Recognized Statistical Rating Organization (NRSRO), the SVO utilizes that rating and assigns an NAIC designation based upon the following system (General Ratings Process):

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

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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 loan-backed and structured securities (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 way to view our fixed maturity portfolio for purposes of evaluating credit quality since a large portion of our holdings were purchased and are carried at significant discounts to par.

The SVO has developed a ratings process and provides instruction on both modeled and non-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 U.S. insurers for all years presented herein. Blackrock provides five prices (breakpoints), based on each U.S. insurer's statutory book value price, to utilize in determining the NAIC designation for each modeled LBaSS.

Prior to January 1, 2019, certain non-modeled LBaSS (including CLOs and ABS, other than RMBS and CMBS) underwent ratings evaluation by an NAIC credit rating provider (CRP). Such securities were subject to an exemption from the General Ratings Process (MFE Exemption) and received NAIC designations through a prescribed process (MFE Process). Pursuant to the MFE Process, CRP ratings were translated to an NAIC designation equivalent. If the translation process resulted in an NAIC designation equivalent of NAIC 1 or NAIC 6, then such designation was considered the final NAIC designation. If the translation process resulted in an NAIC designation equivalent of NAIC 2 through NAIC 5, then the NAIC designation equivalent was used to select the appropriate breakpoint from a pricing matrix and such breakpoint was applied to the amortized cost or fair value (in each instance, as a percentage of par), as applicable, to determine the final NAIC designation. Effective January 1, 2019, the MFE Exemption was eliminated, and as a result, NAIC designations for all non-modeled LBaSS are thereafter determined through the General Ratings Process.

The NAIC designation determines the associated level of risk-based capital (RBC) that an insurer is required to hold for modeled LBaSS owned by the insurer. In general, under the modeled LBass process and, prior to January 1, 2019, the non-modeled LBaSS processes, 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, 2019			December 31, 2018		
(In millions, except percentages)	Amortized Cost	Fair Value	Percent of Total	Amortized Cost	Fair Value	Percent of Total
NAIC designation						
1	$ 34,930	$ 37,451	51.1%	$ 31,106	$ 31,311	51.6%
2	30,599	32,125	43.8%	26,682	25,871	42.6%
Total investment grade	65,529	69,576	94.9%	57,788	57,182	94.2%
3	2,819	2,845	3.9%	2,866	2,746	4.5%
4	722	709	1.0%	591	533	0.9%
5	125	124	0.2%	235	232	0.4%
6	18	17	0.0%	7	9	0.0%
Total below investment grade	3,684	3,695	5.1%	3,699	3,520	5.8%
Total AFS securities including related party	$ 69,213	$ 73,271	100.0%	$ 61,487	$ 60,702	100.0%

A significant majority of our AFS portfolio, 94.9% and 94.2% as of September 30, 2019 and December 31, 2018, 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, 2019		December 31, 2018	
	Fair Value	Percent of Total	Fair Value	Percent of Total
NRSRO rating agency designation				
AAA/AA/A	$ 26,726	36.5%	$ 19,690	32.4%
BBB	28,818	39.3%	23,326	38.4%
Non-rated[1]	9,898	13.5%	9,624	15.9%
Total investment grade	65,442	89.3%	52,640	86.7%
BB	3,126	4.3%	2,670	4.4%
B	887	1.2%	875	1.4%
CCC	2,083	2.8%	2,340	3.9%
CC and lower	1,171	1.6%	1,296	2.1%
Non-rated[1]	562	0.8%	881	1.5%
Total below investment grade	7,829	10.7%	8,062	13.3%
Total AFS securities including related party	$ 73,271	100.0%	$ 60,702	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 loan-backed and structured securities, the NAIC designation methodology differs in significant respects from the NRSRO rating methodology.*

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

The portion of our AFS portfolio that was considered below investment grade based on NRSRO ratings was 10.7% and 13.3% as of September 30, 2019 and December 31, 2018, 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, 2019 and December 31, 2018, the non-rated securities shown above were comprised 57% and 56%, respectively, of corporate private placement securities for which we have not sought individual ratings from the NRSRO, and 27% and 30%, respectively, of RMBS, many of which were acquired at a significant discount to par. We rely on internal analysis of credit risk and designations assigned by the NAIC. As of September 30, 2019 and December 31, 2018, 95% and 92%, 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 $6.6 billion and $5.8 billion as of September 30, 2019 and December 31, 2018, respectively. The increase in our ABS portfolio is mainly due to attractive investments made during the period as new deposits and the Voya and Lincoln investment portfolios were redeployed. As of September 30, 2019 and December 31, 2018, our ABS portfolio included $6.1 billion (92% of the total) and $5.4 billion (92% of the total), respectively, of securities that are considered investment grade based on NAIC designations, while $6.1 billion (92% of the total) and $5.2 billion (89% 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 $7.7 billion and $5.9 billion as of September 30, 2019 and December 31, 2018, respectively.

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

	September 30, 2019		December 31, 2018	
(In millions, except percentages)	Fair Value	Percent of Total	Fair Value	Percent of Total
NAIC designation				
1	$ 4,281	55.7%	$ 3,005	50.7%
2	3,249	42.2%	2,498	42.2%
Total investment grade	7,530	97.9%	5,503	92.9%
3	132	1.7%	393	6.7%
4	20	0.3%	20	0.3%
5	7	0.1%	7	0.1%
6	—	—%	—	—%
Total below investment grade	159	2.1%	420	7.1%
Total AFS CLO including related party	$ 7,689	100.0%	$ 5,923	100.0%
NRSRO rating agency designation				
AAA/AA/A	$ 4,246	55.2%	$ 2,921	49.3%
BBB	3,259	42.4%	2,829	47.8%
Non-rated[1]	25	0.3%	—	—%
Total investment grade	7,530	97.9%	5,750	97.1%
BB	132	1.7%	146	2.4%
B	20	0.3%	27	0.5%
CCC	7	0.1%	—	—%
CC and lower	—	—%	—	—%
Non-rated[1]	—	—%	—	—%
Total below investment grade	159	2.1%	173	2.9%
Total AFS CLO including related party	$ 7,689	100.0%	$ 5,923	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. With respect to loan-backed and structured securities, the NAIC designation methodology differs in significant respects from the NRSRO rating methodology.*

As of September 30, 2019 and December 31, 2018, a majority of our AFS CLO portfolio, 97.9% and 92.9%, respectively, was invested in assets considered to be investment grade based upon an application of the NAIC's methodology. As of September 30, 2019 and December 31, 2018, 97.9% and 97.1%, respectively, of our CLO portfolio was considered investment grade based on NRSRO ratings. The increase in our CLO portfolio is mainly due to attractive investments made during the period as new deposits and the Voya and Lincoln investment portfolios were redeployed.

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 $2.8 billion and $2.4 billion as of September 30, 2019 and December 31, 2018. As of September 30, 2019 and December 31, 2018, our CMBS portfolio included $2.6 billion (95% of the total) and $2.1 billion (91% of the total), respectively, of securities that are considered investment grade based on NAIC designations, while $1.9 billion (70% of the total) and $1.6 billion (66% 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. RMBS are securities constructed from pools of residential mortgages and backed by payments from those pools. These holdings were $7.3 billion and $8.0 billion as of September 30, 2019 and December 31, 2018, respectively.

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

(In millions, except percentages)	September 30, 2019		December 31, 2018	
	Fair Value	Percent of Total	Fair Value	Percent of Total
NAIC designation				
1	$ 6,666	91.9%	$ 7,415	92.5%
2	265	3.7%	269	3.3%
Total investment grade	6,931	95.6%	7,684	95.8%
3	168	2.3%	207	2.6%
4	133	1.8%	106	1.3%
5	21	0.3%	22	0.3%
6	1	0.0%	—	—%
Total below investment grade	323	4.4%	335	4.2%
Total AFS RMBS	$ 7,254	100.0%	$ 8,019	100.0%
NRSRO rating agency designation				
AAA/AA/A	$ 428	5.9%	$ 487	6.1%
BBB	253	3.5%	220	2.7%
Non-rated[1]	2,694	37.1%	2,932	36.6%
Total investment grade	3,375	46.5%	3,639	45.4%
BB	280	3.9%	332	4.1%
B	261	3.6%	301	3.8%
CCC	2,010	27.7%	2,259	28.2%
CC and lower	1,160	16.0%	1,292	16.1%
Non-rated[1]	168	2.3%	196	2.4%
Total below investment grade	3,879	53.5%	4,380	54.6%
Total AFS RMBS	$ 7,254	100.0%	$ 8,019	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. With respect to loan-backed and structured securities, the NAIC designation methodology differs in significant respects from the NRSRO rating methodology.*

A significant majority of our AFS RMBS portfolio, 95.6% and 95.8% as of September 30, 2019 and December 31, 2018, respectively, was invested in assets considered to be investment grade based upon an application of the NAIC’s methodology to our holdings of RMBS. 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 U.S. 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, 2019 and December 31, 2018, NRSRO characterized 46.5% and 45.4%, respectively, of our AFS 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, 2019, our AFS securities, including related party, had a fair value of $73.3 billion, which was 5.9% above amortized cost of $69.2 billion. As of December 31, 2018, our AFS securities, including related party, had a fair value of $60.7 billion, which was 1.3% below amortized cost of $61.5 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, by NAIC designations:

	September 30, 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	$ 4,646	$ (149)	$ 4,497	96.8%	$ 37,451	(0.4)%
2	5,218	(295)	4,923	94.3%	32,125	(0.9)%
Total investment grade	9,864	(444)	9,420	95.5%	69,576	(0.6)%
3	907	(59)	848	93.5%	2,845	(2.1)%
4	344	(45)	299	86.9%	709	(6.3)%
5	86	(5)	81	94.2%	124	(4.0)%
6	12	(4)	8	66.7%	17	(23.5)%
Total below investment grade	1,349	(113)	1,236	91.6%	3,695	(3.1)%
Total	$ 11,213	$ (557)	$ 10,656	95.0%	$ 73,271	(0.8)%

	December 31, 2018					
(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	$ 15,373	$ (545)	$ 14,828	96.5%	$ 31,311	(1.7)%
2	19,152	(1,035)	18,117	94.6%	25,871	(4.0)%
Total investment grade	34,525	(1,580)	32,945	95.4%	57,182	(2.8)%
3	2,308	(147)	2,161	93.6%	2,746	(5.4)%
4	500	(65)	435	87.0%	533	(12.2)%
5	88	(5)	83	94.3%	232	(2.2)%
6	2	—	2	100.0%	9	— %
Total below investment grade	2,898	(217)	2,681	92.5%	3,520	(6.2)%
Total	$ 37,423	$ (1,797)	$ 35,626	95.2%	$ 60,702	(3.0)%

The gross unrealized losses on AFS securities, including related parties, were $557 million and $1.8 billion as of September 30, 2019 and December 31, 2018, respectively. The decrease in unrealized losses was driven by the decrease in U.S. Treasury rates and credit spreads tightening during the nine months ended September 30, 2019.

Other-Than-Temporary Impairments

For our OTTI policy and the identification of securities that could potentially have impairments, 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.*

During the nine months ended September 30, 2019 and 2018, we recorded $32 million and $6 million, respectively, of OTTI losses, primarily related to corporate fixed maturity securities. The annualized OTTI losses we have experienced for the nine months ended September 30, 2019 and 2018 translate into 4 basis points and 1 basis point of average invested assets.

International Exposure

A portion of our AFS securities are invested in securities with international exposure. As of September 30, 2019 and December 31, 2018, 31% and 30% 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 U.S. dollars or do not expose us to significant foreign currency risk as a result of foreign currency swap arrangements.

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

	September 30, 2019			December 31, 2018		
(In millions, except percentages)	Amortized Cost	Fair Value	Percent of Total	Amortized Cost	Fair Value	Percent of Total
Country of risk						
Ireland	$ 778	$ 791	3.5%	$ 578	$ 552	3.0%
Italy	6	7	0.0%	36	35	0.2%
Spain	66	70	0.3%	62	62	0.4%
Total Ireland, Italy, Greece, Spain and Portugal[1]	850	868	3.8%	676	649	3.6%
Other Europe	7,054	7,327	32.3%	6,335	6,133	33.3%
Total Europe	7,904	8,195	36.1%	7,011	6,782	36.9%
Non-U.S. North America	10,983	11,016	48.5%	9,261	8,906	48.4%
Australia & New Zealand	1,858	1,976	8.7%	1,731	1,696	9.2%
Central & South America	483	514	2.3%	448	445	2.4%
Africa & Middle East	328	355	1.6%	228	226	1.2%
Asia/Pacific	600	633	2.8%	351	345	1.9%
Total	$ 22,156	$ 22,689	100.0%	$ 19,030	$ 18,400	100.0%

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

Approximately 95.7% and 93.9% of these securities are investment grade by NAIC designation as of September 30, 2019 and December 31, 2018, respectively. As of September 30, 2019, 10% of our fixed maturity securities, including related parties, were invested in CLOs of Cayman Islands issuers (for which underlying investments are largely loans to U.S. issuers) and 21% were invested in securities of other non-U.S. 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 $868 million and $649 million as of September 30, 2019 and December 31, 2018, respectively, of exposure in these countries.

As of September 30, 2019, we held United Kingdom and Channel Islands AFS securities of $2.7 billion, or 3.7% of our AFS securities, including related parties. As of September 30, 2019, these securities were in a net unrealized gain position of $67 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 $2.7 billion and $2.2 billion as of September 30, 2019 and December 31, 2018, respectively. Trading securities are primarily comprised of AmerUs Closed Block securities for which we have elected the fair value option valuation, CLO equity tranche securities, 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, 2019		December 31, 2018	
(In millions, except percentages)	Net Carrying Value	Percent of Total	Net Carrying Value	Percent of Total
Property type				
Office building	$ 2,673	18.9%	$ 2,221	20.9%
Retail	2,167	15.3%	1,660	15.6%
Hotels	1,028	7.3%	1,040	9.8%
Industrial	1,382	9.8%	1,196	11.2%
Apartment	1,749	12.4%	791	7.4%
Other commercial[1]	702	5.0%	389	3.7%
Total net commercial mortgage loans	9,701	68.7%	7,297	68.6%
Residential loans	4,417	31.3%	3,334	31.4%
Total mortgage loans, net of allowances	$ 14,118	100.0%	$ 10,631	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 $14.1 billion and $10.6 billion as of September 30, 2019 and December 31, 2018, respectively. This included $2.0 billion and $2.1 billion of mezzanine mortgage loans as of September 30, 2019 and December 31, 2018, respectively. The increase in mortgage loans is mainly driven by attractive risk and return investments in both CML and RML during the period. 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 U.S. 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 valuation 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, 2019 and December 31, 2018, we had $64 million and $48 million, respectively, of mortgage loans that were 90 days past due, of which $30 million and $15 million, respectively, were in the process of foreclosure.

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

For the nine months ended September 30, 2019 and the year ended December 31, 2018, we had not recorded any new specific loan valuation allowances. For each of the nine months ended September 30, 2019 and 2018, we recorded $0 million of impairments through net income. We have established a general and specific loan valuation allowance in the aggregate amount of $2 million as of each of September 30, 2019 and December 31, 2018.

Investment Funds and Variable Interest Entities

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 strategy focuses on sourcing assets with 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 have less downside risk.

Our investment funds generally meet the definition of a VIE, and in certain cases these investment funds are consolidated in our financial statements because we meet the criteria of the primary beneficiary.

The following table illustrates our consolidated VIE positions:

	September 30, 2019		December 31, 2018	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Assets of consolidated VIEs				
Investments				
Trading securities	$ 19	2.9%	$ 35	4.9%
Equity securities	6	0.9%	50	7.0%
Investment funds	619	93.6%	624	87.7%
Cash and cash equivalents	3	0.5%	2	0.3%
Other assets	14	2.1%	1	0.1%
Total assets of consolidated VIEs	$ 661	100.0%	$ 712	100.0%
Liabilities of consolidated VIEs				
Other liabilities	$ 1	100.0%	$ 1	100.0%
Total liabilities of consolidated VIEs	$ 1	100.0%	$ 1	100.0%

The following table illustrates our investment funds, including related party positions of our non-consolidated VIEs and investment funds owned by consolidated VIEs:

	September 30, 2019		December 31, 2018[1]	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Investment funds				
Real estate	$ 254	6.2%	$ 215	6.0%
Credit funds	161	3.9%	172	4.8%
Private equity	231	5.7%	253	7.1%
Real assets	65	1.6%	56	1.6%
Natural resources	1	0.0%	4	0.1%
Other	—	—%	3	0.1%
Total investment funds	712	17.4%	703	19.7%
Investment funds – related parties				
Differentiated investments				
AmeriHome	469	11.5%	463	13.0%
Catalina	270	6.6%	233	6.5%
Athora	127	3.1%	105	3.0%
Venerable	94	2.3%	92	2.6%
Other	218	5.3%	196	5.5%
Total differentiated investments	1,178	28.8%	1,089	30.6%
Real estate	721	17.6%	497	14.0%
Credit funds	378	9.2%	316	8.9%
Private equity	69	1.7%	18	0.5%
Real assets	155	3.8%	145	4.1%
Natural resources	162	4.0%	104	2.9%
Public equities	100	2.4%	63	1.8%
Total investment funds – related parties	2,763	67.5%	2,232	62.8%
Investment funds owned by consolidated VIEs				
MidCap	556	13.6%	553	15.5%
Real estate	44	1.1%	30	0.8%
Real assets	19	0.4%	41	1.2%
Total investment funds owned by consolidated VIEs	619	15.1%	624	17.5%
Total investment funds, including related parties and funds owned by consolidated VIEs	$ 4,094	100.0%	$ 3,559	100.0%

[1] *Certain reclassifications have been made to conform with current year presentation.*

Overall, the total investment funds, including related party and consolidated VIEs, were $4.1 billion and $3.6 billion, respectively, as of September 30, 2019 and December 31, 2018. 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.

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 and Lincoln. As of September 30, 2019, the significant majority of the ceding companies holding the assets pursuant to such reinsurance agreements had a financial strength rating of A- or better.

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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 directly control the underlying investments in the funds withheld at interest, in each instance the ceding company has hired Apollo to manage the withheld assets in accordance with our investment guidelines.

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

	September 30, 2019		December 31, 2018	
(In millions, except percentages)	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Fixed maturity securities				
U.S. government and agencies	$ 17	0.1 %	$ 77	0.3 %
U.S. state, municipal and political subdivisions	488	1.7 %	563	2.0 %
Foreign governments	179	0.6 %	145	0.5 %
Corporate	15,143	52.5 %	16,267	56.9 %
CLO	2,470	8.6 %	1,990	7.0 %
ABS	2,142	7.4 %	1,601	5.6 %
CMBS	749	2.6 %	575	2.0 %
RMBS	1,619	5.6 %	1,876	6.6 %
Equity securities	230	0.8 %	66	0.2 %
Mortgage loans	4,508	15.6 %	3,815	13.3 %
Investment funds	745	2.6 %	660	2.3 %
Derivative assets	188	0.6 %	77	0.3 %
Short-term investments	107	0.4 %	641	2.2 %
Cash and cash equivalents	405	1.4 %	455	1.6 %
Other assets and liabilities	(150)	(0.5)%	(208)	(0.8)%
Total funds withheld at interest including related party	$ 28,840	100.0 %	$ 28,600	100.0 %

As of September 30, 2019 and December 31, 2018, we held $28.8 billion and $28.6 billion, respectively, of funds withheld at interest receivables, including related party. Approximately 95.1% and 96.6% of the fixed maturity securities within the funds withheld at interest are investment grade by NAIC designation as of September 30, 2019 and December 31, 2018, respectively.

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.

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

Invested Assets

The following summarizes our invested assets:

(In millions, except percentages)	September 30, 2019		December 31, 2018	
	Invested Asset Value[1]	Percent of Total	Invested Asset Value[1]	Percent of Total
Corporate	$ 59,310	49.0%	$ 55,772	50.2%
CLO	10,234	8.4%	8,275	7.5%
Credit	69,544	57.4%	64,047	57.7%
RMBS	8,537	7.0%	9,814	8.9%
Mortgage loans	18,514	15.3%	14,423	13.0%
CMBS	3,383	2.8%	3,018	2.7%
Real estate	30,434	25.1%	27,255	24.6%
ABS	8,935	7.4%	7,706	6.9%
Alternative investments	5,522	4.6%	4,492	4.1%
State, municipal, political subdivisions and foreign government	2,267	1.9%	2,122	1.9%
Equity securities	515	0.4%	467	0.4%
Short-term investments	623	0.5%	765	0.7%
U.S. government and agencies	53	0.0%	134	0.1%
Other investments	17,915	14.8%	15,686	14.1%
Cash and equivalents	2,041	1.7%	2,881	2.6%
Policy loans and other	1,206	1.0%	1,165	1.0%
Total invested assets	$ 121,140	100.0%	$ 111,034	100.0%

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

Our total invested assets were $121.1 billion and $111.0 billion as of September 30, 2019 and December 31, 2018, respectively. As of September 30, 2019, our total invested assets were mainly comprised of 49.0% of corporate securities, 25.6% of structured securities, 15.3% of mortgage loans and 4.6% of alternative investments. Corporate securities included $15.9 billion of private placements, which represented 13.1% of our total invested assets. The increase in total invested assets as of September 30, 2019 from December 31, 2018 was primarily driven by strong growth in deposits which exceeded liability outflows, investment of proceeds from our preferred stock issuances and reinvestment of earnings.

In managing our business we utilize invested assets as presented in the above table. 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*. Invested assets represent the investments that directly back our 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 deconsolidate any VIEs in order to show the net investment in the funds, which are included in the alternative investments line above.

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

Alternative Investments

The following summarizes our alternative investments:

	September 30, 2019		December 31, 2018	
(In millions, except percentages)	Invested Asset Value	Percent of Total	Invested Asset Value	Percent of Total
Retirement Services				
Differentiated investments				
AmeriHome	$ 574	10.4%	$ 568	12.6%
MidCap	556	10.1%	553	12.3%
Catalina	270	4.9%	232	5.2%
Venerable	94	1.7%	92	2.1%
Other	210	3.8%	229	5.1%
Total differentiated investments	1,704	30.9%	1,674	37.3%
Real estate	1,311	23.7%	1,015	22.6%
Credit	1,118	20.3%	537	11.9%
Private equity	326	5.9%	279	6.2%
Real assets	311	5.6%	276	6.2%
Natural resources	62	1.1%	55	1.2%
Other	47	0.9%	4	0.1%
Total Retirement Services alternative investments	4,879	88.4%	3,840	85.5%
Corporate and Other				
Athora	138	2.5%	130	2.9%
Credit	138	2.5%	203	4.5%
Natural resources	266	4.8%	213	4.8%
Public equities[1]	101	1.8%	100	2.2%
Other	—	—%	6	0.1%
Total Corporate and Other alternative investments	643	11.6%	652	14.5%
Total alternative investments	$ 5,522	100.0%	$ 4,492	100.0%

[1] *As of September 30, 2019, public equities is exclusively comprised of an investment in OneMain Holdings, Inc. (ticker: OMF).*

Alternative investments were $5.5 billion and $4.5 billion as of September 30, 2019 and December 31, 2018, respectively, representing 4.6% and 4.1% of our total invested assets portfolio as of September 30, 2019 and December 31, 2018, respectively.

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 invested assets section, we adjust the GAAP presentation for funds withheld and modco and de-consolidate VIEs. We also include CLO 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 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

Our equity investment in MidCap is held indirectly through CoInvest VII, of which MidCap constitutes substantially all of the fund's investments. MidCap is a commercial finance company that provides various financial products to middle-market businesses in multiple industries, primarily located in the U.S. 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 CoInvest VII is substantially comprised of its investment in MidCap, which had a carrying value of $556 million and $553 million as of September 30, 2019 and December 31, 2018, respectively. Our investment in CoInvest VII largely reflects any contributions to and distributions from CoInvest VII and the fair value of MidCap. CoInvest VII returned a net investment earned rate of 14.90% and 18.23% for the three months ended September 30, 2019 and 2018, respectively, and 13.32% and 14.86% for the nine months ended September 30, 2019 and 2018, respectively. Alternative investment income from CoInvest VII was $21 million and $25 million for the three months ended September 30, 2019 and 2018, respectively, and $56 million and $62 million for the nine months ended September 30, 2019 and 2018, respectively.

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 $574 million and $568 million as of September 30, 2019 and December 31, 2018, 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 14.03% and 14.66% for the three months ended September 30, 2019 and 2018, respectively, and 13.90% and 13.52% for the nine months ended September 30, 2019 and 2018, respectively. Alternative investment income from A-A Mortgage was $20 million and $21 million for the three months ended September 30, 2019 and 2018, respectively, and $59 million and $55 million for the nine months ended September 30, 2019 and 2018, respectively.

Public Equities

We indirectly hold public equity positions through our equity investments in a few alternative investments. Although the carrying value of these securities is minor, such securities have resulted in volatility in our statements of income in recent periods. As of September 30, 2019 and December 31, 2018, we indirectly held public equity positions of $101 million and $100 million, respectively. As of September 30, 2019 and December 31, 2018, we held approximately 2.8 million shares of OneMain with a market value of $101 million and $63 million, respectively. As of December 31, 2018, we held approximately 5.5 million shares of Caesars, with a market value of $37 million. Caesars was held indirectly through our investment in AAA Investment (Co Invest VI), L.P. (CoInvest VI). In the first quarter of 2019, CoInvest VI sold its remaining shares of Caesars.

Non-GAAP Measure Reconciliations

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

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

(In millions)	September 30, 2019	December 31, 2018
Total shareholders' equity	$ 13,545	$ 8,276
Less: Preferred stock	1,172	—
Total common shareholders' equity	12,373	8,276
Less: AOCI	2,442	(472)
Less: Accumulated change in fair value of reinsurance assets	727	(75)
Total adjusted common shareholders' equity	$ 9,204	$ 8,823
Segment adjusted common shareholders' equity		
Retirement Services	$ 7,494	$ 7,807
Corporate and Other	1,710	1,016
Total adjusted common shareholders' equity	$ 9,204	$ 8,823

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Average shareholders' equity	$ 12,955	$ 8,720	$ 10,911	$ 9,077
Less: Average preferred stock	1,006	—	586	—
Less: Average AOCI	2,101	90	985	741
Less: Average accumulated change in fair value of reinsurance assets	683	(10)	326	65
Average adjusted common shareholders' equity	$ 9,165	$ 8,640	$ 9,014	$ 8,271
Segment average adjusted common shareholders' equity				
Retirement Services	$ 7,598	$ 6,537	$ 7,651	$ 6,130
Corporate and Other	1,567	2,103	1,363	2,141
Average adjusted common shareholders' equity	$ 9,165	$ 8,640	$ 9,014	$ 8,271

The reconciliation of net income available to Athene Holding Ltd. common shareholders to adjusted net income available to AHL common shareholders, which is included in adjusted ROE is as follows:

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
Net income available to Athene Holding Ltd. common shareholders	$ 276	$ 623	$ 1,704	$ 1,157
Change in fair value of reinsurance assets	(88)	43	(802)	192
Adjusted net income available to AHL common shareholders	$ 188	$ 666	$ 902	$ 1,349

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,			
	2019		2018		2019		2018	
(In millions, except percentages)	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP net investment income	$ 1,070	3.60 %	$ 1,070	4.30 %	$ 3,297	3.80 %	$ 2,883	4.39 %
Change in fair value of reinsurance assets	199	0.67 %	52	0.20 %	492	0.57 %	169	0.26 %
Net VIE earnings	23	0.08 %	39	0.16 %	68	0.08 %	55	0.08 %
Alternative income gain (loss)	6	0.02 %	(14)	(0.06)%	13	0.01 %	(14)	(0.02)%
Held for trading amortization and other	(6)	(0.02)%	(21)	(0.08)%	(30)	(0.03)%	(65)	(0.10)%
Total adjustments to arrive at net investment earnings/earned rate	222	0.75 %	56	0.22 %	543	0.63 %	145	0.22 %
Total net investment earnings/earned rate	$ 1,292	4.35 %	$ 1,126	4.52 %	$ 3,840	4.43 %	$ 3,028	4.61 %
Retirement Services	$ 1,264	4.31 %	$ 1,108	4.55 %	$ 3,756	4.38 %	$ 2,957	4.63 %
Corporate and Other	28	7.28 %	18	3.51 %	84	8.92 %	71	3.86 %
Total net investment earnings/earned rate	$ 1,292	4.35 %	$ 1,126	4.52 %	$ 3,840	4.43 %	$ 3,028	4.61 %
Retirement Services average invested assets	$ 117,338		$ 97,500		$ 114,391		$ 85,163	
Corporate and Other average invested assets	1,567		2,103		1,262		2,473	
Consolidated average invested assets	$ 118,905		$ 99,603		$ 115,653		$ 87,636	

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,			
	2019		2018		2019		2018	
(In millions, except percentages)	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP interest sensitive contract benefits	$ 801	2.73 %	$ 742	3.04 %	$ 3,411	3.98 %	$ 1,115	1.75 %
Interest credited other than deferred annuities and institutional products	63	0.21 %	14	0.06 %	168	0.19 %	30	0.05 %
FIA option costs	282	0.96 %	231	0.95 %	840	0.98 %	611	0.96 %
Product charges (strategy fees)	(31)	(0.10)%	(25)	(0.10)%	(88)	(0.10)%	(70)	(0.11)%
Reinsurance embedded derivative impacts	14	0.05 %	29	0.12 %	43	0.05 %	35	0.05 %
Change in fair value of embedded derivatives – FIAs	(560)	(1.91)%	(546)	(2.24)%	(2,739)	(3.19)%	(603)	(0.94)%
Negative VOBA amortization	9	0.03 %	5	0.02 %	28	0.03 %	22	0.03 %
Other changes in interest sensitive contract liabilities	(2)	(0.01)%	3	0.01 %	(5)	(0.01)%	3	0.00 %
Total adjustments to arrive at cost of crediting	(225)	(0.77)%	(289)	(1.18)%	(1,753)	(2.05)%	28	0.04 %
Retirement Services cost of crediting	$ 576	1.96 %	$ 453	1.86 %	$ 1,658	1.93 %	$ 1,143	1.79 %
Retirement Services cost of crediting on deferred annuities	$ 453	1.98 %	$ 395	1.98 %	$ 1,345	1.98 %	$ 988	1.93 %
Retirement Services cost of crediting on institutional products	123	3.68 %	58	3.54 %	313	3.71 %	155	3.29 %
Retirement Services cost of crediting	$ 576	1.96 %	$ 453	1.86 %	$ 1,658	1.93 %	$ 1,143	1.79 %
Retirement Services average invested assets	$ 117,338		$ 97,500		$ 114,391		$ 85,163	
Average account value on deferred annuities	91,467		79,673		90,638		68,421	
Average institutional reserve liabilities	13,320		6,608		11,200		6,301	

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
GAAP benefits and expenses	$ 4,222	$ 1,897	$ 11,062	$ 4,067
Premiums	(2,605)	(526)	(5,304)	(1,535)
Product charges	(135)	(119)	(392)	(321)
Other revenues	(6)	(10)	(27)	(22)
Cost of crediting	(280)	(193)	(775)	(497)
Change in fair value of embedded derivatives – FIA, net of offsets	(497)	(768)	(2,574)	(939)
DAC, DSI and VOBA amortization related to investment gains and losses	(151)	28	(505)	74
Rider reserves related to investment gains and losses	(9)	1	(61)	8
Policy and other operating expenses, excluding policy acquisition expenses	(130)	(98)	(350)	(293)
AmerUs closed block fair value liability	(46)	8	(158)	98
Other	(5)	1	(3)	9
Total adjustments to arrive at other liability costs	(3,864)	(1,676)	(10,149)	(3,418)
Other liability costs	$ 358	$ 221	$ 913	$ 649
Retirement Services	$ 358	$ 221	$ 913	$ 649
Corporate and Other	—	—	—	—
Consolidated other liability costs	$ 358	$ 221	$ 913	$ 649

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

	Three months ended September 30,		Nine months ended September 30,	
(In millions)	2019	2018	2019	2018
GAAP policy and other operating expenses	$ 194	$ 158	$ 544	$ 454
Interest expense	(15)	(15)	(47)	(44)
Policy acquisition expenses, net of deferrals	(63)	(60)	(194)	(163)
Integration, restructuring and other non-operating expenses	(34)	(2)	(46)	(18)
Stock compensation expenses	(3)	(3)	(9)	(8)
Total adjustments to arrive at operating expenses	(115)	(80)	(296)	(233)
Operating expenses	$ 79	$ 78	$ 248	$ 221
Retirement Services	$ 67	$ 63	$ 197	$ 177
Corporate and Other	12	15	51	44
Consolidated operating expenses	$ 79	$ 78	$ 248	$ 221

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

(In millions)	September 30, 2019	December 31, 2018
Total investments, including related parties	$ 127,101	$ 107,632
Derivative assets	(2,386)	(1,043)
Cash and cash equivalents (including restricted cash)	4,032	3,403
Accrued investment income	781	682
Payables for collateral on derivatives	(2,323)	(969)
Reinsurance funds withheld and modified coinsurance	(1,698)	223
VIE and VOE assets, liabilities and noncontrolling interest	669	718
Unrealized (gains) losses	(4,243)	808
Ceded policy loans	(277)	(281)
Net investment receivables (payables)	(516)	(139)
Total adjustments to arrive at invested assets	(5,961)	3,402
Total invested assets	$ 121,140	$ 111,034

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

(In millions)	September 30, 2019	December 31, 2018
Investment funds, including related parties and VIEs	$ 4,094	$ 3,559
Nonredeemable preferred stock included in equity securities	506	—
CLO equities included in trading securities	101	125
Investment funds within funds withheld at interest	745	660
Royalties and other assets included in other investments	67	71
Net assets of the VIE, excluding investment funds	(2)	50
Unrealized (gains) losses and other adjustments	11	27
Total adjustments to arrive at alternative investments	1,428	933
Alternative investments	$ 5,522	$ 4,492

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

(In millions)	September 30, 2019	December 31, 2018
Total liabilities	$ 130,657	$ 117,229
Long-term debt	(992)	(991)
Derivative liabilities	(46)	(85)
Payables for collateral on derivatives	(2,323)	(969)
Funds withheld liability	(768)	(721)
Other liabilities	(1,708)	(888)
Liabilities of consolidated VIEs	(1)	(1)
Reinsurance ceded receivables	(5,697)	(5,534)
Policy loans ceded	(277)	(281)
Other	(20)	(27)
Total adjustments to arrive at reserve liabilities	(11,832)	(9,497)
Total reserve liabilities	$ 118,825	$ 107,732

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 as of September 30, 2019 was $58.4 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 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 $1.0 billion revolving credit facility, which was undrawn as of September 30, 2019 and had a remaining term of more than a year. 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. 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; and
- 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
  - Athene Annuity Re Ltd. (AARe) capital maintenance calls arising from AARe collateral calls from modco reinsurance contracts; and
  - U.S. 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, and net transfers from separate accounts and financial product deposits. Uses of cash include investment purchases, payments to policyholders for surrenders and withdrawals, maturity payments on funding agreements, policy acquisition costs, preferred stock dividend payments 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, 2019 and December 31, 2018, approximately 77% and 78%, respectively, of our deferred annuity liabilities were subject to penalty upon surrender. In addition, as of September 30, 2019 and December 31, 2018, approximately 64% and 65%, respectively, of policies contained MVAs that may also have the effect of limiting early withdrawals if interest rates increase. 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. There were no outstanding borrowings under these arrangements as of September 30, 2019 or December 31, 2018.

We have issued funding agreements to the FHLB in exchange for cash advances. These funding agreements were issued in an investment spread strategy, consistent with other investment spread operations. As of September 30, 2019 and December 31, 2018, we had funding agreements outstanding with the FHLB in the aggregate principal amount of $1.2 billion and $926 million, 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, 2019, the total maximum borrowings under the FHLB facility were limited to $18.7 billion. However, our ability to borrow under the facility is constrained by the availability of assets that qualify as eligible collateral under the facility and by the Iowa Code requirement that we maintain funds equivalent to our legal reserve in certain permitted investments, from which we exclude pledged assets. Considering these limitations, we estimate that as of September 30, 2019 we had the ability to draw up to a total of approximately $1.7 billion, inclusive of borrowings then outstanding. This estimate is based on our internal analysis and assumptions, and may not accurately measure collateral which is ultimately acceptable to the FHLB. Drawing such amounts would have an adverse impact on AAIA's RBC ratio, which may further restrict our ability or willingness to draw up to our estimated capacity.

Cash Flows

Our cash flows were as follows:

	Nine months ended September 30,	
(In millions)	2019	2018
Net income	$ 1,721	$ 1,157
Payment at inception of reinsurance agreements, net	—	(394)
Non-cash revenues and expenses	264	380
Net cash provided by operating activities	1,985	1,143
Sales, maturities and repayments of investments	11,763	12,818
Purchases of investments	(19,543)	(18,821)
Deconsolidation of Athora Holding Ltd.	—	(296)
Other investing activities	521	245
Net cash used in investing activities	(7,259)	(6,054)
Deposits on investment-type policies and contracts	8,879	7,011
Withdrawals on investment-type policies and contracts	(4,846)	(4,254)
Net change in cash collateral posted for derivative transactions	1,354	(8)
Net proceeds and repayments of debt	—	998
Issuance of preferred stock, net of expenses	1,172	—
Preferred stock dividends	(17)	—
Repurchase of common stock	(548)	(5)
Other financing activities	(90)	115
Net cash provided by financing activities	5,904	3,857
Net increase (decrease) in cash and cash equivalents[1]	$ 630	$ (1,054)

[1] *Includes cash and cash equivalents, restricted cash, and cash and cash equivalents of consolidated VIEs.*

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 $2.0 billion and $1.1 billion for the nine months ended September 30, 2019 and 2018, respectively. The increase in cash provided by operating activities was primarily driven by an increase in net investment income reflecting growth in our investment portfolio and an increase in PRT premiums as well as the 2018 ceding commission related to the Voya reinsurance transaction.

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 $7.3 billion and $6.1 billion for the nine months ended September 30, 2019 and 2018, respectively. The change in cash used in investing activities was primarily attributed to purchases of investments attributed to higher organic deposits in 2019 and the deconsolidation of Germany in 2018.

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, repurchases of common stock and payment of preferred stock dividends. Our financing activities provided cash flows totaling $5.9 billion and $3.9 billion for the nine months ended September 30, 2019 and 2018, respectively. The change in cash provided from financing activities was primarily attributed to higher investment-type deposits from retail, flow reinsurance and funding agreement deposits, the change in cash collateral posted for derivative transactions driven by favorable equity market performance in 2019 and proceeds from the issuance of preferred stock, partially offset by 2018 proceeds from the issuance of debt and the repurchase of common stock in 2019.

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 U.S. 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 the approval of the appropriate regulator is required prior to payment. AHL does not currently plan on having the U.S. 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 potential imposition of withholding tax and 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 $1.0 billion credit facility or by pursuing future issuances of debt or equity securities to third-party investors. However, such additional funding may not be available on terms favorable to us or at all, depending on our financial condition, results of operations or prevailing market conditions. In addition, certain covenants in our credit facility prohibit us from incurring any debt not expressly permitted thereby, which may limit our ability to pursue future issuances of debt. Specifically, our credit facility prohibits us from incurring any debt if, on a pro-forma basis, the debt would cause us to exceed a Consolidated Debt to Capitalization Ratio (as such term is defined in the credit facility) of 35%. 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 January 2028.

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 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 expenses. See *Note 8 – 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, 2019 and December 31, 2018, the revolving note payable had an outstanding balance of $0 million and $105 million, respectively.

Capital Resources

As of December 31, 2018 and 2017, our U.S. insurance companies' total adjusted capital (TAC), as defined by the NAIC, was $2.2 billion and $1.9 billion, respectively, and our U.S. RBC ratio was 421% and 490%. Each U.S. 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, 2018 and 2017, respectively.

ALRe statutory capital was $9.7 billion and $7.0 billion as of December 31, 2018 and 2017, respectively. During 2018, AHL contributed its wholly owned subsidiary, Athene USA, to ALRe. ALRe adheres to BMA regulatory capital requirements to maintain statutory capital and surplus to meet the MMS and maintain minimum EBS capital and surplus to meet the 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 $12.0 billion and $7.7 billion, resulting in a BSCR ratio of 340% and 354% as of December 31, 2018 and 2017, respectively. An insurer must have a BSCR ratio of 100% or greater to be considered solvent by the BMA. As of December 31, 2018 and 2017, ALRe held the appropriate capital to adhere to these regulatory standards. In evaluating our capital position and the amount of capital needed to support our Retirement Services segment, we review our ALRe capital by applying the NAIC RBC factors. As of December 31, 2018 and 2017, our ALRe RBC was 405% and 562%, respectively. The decrease in ALRe RBC was driven by the capital charges related to the Voya and Lincoln reinsurance agreements, alternative investment deployment, the increase in deposits and impacts resulting from the Tax Act. Although the updates to the RBC factors to reflect the reduction in the corporate income tax rate from 35% to 21% lowered our ALRe RBC ratio, we do not believe this materially impacted the level of capital that we deem appropriate to run our business. We believe that we enjoy 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, provides us the opportunity to take advantage of market dislocations as they arise.

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 has approved four additional authorizations under our share repurchase program for the purchase of up to an additional $1.3 billion of our Class A shares, in the aggregate, for a total authorization of $1.6 billion. Pursuant to our share repurchase program, we repurchased 2.9 million and 12.8 million Class A shares for $121 million and $544 million during the three months ended September 30, 2019 and the nine months ended September 30, 2019, respectively. As of November 5, 2019, we have repurchased, in the aggregate, 22.4 million Class A shares for $927 million and have $640 million of repurchase authorization remaining.

Balance Sheet and Other Arrangements

Contractual Obligations

There have been no material changes to our contractual obligations from those previously disclosed in the 2018 Annual Report.

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. 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 2018 Annual Report. The most critical accounting estimates and judgments include those used in determining:

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

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* of our 2018 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.

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 2018 Annual Report.

There have been no material changes to our market risk exposures from those previously disclosed in the 2018 Annual Report, except as described below. The following updates and replaces the information provided in the 2018 Annual Report under the similarly titled headings:

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, 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 $158 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 $72 million. If there were a similar parallel increase in interest rates from levels as of December 31, 2018, we estimate a net decrease to our point-in-time pre-tax income from changes in the fair value of these financial instruments of $199 million with an additional decrease to pre-tax income of $23 million from DAC, DSI, and VOBA amortization and changes in rider reserves. The decrease in the estimated outcome of the sensitivity analysis as of September 30, 2019 when compared to that as of December 31, 2018 was driven by the sensitivity of market value hedges and the growth in the business. The financial instruments included in the sensitivity analysis are carried at fair value and changes in fair value are recognized in earnings. These financial instruments include derivative instruments, embedded derivatives and certain fixed maturity securities. The sensitivity analysis excludes those financial instruments carried at fair value for which changes in fair value are recognized in equity, such as AFS fixed maturity securities.

Assuming a 25 basis point increase in interest rates that persists for a 12-month period, the estimated impact to adjusted operating income would be an increase of approximately $30 – $35 million. This is driven by an increase 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 Athene Holding Ltd. 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 Athene Holding Ltd. 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, 2019, 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 an OTTI, 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 2018 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 during the quarter ended September 30, 2019, 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 U.S. 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 10 – 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 2018 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 2018 Annual Report.

The following is inserted as the new penultimate paragraph of the similarly named risk factor included in our 2018 Annual Report:

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

The NAIC and state insurance regulators, as well as the Federal Reserve and Federal Insurance Office, are currently working with the International Association of Insurance Supervisors to develop a global common framework (ComFrame) for the supervision of internationally active insurance groups (IAIGs). If adopted, ComFrame would establish international standards for the designation of a group-wide supervisor for each IAIG and for the imposition of a group capital requirement applicable to an IAIG in addition to the current legal entity capital requirements imposed by state insurance laws and regulations. In response to ComFrame, the NAIC developed a model law that allows state insurance regulators in the U.S. to be designated as group-wide supervisors for U.S.-based IAIGs. Additionally, the NAIC is developing a group capital calculation applicable to U.S.-based insurance groups in addition to the RBC requirement that is applied on a legal entity basis. These regulatory developments may increase the amount of capital that we are required to hold and could result in us being subject to increased regulatory requirements.

The following updates and replaces, in its entirety, the similarly named risk factor included in our 2018 Annual Report:

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

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

IMA Termination Rights

Our bye-laws currently provide that we may not, and will cause our subsidiaries not to, terminate any IMA among us or any of our subsidiaries, on the one hand, and the applicable Apollo subsidiary, 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 below) and (ii) 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 any 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 the applicable Apollo subsidiary's obligations under the relevant agreement, in each case of this clause (B), that is materially detrimental to us, and in either case of this clause (B), subject to the delivery of written notice at least 30 days prior to such termination; provided, that in connection with an event described in clause (B)(i) or (B)(ii), the applicable Apollo subsidiary shall have the right to dispute such determination of the Independent Directors within 30 days after receiving notice from us of such determination, in which case the matter will be submitted to binding arbitration and such IMA shall continue to remain in effect during the period of the arbitration (the events described in the foregoing clauses (A) and (B) are referred to in more detail in our bye-laws as "AHL Cause"). For purposes of these provisions of the bye-laws, an "Independent Director" cannot be (x) an officer or employee of ours or any of our subsidiaries or (y) an officer or employee of (1) any member of the Apollo Group described in clauses (i) through (iv) of the definition of "Apollo Group" as set forth in our bye-laws or (2) AGM or any of its subsidiaries (excluding any subsidiary that constitutes any portfolio company (or investment) of (A) an investment fund or other investment vehicle whose general partner, managing member or similar governing person is owned, directly or indirectly, by AGM or by one or more of its subsidiaries or (B) a managed account agreement (or similar arrangement) whereby AGM or one or more of its subsidiaries serves as general partner, managing member or in a similar governing position). The limitations on our ability to terminate the IMAs with the applicable Apollo subsidiary could have a material adverse effect on our financial condition and results of operations.

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

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

Investment Management Fees

The Fee Agreement provides for a monthly fee payable to Apollo in arrears in an amount equal to the following, to the extent not otherwise payable to Apollo pursuant to any one or more investment management or sub-advisory agreements or arrangements:

(1) a base management fee equal to the sum of (i) 0.225% per annum 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 (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 annum 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, 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, as further described in the Fee Agreement:

   (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 U.S. government;

   (ii) 0.13% of the market value of Core Plus assets, which include private investment grade corporate bonds, fixed rate first lien 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, 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, U.S. treasuries, non-preferred equities and alternatives.

The base management fee covers a range of investment services that we receive from Apollo, including investment management, asset allocation, mergers and acquisition asset diligence and certain operational support services such as investment compliance, tax, legal and risk management support, among others. 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.

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

The following updates and replaces, in its entirety, the similarly named risk factor included in our 2018 Annual Report:

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

U.S. state regulators retain the authority to license insurers in their states and an insurer generally may not operate in a state in which it is not licensed. We have U.S. domiciled insurance subsidiaries that collectively are currently licensed to do business in all 50 states and the District of Columbia. Our ability to retain these licenses depends on our and our subsidiaries’ ability to meet requirements established by the NAIC and adopted by each state such as RBC standards and surplus requirements.

Some of the factors influencing these licensing requirements, particularly factors such as changes in equity market levels, the value of certain derivative instruments that do not receive hedge accounting, the value and credit ratings of certain fixed-income and equity securities in our investment portfolio, interest rate changes and changes to the RBC formulas and the interpretation of the NAIC’s instructions with respect to RBC calculation methodologies, are out of our control. In addition, licensing regulations differ as to products and jurisdictions and may be subject to interpretation as to whether certain licenses are required with respect to the manner in which we may sell or service some of our products in certain jurisdictions. The degree of complexity is heightened in the context of products that are issued through our institutional channel, including our PRT products, where one product may cover risks in multiple jurisdictions.

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

On January 23, 2019, we received a letter from the NYSDFS, which expressed concerns with our interpretation and reliance upon certain exemptions from licensing in New York in connection with certain activities undertaken by our PRT business within New York State. We have been in dialogue with the NYSDFS regarding potential changes to our PRT business practices that may be necessary to comply with New York law. Earlier this year, we were notified by the NYSDFS that, in addition to such changes in our business practices, it proposes that we enter into a settlement agreement or consent order to resolve such licensing concerns. Although we do not expect any changes in our business practices implemented as a result of our discussions with the NYSDFS to have a material adverse effect on our ability to write PRT business, it is possible such changes could have a material impact on our future growth prospects within our PRT channel. Further, such settlement agreement or consent order, if entered into, will include fines and penalties. If we are unable to enter into a settlement agreement or consent order, the ultimate resolution of this matter could have a material impact on our results of operations.

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

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

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

The following updates and replaces, in its entirety, the similarly named section of risk factors included in our 2018 Annual Report:

Risks Relating to Taxation

The BEAT may significantly increase our tax liability.

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

Certain of our reinsurance agreements require our U.S. subsidiaries (including any non-U.S. subsidiaries subject to U.S. federal income taxation) to pay or accrue substantial amounts to our non-U.S. 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-U.S. 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 U.S. 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 profit from 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 takes 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.

The term "related" is defined broadly under the BEAT and application of the definition and the tax attribution rules to which it refers can produce results that are hard to predict. We believe that other than our subsidiaries, none of our reinsurance counterparties should be treated as "related" to us for purposes of the BEAT, and therefore payments under our reinsurance arrangements with such counterparties are not subject to the BEAT. However, there is considerable uncertainty regarding the scope of the term "related" for BEAT purposes, and no assurances can be made that the IRS will not assert that one or more of our reinsurance counterparties are "related" to us for purposes of the BEAT. A successful challenge could have a material and adverse effect on our financial condition, results of operations and cash flows.

AHL or its non-U.S. subsidiaries may be subject to U.S. federal income taxation.

AHL and certain of its subsidiaries are incorporated under the laws of non-U.S. jurisdictions, including Bermuda. AHL, ALRe and their subsidiaries that are treated as foreign corporations under the U.S. Internal Revenue Code of 1986, as amended (the "Code") (the "Non-U.S. Subsidiaries," and together with AHL and ALRe, the "Non-U.S. Companies"), have historically intended to operate in a manner that will not cause any to be treated as being engaged in a trade or business within the U.S. or subject to current U.S. federal income taxation on their net income. However, the recent 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 any of our Non-U.S. Companies to conduct its business differently. Further, because 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, there can be no assurance that the IRS will not successfully contend that a Non-U.S. Company is engaged in a trade or business in the U.S. If a Non-U.S. Company were considered to be engaged in a trade or business in the U.S., it could be subject to U.S. federal income taxation on a net basis on its income that is effectively connected with such U.S. 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 the income tax treaties between the U.S. and Bermuda (the "Bermuda Treaty") and between the U.S. and the U.K. (the "U.K. Treaty"). Any such U.S. federal income taxation could result in substantial tax liabilities and consequently could have a material adverse effect on our financial condition, results of operations and cash flows.

AHL and ALRe are U.K. tax residents and expect to qualify for the benefits of the U.K. Treaty because AHL's Class A common shares are listed and regularly traded on the NYSE. ACRA is also a U.K tax resident and expects to qualify for the benefits of the U.K. Treaty by reason of satisfying an ownership and base erosion test. Accordingly, AHL, ALRe and ACRA are expected to qualify for exemptions from, or reduced rates of, U.S. tax on certain amounts that are from U.S. sources or connected with a U.S. trade or business, provided that they satisfy all of the requirements of the U.K. Treaty. However, there can be no assurances that AHL, ALRe and ACRA will continue to qualify for treaty benefits, particularly given the potential implications of the Bermuda Economic Substance Act 2018, or will not have a U.S. permanent establishment to which their income is attributable. If AHL, ALRe or ACRA fails to qualify for treaty benefits or has a U.S. permanent establishment to which its income is attributable, 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.

U.S. persons who own depositary shares representing an interest in our preferred stock or own our Class A common shares may be subject to U.S. federal income taxation at ordinary income rates on our undistributed earnings and profits.

AHL's bye-laws generally limit the voting power of our Class A common shares (and certain other of our voting securities) such that no person owns (or is treated as owning) more than 9.9% of the total voting power of our common shares (with certain exceptions). AHL's bye-laws also generally reduce the voting power of Class B common shares held by certain holders if (A) one or more U.S. persons that own (or are treated as owning) more than 9.9% of the total voting power of our common shares own (or are treated as owning) individually or in the aggregate more than 24.9% of the voting power or the value of our common shares or (B) a U.S. person that is classified as an individual, an estate or a trust for U.S. federal income tax purposes owns (or is treated as owning) more than 9.9% of the total voting power of our common shares. Additionally, AHL's bye-laws require the board of AHL to refer certain decisions with respect to ALRe and our non-U.S. subsidiaries to our shareholders, and to vote our shares in those subsidiaries accordingly. These provisions were intended to reduce the likelihood that any of the Non-U.S. Companies will be treated as a controlled foreign corporation ("CFC"), other than for purposes of taking into account related person insurance income ("RPII"). However, the relevant attribution rules are complex and there is no definitive legal authority on whether the voting provisions included in AHL's organizational documents are effective for purposes of the CFC provisions.

Moreover, the Tax Act eliminated the prohibition on "downward attribution" from non-U.S. persons to U.S. persons under Section 958(b)(4) of the Code for purposes of determining constructive stock ownership under the CFC rules. As a result, our U.S. subsidiaries are deemed to own all of the stock of the Non-U.S. Subsidiaries for CFC purposes. Further, we believe that other U.S. persons are currently treated as 10% U.S. Shareholders that own more than 25% of the vote (and potentially more than 25% of the value) of ALRe by reason of downward attribution from our direct or indirect shareholders. Accordingly, the Non-U.S. Subsidiaries are currently treated as CFCs and ALRe is believed to be a CFC, at least for purposes of taking into account certain insurance income, without regard to whether the provisions of our bye-laws described above are effective for purposes of the CFC provisions. The legislative history under the Tax Act indicates that this change was not intended to cause a foreign corporation to be treated as a CFC with respect to a 10% U.S. Shareholder (as defined below) that is not related to the U.S. persons receiving such downward attribution. However, it is not clear whether the IRS or a court would interpret the change made by the Tax Act in a manner consistent with such indicated intent.

For any taxable year in which a Non-U.S. Company is treated as a CFC with respect to a 10% U.S. Shareholder of the Non-U.S. Company that held depositary shares representing an interest in our preferred stock or held our Class A common shares directly or indirectly through non-U.S. entities as of the last day in such taxable year that the company was a CFC would generally be required to include in gross income as ordinary income its pro rata share of the company's insurance and reinsurance income and certain other investment income, regardless of whether that income was actually distributed to such U.S. person (with certain adjustments). A "10% U.S. Shareholder" of an entity treated as a foreign corporation for U.S. federal income tax purposes is a U.S. person who owns (directly, indirectly through non-U.S. 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 U.S. 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-U.S. corporation is a CFC if 10% U.S. Shareholders, in the aggregate, own (or are treated as owning) stock of the non-U.S. corporation possessing more than 50% of the voting power or value of such corporation's stock. However, this threshold is lowered to more than 25% for purposes of taking into account the insurance income of a non-U.S. corporation. Special rules apply for purposes of taking into account any RPII of a non-U.S. corporation, as described below.

In addition, if a U.S. person disposes of shares in a non-U.S. corporation and the U.S. person owned (directly, indirectly through non-U.S. 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 U.S. person's share of the corporation's undistributed earnings and profits that were accumulated during the period or periods that the U.S. person owned the shares while the corporation was a CFC (with certain adjustments). Also, a U.S. person may be required to comply with specified reporting requirements, regardless of the number of shares owned.

Because of the limitations in AHL's bye-laws referred to above, among other factors, we believe it is unlikely that any U.S. person that is treated as owning less than 10% of the total value of AHL would be a 10% U.S. Shareholder of any of the Non-U.S. Companies. However, because the relevant attribution rules are complex and there is no definitive legal authority on whether the voting provisions included in AHL's organizational documents are effective for purposes of the CFC provisions, there can be no assurance that this will be the case. Further, our ability to obtain information that would permit us to enforce the limitation described above may be limited. We will take reasonable steps to obtain such information, but there can be no assurance that such steps will be adequate or that we will be successful in this regard. Accordingly, we may not be able to fully enforce the limitation described above.

U.S. persons who own depositary shares representing an interest in our preferred stock or own our Class A common shares may be subject to U.S. 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-U.S. Companies is treated as recognizing RPII in a taxable year and is also treated as a CFC for such taxable year, each U.S. person that owns depositary shares representing an interest in our preferred stock or owns our Class A common shares directly or indirectly through non-U.S. 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 U.S. persons, regardless of whether that income is distributed (with certain adjustments). For this purpose, a Non-U.S. Company generally will be treated as a CFC if U.S. persons in the aggregate are treated as owning 25% or more of the total voting power or value of the Non-U.S. Company's stock at any time during the taxable year. We believe that the Non-U.S. Companies will be treated as CFCs for this purpose based on the current and expected ownership of our shares.

RPII generally is any income of a non-U.S. corporation attributable to insuring or reinsuring risks of a U.S. person that owns (or is treated as owning) stock of such non-U.S. corporation, or risks of a person that is "related" to such a U.S. 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 U.S. 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.

Athene and Apollo have considerable overlap in ownership. If it is determined that the same persons “control” both us and Apollo through owning (or being treated as owning) more than 50% of the vote or value of Athene and Apollo, substantially all of the income of the Non-U.S. Companies that are engaged in reinsurance might constitute RPII. This would trigger the adverse RPII consequences described above to all U.S. persons that hold our depositary shares representing an interest in our preferred stock or hold our Class A common shares directly or indirectly through non-U.S. entities and would have a material adverse effect on the value of their investment in the depositary shares representing an interest in our preferred stock or their investment in our Class A common shares.

Existing voting restrictions set forth in AHL’s bye-laws are generally intended to prevent a person who owns (or is treated as owning) shares in Apollo from owning (or being treated as owning) any of the voting power of our Class A common shares, thus preventing persons who own (or are treated as owning) both AHL and Apollo from owning (or being treated as owning) more than 50% of the voting power of our stock. However, these restrictions do not prevent members of the Apollo Group from retaining the right to vote on newly acquired Class A common shares, should they choose to do so, nor do they prevent persons who own (or are treated as owning) both AHL and Apollo from owning (or being treated as owning) more than 50% of the value of our stock. AHL’s bye-laws also generally provide that no person (nor certain direct or indirect beneficial owners or related persons to such person) who owns our shares, other than a member of the Apollo Group, may acquire any shares of Apollo or otherwise make any investment that would cause such person, or any other person that is a U.S. person, to own (or be treated as owning) more than 50% of the vote or value of AHL’s stock. Any holder of our shares that violates this provision may be required, at the board’s discretion, to sell its shares or take any other reasonable action that the board deems necessary.

Because of the restrictions described above, among other factors, we believe it is likely that one or more exceptions under the RPII rules will apply such that U.S. persons will not be required to include any RPII in their gross income with respect to the Non-U.S. Companies. However, there can be no assurance that this will be the case. Further, our ability to obtain information that would permit us to enforce the restrictions described above may be limited. We will take reasonable steps to obtain such information, but there can be no assurance that such steps will be adequate or that we will be successful in this regard. Accordingly, we may not be able to fully enforce these restrictions.

U.S. persons who dispose of depositary shares representing an interest in our preferred stock or dispose of our Class A common shares may be required to treat any gain as ordinary income for U.S. federal income tax purposes and comply with other specified reporting requirements.

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

U.S. tax-exempt organizations that own depositary shares representing an interest in our preferred stock or own our Class A common shares may recognize unrelated business taxable income.

A U.S. tax-exempt organization that directly or indirectly owns depositary shares representing an interest in our preferred stock or owns our Class A common shares generally will recognize unrelated business taxable income and be subject to additional U.S. tax filing obligations to the extent such tax-exempt organization is required to take into account any of our insurance income or RPII pursuant to the CFC and RPII rules described above. U.S. tax-exempt organizations should consult their own tax advisors regarding the risk of recognizing unrelated business taxable income as a result of the ownership of depositary shares representing an interest in our preferred stock or the ownership of our Class A common shares.

U.S. persons who own depositary shares representing an interest in our preferred stock or own our Class A common shares may be subject to adverse tax consequences if AHL is considered a passive foreign investment company for U.S. federal income tax purposes.

If AHL is considered a passive foreign investment company (PFIC) for U.S. federal income tax purposes, a U.S. person who directly or, in certain cases, indirectly owns depositary shares representing an interest in our preferred stock or owns our Class A common shares could be subject to adverse tax consequences, including a greater tax liability than might otherwise apply, an interest charge on certain taxes that are deemed deferred as a result of AHL’s non-U.S. status and additional U.S. tax filing obligations, regardless of the number of shares owned.

We currently do not expect that AHL will be a PFIC for U.S. federal income tax purposes in the current taxable year or the foreseeable future because AHL, through its insurance subsidiaries, intends to qualify for the “active insurance” exception to PFIC treatment. This exception was amended as part of the Tax Act, and we believe that we qualify for the exception as amended. However, there is significant uncertainty regarding how the exception will be interpreted. The IRS recently proposed regulations providing guidance on the amended exception. The proposed regulations are not effective until adopted in final form.

Under the Code and the proposed regulations, the active insurance exception is available only if a foreign insurance company is considered to be engaged in the "active conduct" of an insurance business. The proposed regulations state that whether a company is engaged in the "active conduct" of an insurance business is a facts and circumstances test, but then introduce a "bright line" rule providing that the "active conduct" requirement is met if, and only if, the insurance company's "active conduct percentage" is at least 50%. In general, a company's active conduct percentage is determined by dividing the company's aggregate expenses for certain insurance-related services of its officers and employees (and the officers and employees of certain affiliates) by the company's aggregate expenses for such insurance-related services (including those paid to unaffiliated persons). The precise scope of expenses that should be taken into account in calculating the active conduct percentage is unclear.

ALRe generally pays fees to unaffiliated service providers, including Apollo, for investment management and other services. Including such fees in the calculation would have the effect of reducing ALRe's active conduct percentage. Due to uncertainty in the scope of expenses that should be taken into account, complexity in tracking and allocating expenses, and variations in expenses from year to year, among other uncertainties, no assurances can be provided that ALRe's active conduct percentage will be at least 50% in any given year. Accordingly, if the proposed regulations were finalized in their proposed form, depending on which expenses are included in the fraction, there is risk that ALRe would be considered a PFIC in one or more taxable years, in which case AHL would also likely be a PFIC in such taxable years.

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

Changes in U.S. tax law might adversely affect us or our shareholders, including holders of the depositary shares representing an interest in our preferred stock or holders of our Class A common shares.

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

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

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

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

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

We may become subject to U.S. withholding tax under certain U.S. tax provisions commonly known as FATCA.

Certain U.S. tax provisions commonly known as FATCA impose a 30% withholding tax on certain payments of U.S. source income to certain "foreign financial institutions" and "non-financial foreign entities." The withholding tax may also apply to certain "foreign passthru payments" made by foreign financial institutions at a future date. The U.S. government has signed an intergovernmental agreement to facilitate the implementation of FATCA with the government of Bermuda (Bermuda IGA). The Non-U.S. Companies intend to comply with the obligations imposed on them under FATCA and the Bermuda IGA, as applicable, to avoid being subject to withholding under FATCA on payments made to them or penalties. However, no assurance can be provided in this regard. We may become subject to withholding tax or penalties if we are unable to comply with FATCA.

If AHL is treated as engaged in a U.S. trade or business in any taxable year, all or a portion of the dividends on our preferred stock or our Class A common shares may be treated as U.S. source income and may be subject to withholding and information reporting under FATCA unless a shareholder (and any intermediaries through which the shareholder holds its shares) establishes an exemption from such withholding and information reporting. As discussed above, we have historically intended to limit our U.S. activities so that AHL is not considered to be engaged in a U.S. trade or business. However, the recent 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 AHL to conduct its business differently. Furthermore, no definitive standards are provided by the Code, U.S. Treasury regulations or court decisions regarding when a foreign corporation is engaged in the conduct of a U.S. trade or business. Because the law is unclear, and the determination is highly factual and must be made annually, there is no assurance that the IRS will not contend that AHL is engaged in a U.S. trade or business.

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

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

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

In 2015, the Organisation for Economic Co-operation and Development 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. Beginning with 2017, some countries in which we do business, including Bermuda and the U.S., require certain multinational enterprises, including ours, to report detailed information regarding allocation of revenue, profit, and other information, on a country-by-country basis, which could increase scrutiny by foreign tax authorities.

The BEPS recommendations also include revisions to the definition of a “permanent establishment” and the rules for attributing profit to a permanent establishment. Other recommended actions relate to the goal of ensuring that transfer pricing outcomes are in line with value creation, noting that the current rules may facilitate the transfer of risks or capital away from countries where the economic activity takes place. We expect many countries to change their tax laws in response to this project, and several countries (including the U.S.) have already changed or proposed changes to their tax laws. Changes to tax laws could increase their complexity and the burden and costs of compliance. Additionally, such changes could also result in significant modifications to the existing transfer pricing rules and could potentially have an impact on our taxable profits in various jurisdictions.

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

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, 2019 are set forth below:

Period	(a) Total number of shares purchased[1]	(b) Average price paid per share	(c) Total number of shares purchased as part of publicly announced programs[1,2]	(d) Maximum number (or approximate dollar value) of shares that may yet be purchased under the plans or programs[2]
July 1 – July 31, 2019	454,963	$ 42.34	454,860	$ 75,000,025
August 1 – August 31, 2019	548,754	$ 39.08	548,754	$ 403,552,606
September 1 – September 30, 2019	1,889,877	$ 42.52	1,889,877	$ 323,195,285

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

[2] *On December 10, 2018, we announced that our board of directors had approved an authorization for the repurchase of up to $250 million of our Class A shares (Previous Authorization). On May 7, 2019, we announced that our board of directors had approved an authorization for the repurchase of up to $350 million of our Class A shares, inclusive of the remaining shares authorized for repurchase under the Previous Authorization. On June 10, 2019, we announced that our board of directors had approved an additional $120 million authorization for the repurchase our Class A shares. On August 5, 2019, we announced that our board of directors had approved an additional $350 million authorization for the repurchase of our Class A shares. 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 shares. None of the authorizations have a definitive expiration date, but may be terminated at any time at the sole discretion of our board of directors. See Note 8 – Equity to the condensed consolidated financial statements for more information.*

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EXHIBIT INDEX

Exhibit No.	Description
4.1	Certificate of Designations of 5.625% Fixed Rate Perpetual Non-Cumulative Preference Shares, Series B (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on September 19, 2019)
4.2	Form of Share Certificate evidencing 5.625% Fixed Rate Perpetual Non-Cumulative Preference Share, Series B (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K filed on September 19, 2019)
4.3	Deposit Agreement, dated September 19, 2019, between the Company and Computershare Inc. and Computershare Trust Company, N.A., collectively, and the holders from time to time of the Depositary Receipts (incorporated by reference to Exhibit 4.3 to the Current Report on Form 8-K filed on September 19, 2019)
4.4	Form of Depositary Receipt (included in Exhibit 4.3) (incorporated by reference to Exhibit 4.3 to the Current Report on Form 8-K filed on September 19, 2019)
10.1	Master Framework Agreement, dated as of September 11, 2019, by and between Athene Co-Invest Reinsurance Affiliate 1A Ltd. 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 5, 2019

/s/ Martin P. Klein

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

Exhibit 10.1

MASTER FRAMEWORK AGREEMENT

BY AND BETWEEN

ATHENE CO-INVEST REINSURANCE AFFILIATE 1A LTD.,

AND

ATHENE LIFE RE LTD.

DATED AS OF SEPTEMBER 11, 2019

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Exhibit 10.1

THIS MASTER FRAMEWORK AGREEMENT (this "Agreement") is made and entered into on September 11, 2019 by and between **ATHENE CO-INVEST REINSURANCE AFFILIATE 1A LTD.**, a Bermuda Class C insurer under the Bermuda Insurance Act 1978 ("ACRA 1A"), and **ATHENE LIFE RE LTD.**, a Bermuda Class E insurer under the Bermuda Insurance Act 1978 ("ALRe").

RECITALS

WHEREAS, (a) the Apollo/Athene Dedicated Investment Program ("ADIP") has entered into that certain subscription agreement, dated as of the date hereof, with ACRA 1A and ALRe (the "ADIP Subscription Agreement"), and (b) ALRe has entered into that certain subscription agreement, dated as of the date hereof, with ACRA 1A (together with the ADIP Subscription Agreement, the "Subscription Agreements"), pursuant to which ALRe and/or ADIP shall, following the Closing (as defined in the Subscription Agreements), make additional capital contributions to ACRA 1A and/or purchase certain amounts of shares representing economic and voting interests in other ACRA Investment Entities as set forth more fully below;

WHEREAS, ALRe currently owns shares of ACRA 1A representing 100% of the voting rights and economic interests in ACRA 1A and, after the sale of shares of ACRA 1A to ADIP pursuant to the ADIP Subscription Agreement, ALRe will own shares of ACRA 1A representing 100% of the voting rights and it is expected that ALRe will own shares of ACRA 1A representing 33% of the economic interest in ACRA 1A and ADIP will own, directly or indirectly, shares of ACRA 1A representing 67% of the economic interests in ACRA 1A;

WHEREAS, ACRA 1A, indirectly through its limited partner and general partner interests in Athene Co-Invest Reinsurance Affiliate LP, owns or will own 100% of the voting rights and 99% of the economic interests with respect to Athene Co-Invest Reinsurance Affiliate 1B Ltd., a Bermuda Class C insurer under the Bermuda Insurance Act 1978 that will file an election under Section 953(d) of the Code to be taxed as a U.S. corporation ("ACRA 1B");

WHEREAS, unless otherwise agreed to by ALRe and ACRA 1A, ALRe will own shares of each ACRA Investment Entity (as defined below), other than ACRA 1A, representing 100% of the voting rights and 33% of the economic interest in such ACRA Investment Entity, and ADIP will own, directly or indirectly, shares of each such ACRA Investment Entity representing the 67% of the economic interest in each such ACRA Investment Entity;

WHEREAS, Athene Holding Ltd., a Bermuda exempted company ("AHL"), through its Subsidiaries that are Athene Parties, including ALRe and Athene Annuity Re Ltd., a Bermuda Class E insurer under the Insurance Act 1978 that has filed an election under Section 953(d) of the Code to be taxed as a U.S. corporation ("AARe"), may from time to time consider, pursue and enter into certain Qualifying Transactions;

WHEREAS, subject to the terms, limitations and conditions set forth herein, ALRe desires to offer to ACRA 1A the right to elect to participate in any Qualifying Transaction;

WHEREAS, the board of directors of ACRA 1A may, in its sole discretion, exercise ACRA 1A's participation rights in any Qualifying Transaction through other alternative investment vehicles formed by ACRA 1A from time to time for the purposes of entering into a Qualifying Transaction (together with ACRA 1A, the "ACRA Investment Entities") by assigning ACRA 1A's rights to participate in the applicable Qualifying Transactions to the applicable ACRA Investment Entity;

WHEREAS, ACRA 1A and ALRe have entered into that certain Reinsurance Program Agreement, dated as of the date hereof (the "ACRA 1A Reinsurance Program Agreement"), and ACRA 1B and AARe have entered into that certain Reinsurance Program Agreement, dated as of the date hereof (the "ACRA 1B Reinsurance Program Agreement");

WHEREAS, ACRA 1A and ALRe have entered into that certain Fee and Capitalization Agreement, dated as of the date hereof (the "Fee and Capitalization Agreement"), which sets forth the amount of certain fees and expenses payable by, and capitalization requirements applicable to, the ACRA Investment Entities; and

WHEREAS, in the event that ACRA 1A elects, through itself or another ACRA Investment Entity, to participate in any Qualifying Transaction, ALRe or any other Athene Party and the applicable ACRA Investment Entity or its Subsidiary shall effectuate one or more Transaction Agreements with respect to such Qualifying Transaction, and any Transaction Agreement shall be consistent with the terms, conditions and limitations set forth herein, in the Fee and Capitalization Agreement and, if applicable, in the applicable Reinsurance Program Agreement.

NOW, THEREFORE, in consideration of the premises, mutual covenants and agreements contained in this Agreement, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties agree as follows:

ARTICLE I
DEFINITIONS; RULES OF CONSTRUCTION

Section 1.01 Defined Terms. As used in this Agreement, the following terms have the respective meanings set forth below.

"AARe" has the meaning set forth in the Recitals.

"ACRA 1A" has the meaning set forth in the Preamble.

"ACRA 1A Reinsurance Program Agreement" has the meaning set forth in the Recitals.

"ACRA 1B" has the meaning set forth in the Recitals.

"ACRA 1B Reinsurance Program Agreement" has the meaning set forth in the Recitals.

"ACRA Investment Entities" has the meaning set forth in the Recitals.

"ACRA Party" means any of the ACRA Investment Entities and their Subsidiaries.

"ACRA Quota Share" has the meaning set forth in Section 2.03(c).

"ACRA Reinsurance Agreement" means any reinsurance agreement pursuant to which ALRe, AARe or an entity acquired in connection with an Approved Qualifying Transaction reinsures risks related to an Approved Qualifying Transaction to an ACRA Party.

"ACRA Silo" means, collectively, any ACRA Investment Entity and all of its Subsidiaries that are insurance or reinsurance companies formed for the purposes of entering into any Qualifying Transaction.

"ADIP" has the meaning set forth in the Recitals.

"ADIP Feeder Funds" means, collectively, the limited partners of each limited partnership comprising ADIP.

"ADIP Funding Date" means the date on which ADIP acquires shares of ACRA 1A from ALRe.

"ADIP Limited Partners" means, collectively, the limited partners of each ADIP Feeder Fund.

"ADIP Subscription Agreement" has the meaning set forth in the Recitals.

"Affiliate" means, with respect to any Person, any other Person that directly or indirectly through one or more intermediaries, Controls, is Controlled by or is under common Control with such specified Person. For the avoidance of doubt, none of the following groups of Persons or their Subsidiaries shall be considered "Affiliates" of any ACRA Party or any Athene Party for purposes of this Agreement: (a) Apollo Global Management, LLC, (b) any pooled investment vehicle, fund, managed account or other client to which Apollo Global Management, LLC or its Subsidiaries provide investment advice or otherwise serve in a fiduciary capacity, (c) any portfolio company in which the entities described in clause (b) directly or indirectly hold investments or (d) Athora Holding Ltd., Catalina Holdings (Bermuda) Ltd., OneMain Holdings, Inc., VA Capital Company LLC and Aspen Insurance Holdings Limited.

"Agreement" has the meaning set forth in the Preamble.

"AHL" has the meaning set forth in the Recitals.

"ALRe" has the meaning set forth in the Preamble.

"Applicable Insurance Regulatory Authority" means, with respect to any Person, the insurance regulatory or administrative authority or agency of the jurisdiction in which such Person is domiciled.

"Applicable Law" means any federal, state, local or foreign law (including common law), constitution, treaty, statute, ordinance, rule, regulation, order (including any executive order), writ, injunction, judgment, permit, governmental agreement, directive or decree or any provisions of any of the foregoing applicable to a Person or any of such Person's subsidiaries, properties, assets, or to such Person's officers, directors, managing directors, employees or agents in their capacity as such.

"Approved Qualifying Transaction" has the meaning set forth in Section 2.03(b).

"Athene Party" means any of AHL and its Subsidiaries, except for any ACRA Party.

"Business Day" shall mean any day other than a Saturday, Sunday or any other day on which banking institutions are authorized or required by law or executive order to close in New York, New York or Hamilton, Bermuda.

"Code" means the Internal Revenue Code of 1986.

"Commitment Period" shall mean the period starting on the date hereof through the last day of the "Commitment Period" as defined in the ADIP Subscription Agreement.

"Commutation Right" means, with respect to each Approved Qualifying Transaction, the right of ALRe and any other Athene Party to offer to commute or otherwise terminate the ACRA Parties' participation in such Approved Qualifying Transaction as described in the applicable Transaction Agreements.

"Confidential Information" has the meaning set forth in Section 4.01(a).

"Constituent Documents" means, with respect to any entity, the certificate of incorporation, bylaws, limited liability company agreement, certificate of formation, memorandum of association or equivalent constituent document of such entity, as applicable.

"Control," "Controlled" or "Controlling" means, as to any Person, the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise. The terms "Controlled by" and "under common Control with" shall have correlative meanings.

"Disclosing Party" means any Athene Party, on the one hand, or any ACRA Party or its Affiliates (other than any Athene Party), on the other hand, or any representative of any of the foregoing, that furnishes or discloses Confidential Information to any ACRA Party or its representatives or any Athene Party or its representatives, as applicable, in connection with this Agreement, any Qualifying Transaction, the Fee and Capitalization Agreement, any Reinsurance Program Agreement or any Transaction Agreement.

"Fee and Capitalization Agreement" has the meaning set forth in the Recitals.

"Flow Reinsurance Agreement" means any ACRA Reinsurance Agreement entered into between an Athene Party and an ACRA Party with respect to any flow reinsurance transaction that is an Approved Qualifying Transaction.

"Flow Reinsurance Transaction" means any Approved Qualifying Transaction, or portion thereof, with respect to which the applicable ACRA Party's participation is set forth in a Flow Reinsurance Agreement.

"Governmental Authority" means the government of the United States of America, Bermuda or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, administrative tribunal, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government, including any Applicable Insurance Regulatory Authority.

"Initial Commutation Date" means, with respect to each Approved Qualifying Transaction, (a) with respect to any Approved Qualifying Transaction that is not a Flow Reinsurance Transaction, the date that is the tenth (10th) anniversary of the effective date or closing date, as applicable, of such Approved Qualifying Transaction, (b) with respect to any Flow Reinsurance Transaction, the date that is the tenth (10th) anniversary date upon which the applicable Flow Reinsurance Agreement was terminated with respect to new business pursuant to the terms and conditions of such Flow Reinsurance Agreement or (c) such other date in the applicable Transaction Agreements upon which the applicable Athene Party may exercise its Commutation Right with respect to such Approved Qualifying Transaction for the first time; provided, however, that the parties may agree to reflect the applicable ACRA Party's participation in multiple applicable Approved Qualifying Transactions entered into in a particular calendar year or other time period in one ACRA Reinsurance Agreement, in which case the Initial Commutation Date for all Approved Qualifying Transactions that are subject to such ACRA Reinsurance Agreement shall be the tenth (10th) anniversary of the effective date of the last Approved Qualifying Transaction allocated to such ACRA Reinsurance Agreement.

"Joinder Agreement" has the meaning set forth in Section 4.02.

"Lien" means any mortgage, pledge, hypothecation, assignment, encumbrance, lien (statutory or other), charge, claim or preference, priority or other security interest or preferential arrangement in the nature of a security interest of any kind or nature whatsoever (including any conditional sale or other title retention agreement, and any financing lease having substantially the same economic effect as any of the foregoing).

"Participation Right" has the meaning set forth in Section 2.01.

"Permits" has the meaning set forth in Section 6.01(d).

"Person" means any natural person, corporation, limited liability company, trust, joint venture, association, company, partnership, limited partnership, Governmental Authority or other entity.

"Qualifying Transaction" means any of the following transactions:

(a) any legal entity acquisition transaction with any Third Party pursuant to which one or more legal entities with annuity and/or insurance liabilities are acquired, including any acquisition transaction that would involve one or more block or flow reinsurance transactions entered into in connection with such acquisition transaction pursuant to which (i) an Athene Party would assume annuity and/or insurance liabilities from any Affiliate of the applicable acquisition target through reinsurance and/or (ii) an ACRA Party would assume annuity and/or insurance liabilities from the applicable acquisition target through reinsurance;

(b) any block reinsurance transaction with any Third Party pursuant to which one or more Athene Parties would assume annuity and/or insurance liabilities;

(c) any pension risk transfer transaction with any Third Party pursuant to which an Athene Party would assume or otherwise become responsible for pension liabilities; or

(d) any flow reinsurance transactions with any new Third Party counterparties pursuant to which one or more Athene Parties would assume annuity and/or insurance liabilities with respect to annuities or insurance policies issued after the effective date of such transaction;

provided, that ALRe or AARe, as applicable, and any ACRA Investment Entity may agree that any acquisition, reinsurance or pension risk transfer transaction not contemplated in clauses (a)-(d) above may be a "Qualifying Transaction," subject to the approval from either (i) with respect to any (x) reinsurance transactions entered into by ALRe or any other Athene Party involving funding agreements and (y) any flow reinsurance transactions with any existing Third Party counterparties entered into by any Athene Party prior to the date hereof or new flow reinsurance transactions with such existing Third Party counterparties, the Transaction Committee of the applicable ACRA Investment Entity or (ii) for all other acquisition or reinsurance transactions, the Transaction Committee and the Conflicts Committee of the applicable ACRA Investment Entity; provided, further, that if ALRe, in its sole discretion, determines that any ACRA Investment Entity's participation in any transaction would cause a material tax, regulatory or operational burden on any Athene Party or the size of the transaction is de minimis, then such transaction shall not be a "Qualifying Transaction."

"Receiving Party" means any Athene Party, on the one hand, or any ACRA Party or its Affiliates (other than any Athene Party), on the other hand, or any representative of any of the foregoing, that receives Confidential Information from any ACRA Party or its representatives or any Athene Party or its representatives, as applicable, in connection with this Agreement, any Qualifying Transaction, the Fee and Capitalization Agreement, any Reinsurance Program Agreement or any Transaction Agreement.

"Reinsurance Program Agreements" means, collectively, the ACRA 1B Reinsurance Program Agreement, the ACRA 1A Reinsurance Program Agreement and any other Reinsurance Program Agreement entered into by and among any ACRA Parties, on the one hand, and any Athene Parties, on the other hand, after the date hereof.

"Step-up Fee" has the meaning set forth in Section 3.01(b).

"Subsidiary" means with respect to any entity, any other entity as to which it owns, directly or indirectly, or otherwise controls, directly or indirectly, an amount of the voting securities, other voting ownership or voting partnership interests of which is sufficient to elect at least a majority of its board of directors or other governing body or more than 50% of the voting shares or other similar interests.

"Subscription Agreements" has the meaning set forth in the Recitals.

"Third Party" means any Person that is not (a) an ACRA Party, (b) an Athene Party, (c) ADIP, the ADIP Feeder Funds, the ADIP Limited Partners or any other Subsidiary of ADIP or (d) Apollo Global Management, LLC or any of its Affiliates.

"Third-Party Ceding Company" means, with respect to each Third-Party Underlying Reinsurance Agreement, the Third Party ceding liabilities to the applicable Athene Party under such Third-Party Underlying Reinsurance Agreement.

"Third-Party Underlying Reinsurance Agreement" means any reinsurance agreement, together with all amendments thereto, pursuant to which an Athene Party reinsures from a Third Party liabilities that are subsequently retroceded by AARe or ALRe to an ACRA Party pursuant to an ACRA Reinsurance Agreement.

"Transaction Agreements" means (a) with respect to the business assumed in connection with any Approved Qualifying Transaction, any ACRA Reinsurance Agreements and any other agreements, instruments and documents reasonably necessary to effect the transactions contemplated by such ACRA Reinsurance Agreement, and (b) with respect to the business otherwise acquired in connection with any Approved Qualifying Transaction, any agreements, instruments and documents reasonably necessary to effect the acquisition and other transactions contemplated by such Approved Qualifying Transaction and this Agreement with respect to such Approved Qualifying Transaction.

"Wrap Fee" has the meaning set forth in Section 3.01(a).

Section 1.02 **Certain Rules of Construction**. The headings and captions in this Agreement are for convenience of reference only and do not define, limit or otherwise affect any of the terms or provisions hereof. The definitions of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine and neuter forms. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation." The word "will" shall be construed to have the same meaning and effect as the word "shall." In the computation of periods of time from a specified date to a later specified date, the word "from" or "since" means "from and including," the words "to" and "until" each mean "to but excluding," and the word "through" means "to and including." Any reference to "days" means calendar days unless Business Days are expressly specified. Unless the context requires otherwise or unless specifically stated herein to the contrary (a) any definition of or reference to any agreement, instrument or other document herein (including of or to this Agreement) shall be construed as referring to such agreement, instrument or other document (including the exhibits, schedules and other attachments thereto), as the case may be, as from time to time amended, restated, supplemented or otherwise modified (but only to the extent such amendment, restatement, supplement or modification, as the case may be, is effected in accordance with the terms hereof and thereof), (b) any definition of or reference to any statute, rule or regulation shall be construed as referring thereto as from time to time (including prior to the date hereof) amended, supplemented or otherwise modified (including by succession of comparable successor Applicable Laws), and to all rules and regulations promulgated thereunder or pursuant thereto, (c) any reference herein to any party to this Agreement or any other agreement or document shall be deemed to refer to any Person that becomes (or became, if applicable) a successor or assign of such party (subject to any restriction on assignment set forth herein or therein), upon the occurrence thereof, and, in the case of any Governmental Authority, any other Governmental Authority that shall have succeeded to any or all functions thereof, (d) the words "herein," "hereof" and "hereunder," and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, (e) all references herein to articles, sections, exhibits and schedules shall be construed to refer to articles and sections of, and exhibits and schedules to, this Agreement, (f) any capitalized terms used in any exhibit or schedule to this Agreement and not otherwise defined therein shall have the meanings as defined in this Agreement and (g) the words "asset" and "property" shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts and contract rights.

ARTICLE II
QUALIFYING TRANSACTIONS

Section 2.01 **Participation Right**. ACRA 1A shall have the right to elect to participate, through itself, another ACRA Investment Entity or any of their respective Subsidiaries, in any Qualifying Transaction executed by an Athene Party during the Commitment Period (such right, the "Participation Right"); provided, however, that ALRe may, in its sole discretion, by written notice to ACRA 1A, upon a failure of ADIP (either directly or indirectly) to fund any permitted capital call by ACRA 1A (after giving effect to any applicable cure period in the ADIP Subscription Agreement) on behalf of itself or any other ACRA Investment Entity to which such Participation Right is assigned by ACRA 1A, suspend the Participation Right and any cooperation rights relating thereto with respect to any new Qualifying Transactions following such failure until such time that such failure is cured.

Section 2.02 **Cooperation**.

(a) Subject to Section 2.01, during the Commitment Period, ALRe shall, and shall cause each of the applicable Athene Parties to, and ACRA 1A shall, and shall cause each of the applicable ACRA Parties to, reasonably cooperate and work together in good faith in connection with (i) the analysis, review, diligence, structuring, negotiation and documentation with respect to each Qualifying Transaction, and (ii) the preparation, completion, execution and delivery of any agreements, instruments and documents reasonably necessary to effect each Qualifying Transaction.

(b) With respect to each Qualifying Transaction that will involve the assumption of business by any ACRA Party, ALRe shall, or shall cause each of the applicable Athene Parties to, use its reasonable best efforts to obtain any third-party consents required, or otherwise structure such transaction such that no third-party consent is required, from the applicable Third-Party Ceding Company for the applicable ACRA Party to assume such business.

(c) Subject to the confidentiality requirements set forth in Section 4.01, with respect to each Qualifying Transaction, ALRe shall, and shall cause each other applicable Athene Party to, use its reasonable best efforts to make available to the applicable ACRA Parties all documents, data, information and other materials that the applicable Third Party makes available to the Athene Parties in connection with such Qualifying Transaction which are relevant to the analysis, review, diligence, structuring, negotiation and documentation of such Qualifying Transaction. Notwithstanding the foregoing, the Athene Parties shall not be required to share any such documents, data, information and other materials with the ACRA Parties to the extent that any Athene Parties are prohibited from sharing such information with the ACRA Parties pursuant to any Applicable Law relating to the privacy of customer information or otherwise.

Section 2.03 Election to Participate in a Qualifying Transaction.

(a) ACRA 1A may, in its sole discretion, assign its Participation Right with respect to any Qualifying Transactions to another ACRA Investment Entity.

(b) Unless ALRe and the Transaction Committee of the applicable ACRA Investment Entity agree otherwise, such ACRA Investment Entity, with the consent of its Transaction Committee, shall provide written notice to ALRe of its election to exercise its Participation Right with respect to a Qualifying Transaction no later than ten (10) Business Days before any Athene Party has executed any definitive agreement with the applicable Third Party with respect to such Qualifying Transaction (each such Qualifying Transaction with respect to which the applicable ACRA Investment Entity has exercised its Participation Right, an "Approved Qualifying Transaction"). Unless ALRe and the Transaction Committee of the applicable ACRA Investment Entity agree otherwise, if no such written notice is received by ALRe by the date set forth in the proceeding sentence, then the Participation Right with respect to such Qualifying Transaction shall be deemed rejected.

(c) In connection with the Participation Right, the applicable ACRA Investment Entity may elect to directly or indirectly (i) assume by retrocession up to a 100% quota share (the "ACRA Quota Share") of the liabilities assumed by the applicable Athene Party in connection with any Approved Qualifying Transaction, (ii) assume by reinsurance up to the ACRA Quota Share of the annuity or insurance liabilities of any insurance company acquired in connection with any Approved Qualifying Transaction, and/or (iii) acquire direct or indirect ownership interests in entities acquired in connection with any Approved Qualifying Transaction; provided, however, that in the case of (i) and (ii) above, unless otherwise determined by mutual agreement of the applicable ACRA Investment Entity and ALRe, if a 100% quota share is not permitted by the applicable Governmental Authorities or under applicable tax guidelines, regulatory guidelines and/or contractual restrictions applicable to the applicable Athene Party or the applicable ACRA Party, then the ACRA Quota Share for such Approved Qualifying Transaction shall be the highest quota share approved by such Governmental Authorities and permitted under applicable tax guidelines, regulatory guidelines and/or contractual restrictions applicable to the applicable Athene Party or the applicable ACRA Party. Notwithstanding anything herein, with respect to any Flow Reinsurance Agreement, the applicable ACRA Party shall assume new business under such Flow Reinsurance Agreement only until the earlier of (A) the last date of the Commitment Period, (B) the date upon which ACRA 1A's right to participate in any Qualifying Transaction during the Commitment Period has been terminated, (C) the date upon which ADIP (either directly or indirectly) has failed to fund their portion of any agreed capitalization requirements applicable to the applicable ACRA Silo in connection with such Flow Reinsurance Agreement (after giving effect to any applicable cure period in the ADIP Subscription Agreement), (D) the date such Flow Reinsurance Agreement had been terminated with respect to new business upon the mutual written consent of the parties to such Flow Reinsurance Agreement and (E) the date upon which the applicable Third-Party Underlying Reinsurance Agreement is terminated with respect to new business.

(d) Notwithstanding the foregoing, the applicable ACRA Investment Entity shall have no right to continue participating in the analysis, review, diligence, structuring, negotiation and documentation in connection with, or exercise its Participation Right with respect to, or enter into any Transaction Agreements with respect to, a Qualifying Transaction if the pricing terms offered (or expected to be offered) by the applicable ACRA Investment Entity to the Athene Parties with respect to such Qualifying Transaction are less favorable to the Athene Parties than the pricing terms of the Athene Parties with respect to the risks being assumed and/or entities being acquired, as applicable, by the Athene Parties under such Qualifying Transaction (if applicable, determined after taking into account any portion of business that is retained by any U.S. domestic Athene Party (other than entities acquired in connection with such Qualifying Transactions) and not retroceded to any ACRA Party) to the applicable Third Party.

(e) Neither the Athene Parties nor the ACRA Investment Entities and their Affiliates (other than any Athene Party) will enter into any Qualifying Transactions other than pursuant to the terms and conditions of this Agreement. ACRA 1A will not enter into or participate in, or engage in discussions or negotiations with Third Parties relating to, any acquisition, reinsurance or pension risk transfer transaction, except pursuant to the terms and conditions of this Agreement.

Section 2.04 Negotiation of the Transaction Agreements.

(a) The applicable ACRA Investment Entity and the applicable Athene Party shall cooperate in connection with any Qualifying Transaction in good faith with one another in accordance with Section 2.02 in order to prepare, negotiate and execute one or more Transaction Agreements. The board of directors of the applicable ACRA Investment Entity shall have discretion to approve the terms and conditions of any Transaction Agreement, provided, that (i) the terms and conditions of the Transaction Agreements for each Approved Qualifying Transaction shall provide for the right of ALRe or another applicable Athene Party to offer to commute or otherwise terminate the ACRA Parties' participation in such Approved Qualifying Transaction as of the Initial Commutation Date with respect to such Approved Qualifying Transaction, (ii) the terms and conditions of each ACRA Reinsurance Agreement between ALRe and ACRA 1A shall be consistent in all material respects with the terms and conditions set forth in the ACRA 1A Reinsurance Program Agreement, (iii) the terms and conditions of each ACRA Reinsurance Agreement between AARe and ACRA 1B will be consistent in all material respects with the terms and conditions set forth in the ACRA 1B Reinsurance Program Agreement, (iv) the terms and conditions of each ACRA Reinsurance Agreement between ACRA 1B and any acquisition target will be consistent in all material respects with the terms and conditions set forth in the ACRA 1B Reinsurance Program Agreement and (v) the terms and conditions of the Transaction Agreements for each Approved Qualifying Transaction other than those covered by (ii) through (iv) above shall (A) contain exit rights for the applicable ACRA Investment Entity and ADIP that are no less favorable to such ACRA Investment Entity and ADIP than those set forth in the ACRA 1A Reinsurance Program Agreement and the ACRA 1B Reinsurance Program Agreement and (B) with respect to any such Transaction Agreements entered into by an ACRA Investment Entity, contain operating covenants that are similar to those set forth in the ACRA 1A Reinsurance Program Agreement, provided, in each case, the applicable ACRA Investment Entity and applicable Athene Party may agree otherwise (subject to the approval of the Conflicts Committee of the applicable ACRA Investment Entity if any change to such terms and conditions is materially adverse to the applicable ACRA Party).

(b) Unless agreed to otherwise by the applicable ACRA Investment Entity and the applicable Athene Party, the parties shall finalize and execute any Transaction Agreements related to any Approved Qualifying Transaction to which they are a party, or a binding commitment with respect thereto, no later than the date upon which the Athene Parties have executed any definitive agreement with the applicable Third Party with respect to such Approved Qualifying Transaction. For the avoidance of doubt, and notwithstanding anything else herein to the contrary, the applicable Athene Party shall have no obligation hereunder to enter into any applicable Transaction Agreements with respect to an Approved Qualifying Transaction until all of the closing conditions have been satisfied and all required regulatory and third-party consents and all required internal approvals have been received with respect to such Approved Qualifying Transaction. ACRA 1A acknowledges and agrees that the Athene Parties are subject to certain internal governance and transaction approval processes that will apply to their ability to enter into Qualifying Transactions, and the Athene Parties will enter into Qualifying Transactions only in accordance with such governance and approval processes.

Section 2.05 Capital Requirements for Approved Qualifying Transactions.

(a) Notwithstanding anything in this Agreement to the contrary, with respect to any Approved Qualifying Transaction in which the applicable ACRA Investment Entity elects to participate on or after the ADIP Funding Date, the applicable ACRA Investment Entity shall, prior to the applicable ACRA Parties entering into any Transaction Agreements with respect to such Approved Qualifying Transactions, draw capital from ALRe and ADIP (either directly or indirectly), pursuant to the terms and conditions of the applicable Subscription Agreement such that prior to the execution of any such Transaction Agreement, the applicable ACRA Investment Entity shall have directly or indirectly received one or more capital contributions from ADIP (either directly or indirectly) and ALRe for purposes of funding such Approved Qualifying Transaction in an amount sufficient to fund (i) the purchase price or up-front ceding commission payable by the applicable ACRA Party in connection with such Approved Qualifying Transaction, (ii) any agreed expense reimbursement amounts in connection with such Approved Qualifying Transaction and (iii) any agreed capitalization requirements applicable to the applicable ACRA Silo in connection with such Approved Qualifying Transaction.

(b) Notwithstanding anything in this Agreement to the contrary, subject to Section 2.03(c), during the Commitment Period, with respect to any Flow Reinsurance Transaction, the applicable ACRA Investment Entity shall periodically draw capital from ALRe and ADIP (either directly or indirectly), pursuant to the terms and conditions of the Subscription Agreements, to fund any agreed capitalization requirements applicable to the applicable ACRA Silo in connection with such Flow Reinsurance Transaction.

(c) Notwithstanding anything in this Agreement to the contrary, with respect to any Approved Qualifying Transaction in which the applicable ACRA Investment Entity elects to participate on or after the ADIP Funding Date, the applicable Athene Party shall have no obligation hereunder to enter into any Transaction Agreements with respect to such Approved Qualifying Transaction, and the applicable ACRA Party shall have no right hereunder to enter into any such Transaction Agreement, unless prior to the execution of such Transaction Agreement, if applicable, ADIP (either directly or indirectly) has funded its portion of any required funding amount with respect to such Approved Qualifying Transaction.

(d) For the avoidance of doubt, any capital contributed to the applicable ACRA Investment Entity with respect to any Flow Reinsurance Agreement or new Qualifying Transaction may be contributed by such ACRA Investment Entity to any ACRA Party in the applicable ACRA Silo.

(e) The ACRA Investment Entities will be subject to certain capitalization requirements and covenants relating thereto, including dividend limitations, set forth in the Fee and Capitalization Agreement.

ARTICLE III
WRAP FEE AND STEP-UP FEE

Section 3.01 Wrap Fee; Step-up Fee.

(a) Wrap Fee. Subject to Section 3.01(b) of this Agreement and Section 3.01 of the Fee and Capitalization Agreement, each ACRA Investment Entity shall pay to ALRe on an annual basis the Wrap Fee with respect to each Approved Qualifying Transaction in which such ACRA Investment Entity or any other ACRA Party that is a part of such ACRA Investment Entity's ACRA Silo is participating. The "Wrap Fee" with respect to each Approved Qualifying Transaction shall be an amount determined in accordance with the Fee and Capitalization Agreement, which amount will generally be (i) with respect to each Approved Qualifying Transaction, other than any Flow Reinsurance Transaction, an amount equal to ten (10) to sixteen (16) basis points per annum *multiplied by* the total reserves of the applicable ACRA Parties with respect to such Approved Qualifying Transaction and (ii) with respect to each Flow Reinsurance Agreement, an amount equal to sixteen (16) basis points per annum *multiplied by* the total reserves of the applicable ACRA Parties with respect to such Flow Reinsurance Transaction. Subject to Section 3.01 of the Fee and Capitalization Agreement, in the event that, with respect to any Approved Qualifying Transaction, the applicable Athene Party does not exercise its Commutation Right with respect to such Approved Qualifying Transaction as of the Initial Commutation Date in accordance with the applicable Transaction Agreements, or the applicable ACRA Investment Entity rejects the applicable Athene Party's exercise of its Commutation Right in accordance with the terms and conditions of the applicable Transaction Agreements, then the applicable ACRA Investment Entity's obligation pay the Wrap Fee with respect to such Approved Qualifying Transaction shall terminate with respect to all periods following the Initial Commutation Date with respect to such Approved Qualifying Transaction.

(b) Step-up Fee. Subject to Section 3.01 of the Fee and Capitalization Agreement, in the event that, with respect to any Approved Qualifying Transaction, the applicable Athene Party does not exercise its Commutation Right with respect to such Approved Qualifying Transaction as of the Initial Commutation Date in accordance with the applicable Transaction Agreements, then ALRe shall, or shall cause the applicable Athene Party to, pay on an annual basis the Step-up Fee with respect to such Approved Qualifying Transaction to the ACRA Investment Entity in the ACRA Silo that is participating in such Approved Qualifying Transaction. The "Step-Up Fee" with respect to each Approved Qualifying Transaction shall be an amount determined in accordance with the Fee and Capitalization Agreement, which amount will generally be determined in the same manner as the Wrap Fee.

ARTICLE IV
CONFIDENTIALITY; JOINDER

Section 4.01 Confidentiality.

(a) Each party hereby agrees that any information made available to any Receiving Party pursuant to this Agreement or the Fee and Capitalization Agreement (which, for the avoidance of doubt, shall include any information provided by any applicable Third Party in connection with any Qualifying Transaction), shall be deemed to be "Confidential Information." Except to the extent permitted by Section 4.01(b) or as may be necessary to effect the terms of this Agreement, no Receiving Party shall share or otherwise provide any Confidential Information to any Third Party or make any public announcement concerning the transactions contemplated by this Agreement or otherwise publicly announce any term or provision of this Agreement, the Fee and Capitalization Agreement, the Reinsurance Program Agreements or any Transaction Agreements. Each Receiving Party shall comply with all obligations and requirements relating to Confidential Information made available by a Third Party in connection with a Qualifying Transaction to which a Disclosing Party is subject under any non-disclosure agreement to which such Disclosing Party is a party relating to such Qualifying Transaction. "Confidential Information" shall not include information that (i) is, or becomes, generally available to the public other than as a result of a breach of this Agreement by a Receiving Party, (ii) any Receiving Party receives or has received on a non-confidential basis from a source other than a Disclosing Party, provided, that such source is not known by the Receiving Party to be subject to a legal, fiduciary or other obligation of confidentiality with respect to such information, (iii) the Receiving Party can establish that such information was already in its possession and is not subject to an obligation of confidentiality to the Disclosing Party or (iv) the Receiving Party has developed, or subsequently develops, independently without reference to any Confidential Information. A Receiving Party may share any Confidential Information with any of its Affiliates or Subsidiaries that have a need to know such information in the regular course of their business.

(b) Notwithstanding the foregoing, each Receiving Party shall be permitted to disclose certain information that may constitute Confidential Information in order to (i) comply with its reporting obligations to its direct and indirect investors and equity holders, if any, provided that such investors and equity holders are subject to confidentiality obligations that are no less protective of such Confidential Information than the confidentiality obligations set forth in this Agreement and (ii) to the extent reasonably necessary, to comply with any tax or regulatory requirements, including any requirements from state insurance regulators and the Securities and Exchange Commission.

Section 4.02 Joinder. ACRA 1A shall cause each other ACRA Investment Entity to enter into a joinder agreement with the parties hereto which binds such ACRA Investment Entity to the terms, conditions, rights and obligations set forth herein with respect to an ACRA Investment Entity (each such agreement, a "Joinder Agreement"). Each ACRA Investment Entity acknowledges and agrees that as a condition precedent (a) for any ACRA Investment Entity to exercise any Participation Rights hereunder or (b) for any ACRA Party to enter into any Transaction Agreement with respect to any Approved Qualifying Transaction, that in the case of clause (a), such ACRA Investment Entity, and in the case of clause (b), the ACRA Investment Entity that is a part of such ACRA Party's ACRA Silo, must either be a party to this Agreement and the Fee and Capitalization Agreement as of the date hereof or must become a party hereto through the execution of a Joinder Agreement and a party to the Fee and Capitalization Agreement through the execution of a joinder agreement in accordance with the terms and conditions thereof.

ARTICLE V
TERM; TERMINATION

Section 5.01 Duration.

(a) This Agreement shall commence on the date hereof and, except as otherwise agreed by the parities hereto in writing, (i) subject to Section 2.01, after the Commitment Period, this Agreement shall terminate automatically upon (A) the termination of all outstanding ACRA Reinsurance Agreements or such time that each ACRA Party has no further liabilities with respect to any outstanding ACRA Reinsurance Agreements and (B) none of the ACRA Parties continuing to own any equity or other interest in any entity it owns through its participation in any Approved Qualifying Transaction contemplated in clause (a) of the definition of "Qualifying Transaction" (or any other acquisition transaction that qualifies as a Qualifying Transaction upon mutual consent of the applicable parties), and (ii) this Agreement may be terminated by the mutual written consent of the parties; provided, that under no circumstances shall any termination of this Agreement relieve any party from liability for any breach of this Agreement occurring prior to such termination or from its obligations under Section 4.01.

(b) The rights and obligations of the parties under Sections 2.01, 2.02, 2.03 and 2.04 with respect to participating in any Qualifying Transaction shall terminate on the last day of the Commitment Period (unless terminated earlier in accordance with Section 2.01).

ARTICLE VI
REPRESENTATIONS AND WARRANTIES

Section 6.01 Representations and Warranties of ALRe. ALRe hereby represents and warrants to each ACRA Investment Entity as of the date hereof as follows:

(a) Organization and Qualification. ALRe is duly incorporated, validly existing and in good standing under the laws of Bermuda and has all requisite corporate power and authority to operate its business as now conducted, except for failures to be in good standing that, individually or in the aggregate, do not have, and would not reasonably be expected to have, a material adverse effect on ALRe's ability to perform its obligations under this Agreement.

(b) Authorization. ALRe has the corporate power and authority to execute, deliver and carry out the terms and provisions of this Agreement and has taken all necessary corporate action to authorize the execution, delivery and performance of this Agreement. ALRe has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding obligation of ALRe enforceable against ALRe in accordance with its terms, except to the extent that enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar Applicable Laws affecting creditors' rights generally and general principles of equity, regardless of whether enforcement is sought in a proceeding in equity or at law.

(c) No Conflict. None of the execution, delivery or performance by ALRe of this Agreement, its compliance with the terms and provisions hereof or the consummation of the transactions contemplated herein, (i) will require any applicable waiting period of, consent, approval or non-disapproval of, registration or filing with, or other action by, any Governmental Authority or other Person, except such as have been obtained or made and are in full force and effect, (ii) will violate any applicable provision of any Applicable Law or any writ, injunction, order or decree of any Governmental Authority applicable to ALRe, (iii) will violate or conflict with any provision of the Constituent Documents of ALRe or (iv) will result in a breach of, or constitute a default (or event which, with the giving of notice or lapse of time, or both, would become a default) under, or give any Person any rights of termination, acceleration or cancellation, or result in the creation or imposition of (or the obligation to create or impose) any Lien upon any of the property or assets of ALRe pursuant to the terms of, any indenture, mortgage, deed of trust, loan agreement, credit agreement or other material agreement or instrument to which ALRe is a party or by which it or any of its property or assets are bound or to which it may be subject, or, except, in the case of each of clauses (ii) and (iv), where such breach, default, termination, acceleration, cancellation or Lien would not reasonably be expected, individually or in the aggregate, to result in a material adverse effect on ALRe's ability to perform its obligations under this Agreement.

(d) Governmental Licenses. ALRe has all licenses, certificates of authority or other similar certificates, registrations, franchises, permits, approvals or other similar authorizations issued by Governmental Authorities (collectively, "Permits") necessary to conduct its business as currently conducted, except in such cases where the failure to have a Permit has not had and would not reasonably be expected to have a material adverse effect on ALRe's ability to perform its obligations under this Agreement. All Permits that are material to the conduct of ALRe's business are valid and in full force and effect.

Section 6.02 Representations and Warranties of the ACRA Investment Entities. ACRA 1A hereby represents and warrants to ALRe as of the date hereof, and each other ACRA Investment Entity hereby represents and warrants to ALRe as of the date such ACRA Investment Entity executes a Joinder Agreement, as follows:

(a) Organization and Qualification. Such ACRA Investment Entity is duly incorporated, validly existing and in good standing under the laws of Bermuda and has all requisite corporate power and authority to operate its business as now conducted, except for failures to be in good standing that, individually or in the aggregate, do not have, and would not reasonably be expected to have, a material adverse effect on such ACRA Investment Entity's ability to perform its obligations under this Agreement.

(b) Authorization. Such ACRA Investment Entity has the corporate power and authority to execute, deliver and carry out the terms and provisions of this Agreement and has taken all necessary corporate action to authorize the execution, delivery and performance of this Agreement. Such ACRA Investment Entity has duly executed and delivered this Agreement, and this Agreement constitutes the legal, valid and binding obligation of such ACRA Investment Entity enforceable against such ACRA Investment Entity in accordance with its terms, except to the extent that enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar Applicable Laws affecting creditors' rights generally and general principles of equity, regardless of whether enforcement is sought in a proceeding in equity or at law.

(c) No Conflict. None of the execution, delivery or performance by such ACRA Investment Entity of this Agreement, its compliance with the terms and provisions hereof or the consummation of the transactions contemplated herein, (i) will require any applicable waiting period of, consent, approval or non-disapproval of, registration or filing with, or other action by, any Governmental Authority or other Person, except (x) such as have been obtained or made and are in full force and effect and (y) any actions necessary to obtain licensure as an insurance company with the Bermuda Monetary Authority, (ii) will violate any applicable provision of any Applicable Law or any writ, injunction, order or decree of any Governmental Authority applicable to such ACRA Investment Entity, (iii) will violate or conflict with any provision of the Constituent Documents of such ACRA Investment Entity or (iv) will result in a breach of, or constitute a default (or event which, with the giving of notice or lapse of time, or both, would become a default) under, or give any Person any rights of termination, acceleration or cancellation, or result in the creation or imposition of (or the obligation to create or impose) any Lien upon any of the property or assets of such ACRA Investment Entity pursuant to the terms of, any indenture, mortgage, deed of trust, loan agreement, credit agreement or other material agreement or instrument to which such ACRA Investment Entity is a party or by which it or any of its property or assets are bound or to which it may be subject, or, except, in the case of each of clauses (ii) and (iv), where such breach, default, termination, acceleration, cancellation or Lien would not reasonably be expected, individually or in the aggregate, to result in a material adverse effect on such ACRA Investment Entity's ability to perform its obligations under this Agreement.

(d) Governmental Licenses. Each ACRA Party that is a part of such ACRA Investment Entity's ACRA Silo will have all Permits necessary to conduct its business as currently contemplated prior to engaging or transacting such business, except in such cases where the failure to have a Permit would not reasonably be expected to have a material adverse effect on such ACRA Party's ability to perform its obligations under this Agreement. All Permits that are material to the conduct of each ACRA Party's, that is a part of such ACRA Investment Entity's ACRA Silo, business will be valid and in full force and effect prior to such ACRA Investment Entity engaging in or transacting such business.

ARTICLE VII
DISPUTE RESOLUTION

Section 7.01 Arbitration.

(a) If the parties cannot mutually resolve a dispute that arises or relates to this Agreement, including, without limitation, the validity of this Agreement, then such dispute will be finally settled by arbitration in accordance with the provisions of this Article VII.

(b) To initiate arbitration, any party will notify the other parties of its desire to arbitrate, stating the nature of the dispute and the remedy sought.

(c) Any arbitration pursuant to this Section 7.01 will be conducted before a panel of three (3) arbitrators who will be (i) current or former officers of life insurance or life reinsurance companies other than the parties to this Agreement, their Affiliates or Subsidiaries, or (ii) other professionals with experience in life insurance or reinsurance that have not performed services for either party or their Affiliates or Subsidiaries within the five (5) years preceding the initiation of such arbitration. Each of the arbitrators will be familiar with the prevailing customs and practices for reinsurance in the life insurance and life reinsurance industry in the United States and Bermuda. ALRe will appoint one arbitrator and the ACRA Investment Entities will appoint one arbitrator, and the two (2) so appointed will select the third arbitrator who shall be independent and impartial. If either ALRe or the ACRA Investment Entities refuse or fail to appoint an arbitrator within sixty (60) days after the other party/parties has given written notice to such party/parties of its arbitrator appointment, the party/parties that has given notice may appoint the second arbitrator. If the two (2) arbitrators do not agree on a third arbitrator within thirty (30) days of the appointment of the second arbitrator, then the third arbitrator shall be selected by the ARIAS-U.S. Umpire Selection Procedure (available at www.ARIAS-US.org), subject to the arbitrator qualification requirements of this paragraph.

(d) Each arbitration hearing under this Agreement will be held on the date set by the arbitrators at a mutually agreed upon location. In no event will this date be later than six (6) months after the appointment of the third arbitrator. As soon as possible, the arbitrators will establish arbitration procedures as warranted by the facts and issues of the particular case. Notwithstanding Section 8.01, the arbitration and this Section 7.01 shall be governed by Title 9 (Arbitration) of the United States Code.

(e) The decision of the arbitrators will be made by majority rule and will be final and binding on the parties that participated in such arbitration, unless: (i) the decision was procured by corruption, fraud or other undue means; (ii) there was evident partiality by an arbitrator or corruption in any of the arbitrators or misconduct prejudicing the rights of any party; or (iii) the arbitrators exceeded their powers. Subject to the preceding sentence, none of the parties that participated in such arbitration may seek judicial review of the decision of the arbitrators. The arbitrators shall enter an award which shall do justice between the parties that participated in such arbitration and the award shall be supported by written opinion; provided, however, that in no event shall the arbitrators award any punitive, special, incidental, treble, bad faith, tort, exemplary or consequential damages.

(f) Unless the arbitrators decide otherwise, each party that participates in an arbitration will bear the expense of its own arbitration activities, including its appointed arbitrator and any outside attorney and witness fees. The parties participating in an arbitration will jointly bear the expense of the third arbitrator.

(g) ALRE AND EACH ACRA INVESTMENT ENTITY HEREBY WAIVE ANY AND ALL RIGHTS TO TRIAL BY JURY IN ANY MATTER ARISING OUT OF OR RELATING TO THIS AGREEMENT.

ARTICLE VIII
MISCELLANEOUS

Section 8.01 Governing Law and Jurisdiction.

(a) This Agreement shall be governed by and construed in accordance with Bermuda law (without regard to any choice of law or conflict of law principles or rules that would cause the application of any laws or rules of any other jurisdiction). The parties agree that the courts in Bermuda have jurisdiction to hear any matter relating to compelling arbitration or enforcing the judgment of an arbitral panel, and the parties hereby consent to such jurisdiction. Each party hereby waives, to the fullest extent permitted by law, any objection it may now or hereafter have to the laying of such venue, or any claim that a proceeding has been brought in an inconvenient forum. In addition, ALRe and each ACRA Investment Entity hereby consent to service of process out of such courts at the addresses set forth in Section 8.06.

(b) The provisions of this Section 8.01 are not meant to supplement any arbitration or other dispute resolution process contained in Article VII, the Fee Capitalization Agreement, any Reinsurance Program Agreement or any Transaction Agreement. In this regard, and for the avoidance of doubt, this Section 8.01 is not meant to conflict with, supersede or serve as a condition precedent to the arbitration or other dispute resolution process contained in Article VII, the Fee and Capitalization Agreement, any Reinsurance Program Agreement or any Transaction Agreement.

Section 8.02 Offset and Recoupment Rights.

(a) Any debits or credits incurred in favor of or against an ACRA Party, on the one hand, or an Athene Party, on the other hand, with respect to this Agreement are deemed mutual debits or credits, as the case may be, and, to the fullest extent permitted under Applicable Law, may be set off and recouped, and only the net balance shall be allowed or paid.

(b) Notwithstanding anything to the contrary in this Agreement, the Fee and Capitalization Agreement, any Reinsurance Program Agreement or any Transaction Agreement, any Athene Party and any ACRA Party shall have the right hereunder, to the fullest extent permitted under Applicable Law, to offset or recoup any undisputed amounts due or owing by it (or to become due or owing) to any other Person under this Agreement against any undisputed amounts due or owing by such other Person under any Transaction Agreement to it; provided, however, that (i) any Athene Party may only apply such offset or recoupment to any ACRA Party that comprises the ACRA Silo in which the applicable ACRA Party so owing the Athene Party comprises and (ii) any ACRA Party may only apply such offset or recoupment to the applicable Athene Party if such Athene Party has amounts due or owing to any ACRA Party that comprises the same ACRA Silo as the ACRA Party so owed. For the avoidance of doubt, any debits or credits incurred in favor of or against an ACRA Party from one ACRA Silo may not be set off or recouped against any debits or credits incurred in favor of or against an ACRA Party from a different ACRA Silo.

(c) The rights of offset and recoupment set forth in this Section 8.02 (i) are in addition to any rights of offset that may exist under Applicable Law and (ii) may be enforced notwithstanding any other provision of this Agreement, the Fee and Capitalization Agreement, any Reinsurance Program Agreement or any Transaction Agreement.

Section 8.03 Severability. It is the desire and intent of the parties that the provisions of this Agreement be enforced to the fullest extent permissible under the laws and public policies applied in each jurisdiction in which enforcement is sought. Accordingly, if any particular provision of this Agreement shall be adjudicated by a court of competent jurisdiction to be invalid, prohibited or unenforceable for any reason, such provision, as to such jurisdiction, shall be ineffective, without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction. Notwithstanding the foregoing, if such provision could be more narrowly drawn so as not to be invalid, prohibited or unenforceable in such jurisdiction, it shall, as to such jurisdiction, be so narrowly drawn, without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction.

Section 8.04 Binding Effect; Assignment; No Third Party Benefit. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and permitted assigns. Except as otherwise expressly provided in this Agreement, neither this Agreement nor any of the rights, interests, or obligations hereunder shall be assigned by any party without the consent of the other parties. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person other than the parties hereto, and their respective heirs, legal representatives, successors, and permitted assigns, any rights, benefits, or remedies of any nature whatsoever under or by reason of this Agreement.

Section 8.05 Amendments; Waivers.

(a) Neither this Agreement nor any provisions hereof may be amended or modified except pursuant to an agreement or agreements in writing entered into by all of the parties hereto. Neither this Agreement nor any provisions hereof may be waived except pursuant to an instrument in writing executed by each party waiving compliance.

(b) No failure or delay by a party hereto in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such right or power, preclude any other or further exercise thereof or the exercise of any other right or power. The rights and remedies of each party hereunder are cumulative and are not exclusive of any rights or remedies that it would otherwise have.

Section 8.06 Notices.

(a) All notices, requests, consents and other communications hereunder to any party shall be deemed to be sufficient if contained in a written instrument delivered in person or sent by facsimile, electronic mail or nationally-recognized overnight courier, addressed to such party at the address set forth below or such other address as may hereafter be designated in writing by such party to the other parties:

(i) if to ACRA 1A, to:

Athene Co-Invest Reinsurance Affiliate 1A Ltd.
Chesney House
96 Pitts Bay Road
Pembroke, HM08, Bermuda
Attention: Legal Department
Telecopy: (441) 279-8401
Email: legalbda@athene.bm

(ii) if to ALRe, to:

Athene Life Re Ltd.
Chesney House
96 Pitts Bay Road
Pembroke, HM08, Bermuda
Attention: Legal Department
Telecopy: (441) 279-8401
Email: legalbda@athene.bm

All such notices, requests, consents and other communications shall be deemed to have been delivered and received (A) in the case of personal delivery or delivery by facsimile or electronic mail, on the date of such delivery and (B) in the case of dispatch by nationally-recognized overnight courier, on the next Business Day following such dispatch.

(b) Each party hereto may change the names or addresses where notice is to be given by providing notice to the other party of such change in accordance with this Section 8.06.

Section 8.07 Entire Agreement. This Agreement and the other agreements contemplated herein constitute the entire agreement between the parties relating to the subject matter hereof and supersede any and all prior agreements and understandings, both written and oral, relating to the subject matter hereof. The parties hereto represent and warrant that there are no other agreements or understandings, written or oral, regarding any of the subject matter hereof other than as set forth herein and covenant not to enter into any such agreements or understandings after the date hereof, except pursuant to an amendment, modification or waiver of the provisions of this Agreement.

Section 8.08 Counterparts; Effectiveness. This Agreement may be executed by the parties hereto in any number of counterparts (and by different parties hereto on different counterparts), each of which shall be deemed an original, but all of which shall constitute one and the same agreement. Delivery of an executed counterpart or signature page of this Agreement by telecopy or email with PDF attachment shall be effective as delivery of a manually executed counterpart of this Agreement.

Section 8.09 Further Assurances. Each party hereto shall do and perform or cause to be done and performed all such further acts and things and shall execute and deliver all such other agreements, certificates, instruments and documents as any other party hereto reasonably may request in order to carry out the provisions of this Agreement and the consummation of the transactions contemplated hereby.

Section 8.10 Injunctive Relief. The parties hereto acknowledge and agree that irreparable damage would occur in the event any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of the provisions of this Agreement without posting a bond, and shall be entitled to enforce specifically the provisions of this Agreement, in any court of competent jurisdiction in Bermuda, in addition to any other remedy to which the parties may be entitled under this Agreement or at law or in equity.

Section 8.11 Survival. Section 4.01, Article V, Article VII and this Article VIII shall survive the termination of this Agreement.

* * * * *

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first written above.

ATHENE CO-INVEST REINSURANCE AFFILIATE 1A LTD.

By: /s/ Adam Laing
Name: Adam Laing
Title: Chief Financial Officer

ATHENE LIFE RE LTD.

By: /s/ Frank Gillis
Name: Frank Gillis
Title: Chief Executive Officer

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 5, 2019

/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 5, 2019

/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, 2019 (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 5, 2019	/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, 2019 (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 5, 2019	/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.