



Consolidated Financial Statements
Years ended 2019 and 2018

ATHENE LIFE RE LTD.
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April 29, 2020

Report of Independent Auditors

To the Board of Directors and Shareholder of Athene Life Re Ltd.

We have audited the accompanying consolidated financial statements of Athene Life Re Ltd. and its subsidiaries, which comprise the consolidated balance sheets as of December 31 2019 and 2018, and the related consolidated statements of income, comprehensive income (loss), equity and cash flows for each of the three years in the period ended December 31, 2019, including the related notes.

Management's responsibility for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Athene Life Re Ltd. and its subsidiaries as of December 31, 2019 and 2018, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2019 in accordance with accounting principles generally accepted in the United States of America

PricewaterhouseCoopers Ltd.
Chartered Professional Accountants

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ATHENE LIFE RE LTD.
Consolidated Balance Sheets

<i>(In millions)</i>	December 31,	
	2019	2018
Assets		
Investments		
Available-for-sale securities, at fair value (amortized cost: 2019 – \$66,626 and 2018 – \$59,979)	\$ 70,549	\$ 59,220
Trading securities, at fair value	2,054	1,949
Equity securities, at fair value	247	216
Mortgage loans, net of allowances (portion at fair value: 2019 – \$27 and 2018 – \$32)	14,306	10,340
Investment funds (portion at fair value: 2019 – \$154 and 2018 – \$182)	731	703
Policy loans	417	488
Funds withheld at interest (portion at fair value: 2019 – \$769 and 2018 – \$57)	16,024	15,023
Derivative assets	2,885	1,043
Short-term investments (portion at fair value: 2019 – \$406 and 2018 – \$191)	596	191
Other investments (portion at fair value: 2019 – \$93 and 2018 – \$52)	158	122
Total investments	107,967	89,295
Cash and cash equivalents	4,009	2,797
Restricted cash	331	492
Investments in related parties		
Available-for-sale securities, at fair value (amortized cost: 2019 – \$3,781 and 2018 – \$1,462)	3,802	1,437
Trading securities, at fair value	785	249
Equity securities, at fair value	58	120
Mortgage loans	653	291
Investment funds (portion at fair value: 2019 – \$248 and 2018 – \$96)	2,754	2,127
Funds withheld at interest (portion at fair value: 2019 – \$594 and 2018 – \$(110))	13,220	13,577
Other investments	487	386
Intercompany notes receivable	23	105
Accrued investment income (related party: 2019 – \$27 and 2018 – \$25)	798	681
Reinsurance recoverable (related party: 2019 – \$0 and 2018 – \$344; portion at fair value: 2019 – \$1,821 and 2018 – \$1,676)	4,863	5,534
Deferred acquisition costs, deferred sales inducements and value of business acquired	5,008	5,907
Other assets (related party: 2019 – \$15 and 2018 – \$357)	979	1,613
Assets of consolidated variable interest entities		
Investments		
Trading securities, at fair value – related party	16	35
Equity securities, at fair value – related party	6	50
Investment funds (related party: 2019 – \$2,754 and 2018 – \$583; portion at fair value: 2019 – \$683 and 2018 – \$567)	683	624
Cash and cash equivalents	3	2
Other assets	20	1
Total assets	\$ 146,465	\$ 125,323

(Continued)

See accompanying notes to consolidated financial statements

[Table of Contents](#)**ATHENE LIFE RE LTD.**
Consolidated Balance Sheets

<i>(In millions, except per share data)</i>	December 31,	
	2019	2018
Liabilities and Equity		
Liabilities		
Interest sensitive contract liabilities (related party: 2019 – \$15,285 and 2018 – \$16,850; portion at fair value: 2019 – \$11,992 and 2018 – \$8,901)	\$ 102,745	\$ 96,610
Future policy benefits (related party: 2019 – \$1,302 and 2018 – \$1,259; portion at fair value: 2019 – \$2,301 and 2018 – \$2,173)	23,330	16,704
Other policy claims and benefits (related party: 2019 – \$13 and 2018 – \$10)	138	142
Dividends payable to policyholders	113	118
Short-term debt	475	—
Derivative liabilities	93	85
Payables for collateral on derivatives	3,255	969
Funds withheld liability (related party: 2019 – \$0 and 2018 – \$337; portion at fair value: 2019 – \$31 and 2018 – \$(1))	408	721
Other liabilities (related party: 2019 – \$434 and 2018 – \$54)	1,141	866
Liabilities of consolidated variable interest entities	1	1
Total liabilities	131,699	116,216
Commitments and Contingencies (Note 14)		
Equity		
Common stock – par value \$1 per share; authorized, issued and outstanding 1,500,000 shares	2	2
Additional paid-in capital	5,042	5,174
Retained earnings	6,685	4,403
Accumulated other comprehensive income (loss) (related party: 2019 – \$(77) and 2018 – \$(25))	2,286	(472)
Total Athene Life Re Ltd. shareholders' equity	14,015	9,107
Noncontrolling interests	751	—
Total shareholders' equity	14,766	9,107
Total liabilities and equity	\$ 146,465	\$ 125,323

*(Concluded)**See accompanying notes to consolidated financial statements*

ATHENE LIFE RE LTD.

Consolidated Statements of Income

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Revenues			
Premiums (related party: 2019 – \$243, 2018 – \$679 and 2017 – \$0)	\$ 6,382	\$ 3,462	\$ 2,347
Product charges (related party: 2019 – \$54, 2018 – \$34 and 2017 – \$0)	524	449	340
Net investment income (related party investment income: 2019 – \$446, 2018 – \$542 and 2017 – \$217; and related party investment expense: 2019 – \$427, 2018 – \$350 and 2017 – \$315)	4,511	3,988	3,171
Investment related gains (losses) (related party: 2019 – \$1,266, 2018 – \$(23) and 2017 – \$(16))	4,712	(1,338)	2,442
Other-than-temporary impairment investment losses			
Other-than-temporary impairment losses	(44)	(24)	(20)
Other-than-temporary impairment losses reclassified to (from) other comprehensive income	6	6	(4)
Net other-than-temporary impairment losses	(38)	(18)	(24)
Other revenues	37	21	29
Revenues of consolidated variable interest entities			
Net investment income (related party: 2019 – \$0, 2018 – \$55 and 2017 – \$42)	74	56	42
Investment related gains (losses) (related party: 2019 – \$0, 2018 – \$(21) and 2017 – \$35)	5	(18)	35
Total revenues	16,207	6,602	8,382
Benefits and expenses			
Interest sensitive contract benefits (related party: 2019 – \$511, 2018 – \$63 and 2017 – \$0)	4,557	290	2,842
Amortization of deferred sales inducements	74	54	63
Future policy and other policy benefits (related party: 2019 – \$365, 2018 – \$707 and 2017 – \$0)	7,587	4,281	3,014
Amortization of deferred acquisition costs and value of business acquired	958	174	344
Dividends to policyholders	36	37	51
Policy and other operating expenses (related party: 2019 – \$28, 2018 – \$35 and 2017 – \$6)	604	519	446
Total benefits and expenses	13,816	5,355	6,760
Income before income taxes	2,391	1,247	1,622
Income tax expense	117	122	105
Net income	2,274	1,125	1,517
Less: Net income attributable to noncontrolling interests	(8)	—	—
Net income attributable to Athene Life Re Ltd. shareholders	\$ 2,282	\$ 1,125	\$ 1,517

See accompanying notes to consolidated financial statements

ATHENE LIFE RE LTD.**Consolidated Statements of Comprehensive Income (Loss)**

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Net income	\$ 2,274	\$ 1,125	\$ 1,517
Other comprehensive income (loss), before tax			
Unrealized investment gains (losses) on available-for-sale securities	3,469	(2,419)	1,328
Noncredit component of other-than-temporary impairment losses on available-for-sale securities	(6)	(6)	4
Unrealized gains on hedging instruments	28	146	(105)
Foreign currency translation and other adjustments	1	(1)	1
Other comprehensive income (loss), before tax	3,492	(2,280)	1,228
Income tax expense (benefit) related to other comprehensive income (loss)	697	(429)	339
Other comprehensive income (loss)	2,795	(1,851)	889
Comprehensive income (loss)	5,069	(726)	2,406
Less: Comprehensive loss attributable to noncontrolling interests	(3)	—	—
Comprehensive income (loss) attributable to Athene Life Re Ltd. shareholders	\$ 5,072	\$ (726)	\$ 2,406

See accompanying notes to consolidated financial statements

ATHENE LIFE RE LTD.
Consolidated Statements of Equity

<i>(In millions)</i>	Common stock	Additional paid-in capital	Retained earnings	Accumulated other comprehensive income (loss)	Total Athene Life Re Ltd. shareholders' equity	Noncontrolling interests	Total shareholders' equity
Balance at December 31, 2016	\$ 2	\$ 4,264	\$ 1,956	\$ 345	\$ 6,567	\$ —	\$ 6,567
Net income	—	—	1,517	—	1,517	—	1,517
Other comprehensive income	—	—	—	889	889	—	889
Adoption of accounting standards	—	—	(187)	187	—	—	—
Balance at December 31, 2017	2	4,264	3,286	1,421	8,973	—	8,973
Adoption of accounting standards	—	—	42	(42)	—	—	—
Net income	—	—	1,125	—	1,125	—	1,125
Other comprehensive loss	—	—	—	(1,851)	(1,851)	—	(1,851)
Contribution from parent	—	910	—	—	910	—	910
Dividend to parent	—	—	(50)	—	(50)	—	(50)
Balance at December 31, 2018	2	5,174	4,403	(472)	9,107	—	9,107
Adoption of accounting standards	—	—	—	—	—	—	—
Net income	—	—	2,282	—	2,282	(8)	2,274
Other comprehensive income	—	—	—	2,790	2,790	5	2,795
Stock-based compensation	—	15	—	—	15	—	15
Contributions from noncontrolling interests	—	(147)	—	(32)	(179)	754	575
Balance at December 31, 2019	\$ 2	\$ 5,042	\$ 6,685	\$ 2,286	\$ 14,015	\$ 751	\$ 14,766

See accompanying notes to consolidated financial statements

ATHENE LIFE RE LTD.

Consolidated Statements of Cash Flows

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Cash flows from operating activities			
Net income	\$ 2,274	\$ 1,125	\$ 1,517
Adjustments to reconcile net income to net cash provided by operating activities:			
Amortization of deferred acquisition costs and value of business acquired	958	174	344
Amortization of deferred sales inducements	74	54	63
Accretion of net investment premiums, discounts and other	(94)	(178)	(242)
Payment at inception of reinsurance agreements, net (related party: 2019 – \$0, 2018 – \$(407) and 2017 – \$0)	—	(394)	—
Policy novation	(17)	—	—
Stock-based compensation	15	—	—
Net investment (income) loss (related party: 2019 – \$(162), 2018 – \$(106) and 2017 – \$(63))	(158)	(87)	(53)
Net recognized (gains) losses on investments and derivatives (related party: 2019 – \$(16), 2018 – \$16 and 2017 – \$8)	(2,475)	1,109	(2,024)
Foreign currency gains and losses	1	—	—
Deferred income tax expense	65	—	—
Changes in operating assets and liabilities:			
Accrued investment income (related party: 2019 – \$(2), 2018 – \$(15) and 2017 – \$0)	(120)	(66)	(101)
Policy acquisition costs deferred	(646)	(919)	(493)
Interest sensitive contract liabilities (related party: 2019 – \$471, 2018 – \$30 and 2017 – \$0)	4,003	(365)	2,536
Future policy benefits, other policy claims and benefits, dividends payable to policyholders and reinsurance recoverable (related party: 2019 – \$295, 2018 – \$109 and 2017 – \$0)	1,171	2,457	2,106
Current income tax recoverable	36	—	—
Funds withheld assets and liabilities (related party: 2019 – \$(1,368), 2018 – \$113 and 2017 – \$0)	(2,633)	270	(419)
Other assets and liabilities	237	(207)	184
Consolidated variable interest entities related:			
Net investment (income) loss (related party: 2019 – \$0, 2018 – \$0 and 2017 – \$0)	(2)	—	—
Net recognized (gains) losses on investments and derivatives (related party: 2019 – \$(1), 2018 – \$20 and 2017 – \$(36))	(7)	17	(36)
Other operating activities, net	—	—	3
Net cash provided by operating activities	2,682	2,990	3,385
Cash flows from investing activities			
Sales, maturities and repayments of:			
Available-for-sale securities (related party: 2019 – \$252, 2018 – \$179 and 2017 – \$131)	\$ 12,014	\$ 11,976	\$ 10,592
Trading securities (related party: 2019 – \$40, 2018 – \$30 and 2017 – \$55)	272	348	156
Equity securities (related party: 2019 – \$72, 2018 – \$29 and 2017 – \$22)	254	132	147
Mortgage loans (related party: 2019 – \$4, 2018 – \$13 and 2017 – \$0)	2,070	1,373	1,633
Investment funds (related party: 2019 – \$291, 2018 – \$305 and 2017 – \$348)	415	481	483
Derivative instruments and other invested assets (related party: 2019 – \$0, 2018 – \$0 and 2017 – \$0)	1,503	1,859	1,487
Short-term investments (related party: 2019 – \$0, 2018 – \$172 and 2017 – \$65)	398	534	351
Purchases of:			
Available-for-sale securities (related party: 2019 – \$(2,895), 2018 – \$(809) and 2017 – \$(186))	(16,433)	(14,474)	(17,014)
Trading securities (related party: 2019 – \$(6), 2018 – \$(4) and 2017 – \$0)	(495)	(54)	(89)
Equity securities (related party: 2019 – \$(262), 2018 – \$(149) and 2017 – \$0)	(451)	(334)	(105)
Mortgage loans (related party: 2019 – \$(366), 2018 – \$(389) and 2017 – \$0)	(6,391)	(5,745)	(2,336)
Investment funds (related party: 2019 – \$(726), 2018 – \$(1,140) and 2017 – \$(509))	(882)	(1,375)	(660)
Derivative instruments and other invested assets (related party: 2019 – \$(100), 2018 – \$(150) and 2017 – \$0)	(1,295)	(1,348)	(743)
Short-term investments (related party: 2019 – \$0, 2018 – \$(121) and 2017 – \$(117))	(802)	(473)	(421)

See accompanying notes to consolidated financial statements

(Continued)

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ATHENE LIFE RE LTD.

Consolidated Statements of Cash Flows

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Consolidated variable interest entities related:			
Sales, maturities and repayments of investments (related party: 2019 – \$90, 2018 – \$203 and 2017 – \$85)	101	217	95
Purchases of investments (related party: 2019 – \$(92), 2018 – \$(31) and 2017 – \$(23))	(110)	(83)	(23)
Cash settlement of derivatives	38		
Net changes of cash collateral posted for derivative transactions	3	—	—
Policy loans, net	33	—	—
Issuances of intercompany note receivable	—	(104)	—
Other investing activities, net	(144)	(35)	319
Proceeds from note receivable - related party	174	—	—
Investment in note receivable	(136)	—	—
Net cash used in investing activities	(9,864)	(7,105)	(6,128)
Cash flows from financing activities			
Capital contributions	—	95	—
Proceeds from short-term debt	\$ 475	\$ 183	\$ —
Repayment of short-term debt	—	(183)	—
Proceeds from intercompany notes payable		20	—
Repayment of intercompany notes payable		(36)	—
Deposits on investment-type policies and contracts (related party: 2019 – \$146, 2018 – \$151 and 2017 – \$0)	11,569	10,262	9,033
Withdrawals on investment-type policies and contracts (related party: 2019 – \$(455), 2018 – \$(252) and 2017 – \$0)	(6,548)	(6,205)	(4,812)
Payments for coinsurance agreements on investment-type contracts, net	(44)	(2)	(33)
Net change in cash collateral posted for derivative transactions	2,288	(1,354)	946
Dividends paid	—	(50)	—
Capital contributions from noncontrolling interests	575	—	—
Other financing activities, net	(82)	117	(48)
Net cash provided by financing activities	8,233	2,847	5,086
Net increase (decrease) in cash and cash equivalents	1,051	(1,268)	2,343
Cash and cash equivalents at beginning of year ¹	3,291	4,559	2,216
Cash and cash equivalents at end of year¹	\$ 4,342	\$ 3,291	\$ 4,559
Supplementary information			
Cash paid (refunded) for taxes	\$ (9)	\$ 52	\$ (74)
Cash paid for interest	49	3	—
Non-cash transactions			
Deposits on investment-type policies and contracts through reinsurance agreements (related party: 2019 – \$217, 2018 – \$17,619 and 2017 – \$0)	782	26,532	663
Withdrawals on investment-type policies and contracts through reinsurance agreements (related party: 2019 – \$1,753, 2018 – \$1,050 and 2017 – \$0)	3,393	1,843	482
Investments received from settlements on reinsurance agreements	56	52	73
Investments received from settlements on related party reinsurance agreements	149	—	—
Investments received from pension risk transfer premiums	5,235	435	334
Investments exchanged for related party investments	—	95	26
Related party investments exchanged for investments	—	115	—
Ceding commission on reinsurance agreements settled in investments	—	266	—
Non-cash capital contributions	—	815	—

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

(Concluded)

See accompanying notes to consolidated financial statements

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

1. Business, Basis of Presentation and Significant Accounting Policies

Athene Life Re Ltd. (ALRe), a Bermuda exempted company, together with its subsidiaries (collectively, we, our, us, or the Company), is a leading retirement services company. We conduct business primarily through the following consolidated subsidiaries:

- Our non-U.S. reinsurance subsidiaries, to which ALRe's other insurance subsidiaries and third-party ceding companies directly and indirectly reinsure a portion of their liabilities, including ALRe; and
- Athene USA Corporation, an Iowa corporation (together with its subsidiaries, Athene USA) which primarily issues retirement savings products.

ALRe is wholly owned by Athene Holding Ltd. (AHL), a Bermuda exempted company, whose Class A common shares are listed on the New York Stock Exchange (symbol: ATH).

Consolidation and Basis of Presentation—Our consolidated financial statements include our wholly owned subsidiaries, investees we control and any variable interest entities (VIEs) where we are the primary beneficiary. Investments in entities that we do not control, but have the ability to exercise significant influence over operating and financing decisions, other than investments for which we have elected the fair value option, are accounted for under the equity method. Intercompany balances and transactions have been eliminated.

For entities that are consolidated, but not 100% owned, we allocate a portion of the income or loss and corresponding equity to the owners other than us. We include the aggregate of the income or loss and corresponding equity that is not owned by the Company in noncontrolling interests in the consolidated financial statements.

We report investments in related parties and assets and liabilities of consolidated VIEs separately, as further described in the accounting policies that follow.

We have prepared the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (GAAP), which requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the period. Actual experience could materially differ from these estimates and assumptions. Our principal estimates impact:

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

Additional details around these principal estimates and assumptions are discussed in the significant accounting policies that follow and the related footnote disclosures.

Summary of Significant Accounting Policies

Investments

Fixed Maturity Securities – Fixed maturity securities includes bonds, collateralized loan obligations (CLO), asset-backed securities (ABS), residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS) and redeemable preferred stock. We classify fixed maturity securities as available-for-sale (AFS) or trading at the time of purchase and subsequently carry them at fair value. Fair value hierarchy and valuation methodologies are discussed in *Note 5 – Fair Value*. Classification is dependent on a variety of factors including our expected holding period, election of the fair value option and asset and liability matching.

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

AFS Securities – Unrealized gains and losses on AFS securities, net of tax and adjustments to DAC, DSI, VOBA and future policy benefits, if applicable, are generally reflected in accumulated other comprehensive income (loss) (AOCI) on the consolidated balance sheets. Unrealized gains or losses relating to identified risks within AFS securities in fair value hedging relationships are reflected in investment related gains (losses) on the consolidated statements of income.

Trading Securities – We elected the fair value option for certain fixed maturity securities. These fixed maturity securities are classified as trading, with changes to fair value included in investment related gains (losses) on the consolidated statements of income. Although the securities are classified as trading, the trading activity related to these investments is primarily focused on asset and liability matching activities and is not intended to be an income strategy based on active trading. As such, the activity related to these investments on the consolidated statements of cash flows is classified as investing activities.

We generally record security transactions on a trade date basis, with any unsettled trades recorded in other assets or other liabilities on the consolidated balance sheets. Bank loans, private placements and investment funds are recorded on settlement date basis.

Equity Securities – Equity securities includes common stock, mutual funds and non-redeemable preferred stock. Equity securities are carried at fair value with subsequent changes in fair value recognized in net income effective January 1, 2018. Prior to January 1, 2018, the accounting for subsequent changes in the fair value of an equity security was dependent on its classification as AFS or trading as discussed previously.

Purchased Credit Impaired (PCI) Investments – We purchase certain structured securities, primarily RMBS, and re-performing mortgage loans having experienced deterioration in credit quality since their issuance which meet the definition of PCI investments. We determined, based on our expectations as to the timing and amount of cash flows expected to be received, that it was probable at acquisition that we would not collect all contractually required payments, including both principal and interest, while also considering the effects of any prepayments for these PCI investments. Based on these assumptions, the difference between the undiscounted expected future cash flows of the PCI investment and the recorded investment represents the initial accretable yield, which is accreted into investment income, net of related expenses, over its remaining life on a level-yield basis. The difference between the contractually required payments on the PCI investment and the undiscounted expected future cash flows represents the non-accretable difference at acquisition. Over time, based on actual payments received and changes in estimates of undiscounted expected future cash flows, the accretable yield and the non-accretable difference can change. PCI investments are presented on the consolidated financial statements consistent with AFS securities or mortgage loans depending on the underlying investment.

Quarterly, we evaluate the undiscounted expected future cash flows associated with PCI investments based on updates to key assumptions. Changes to undiscounted expected future cash flows due solely to the changes in the contractual benchmark interest rates on variable rate PCI investments will change the accretable yield prospectively. Declines in undiscounted expected future cash flows due to further credit deterioration, as well as changes in the expected timing of the cash flows, can result in the recognition of an other-than-temporary impairment (OTTI) charge for PCI securities or a valuation allowance for PCI loans. Significant increases in undiscounted expected future cash flows are recognized prospectively as an adjustment to the accretable yield.

Mortgage Loans – 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 its contractual interest rate. We record amortization of premiums and discounts using the effective yield method and contractual cash flows on the underlying loan. We accrue interest on loans until it is probable we will not receive interest or the loan is 90 days past due. Interest income, amortization of premiums and discounts, and prepayment fees are reported in net investment income on the consolidated statements of income. We have also elected the fair value option on a portion of our mortgage loans.

Investment Funds – We invest in certain non-fixed income, alternative investments in the form of limited partnerships or similar legal structures (investment funds). For investment funds in which we have determined we are not the primary beneficiary, and therefore not required to consolidate, we typically record these investments using the equity method of accounting, where the cost is recorded as an investment in the fund, or we have elected the fair value option. Adjustments to the carrying amount reflect our pro rata ownership percentage of the operating results as indicated by net asset value (NAV) in the investment fund financial statements, which can be on a lag of up to three months when investee information is not received in a timely manner.

We record our proportionate share of investment fund income within net investment income on the consolidated statements of income. Contributions paid or distributions received by us are recorded directly to the investment fund balance as an increase to carrying value or as a return of capital, respectively.

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

Policy Loans – Policy loans are funds provided to policyholders in return for a claim on the policyholder’s account value. The funds provided are limited to a specified percentage of the account balance. The majority of policy loans do not have a stated maturity and the balances and accrued interest are repaid with proceeds from the policyholder’s account balance. Policy loans are reported at the unpaid principal balance. Interest income is recorded as earned using the contract interest rate and is reported in net investment income on the consolidated statements of income.

Funds Withheld at Interest – Funds withheld at interest represents a receivable for amounts contractually withheld by ceding companies in accordance with funds withheld coinsurance (funds withheld) and modified coinsurance (modco) reinsurance agreements in which we act as reinsurer. Generally, assets equal to statutory reserves are withheld and legally owned by the ceding company, and any excess or shortfall is settled periodically. The underlying agreements contain embedded derivatives as discussed below.

Securities Repurchase and Reverse Repurchase Agreements - Securities repurchase and reverse repurchase transactions involve the temporary exchange of securities for cash or other collateral of equivalent value, with agreement to redeliver a like quantity of the same or similar securities at a future date prior to maturity at a fixed and determinable price. We evaluate transfers of securities under these agreements to repurchase or resell to determine whether they satisfy the criteria for accounting treatment as secured borrowing or lending arrangements. Agreements not meeting the criteria would require recognition of the transferred securities as sales or purchases, with related forward repurchase or resale commitments. All of our securities repurchase transactions are accounted for as collateralized borrowings and are included in payables for collateral on derivatives and securities to repurchase on the consolidated balance sheets. Earnings from investing activities related to the cash received under our securities repurchase arrangements are included in net investment income on the consolidated statements of income. The associated borrowing cost is included in policy and other operating expenses on the consolidated statements of income.

Short-term Investments – Short-term investments consists of financial instruments with maturities of greater than three months but less than twelve months when purchased. Short-term debt securities are accounted for as trading or AFS consistent with our policies for those investments. Short-term loans are carried at amortized cost. Fair values are determined consistent with methodologies described in *Note 5 – Fair Value* for the respective investment type.

Investment Income – We recognize investment income as it accrues or is legally due, net of investment management and custody fees. Investment income on fixed maturity securities includes coupon interest, as well as the amortization of any premium and the accretion of any discount. Investment income on equity securities represents dividend income and preferred coupons interest. Realized gains and losses on sales of investments are included in investment related gains (losses) on the consolidated statements of income. Realized gains and losses on investments sold are determined based on a first-in first-out method.

Other-Than-Temporary Impairment – We identify securities that could potentially have impairments that are other-than-temporary by monitoring market events for changes in market interest rates, credit issues, changes in business climate, management changes, litigation, government actions and other similar factors. Indicators of impairment may include changes in the issuers’ credit ratings and outlook, frequency of late payments, pricing levels, key financial ratios, financial statements, revenue forecasts and cash flow projections.

We review securities on a case-by-case basis to determine whether an other-than-temporary decline in value exists and whether losses should be recognized. We consider relevant facts and circumstances in evaluating whether a credit or interest rate-related impairment of a security is other-than-temporary. Relevant facts and circumstances include: (1) the extent and length of time the fair value has been below cost; (2) the reasons for the decline in fair value; (3) the issuer’s financial position and access to capital; and (4) for fixed maturity securities, our intent to sell a security or whether it is more likely than not that we will be required to sell the security before the recovery of its cost or amortized cost which, in some cases, may extend to maturity and for equity securities prior to January 1, 2018, our ability and intent to hold the security for a period of time that allows for the recovery in value. To the extent we determine that a security is other-than-temporarily impaired, an impairment loss is recognized.

The recognition of impairment losses on fixed maturity securities is dependent upon the facts and circumstances related to the specific security. If we intend to sell a security or it is more likely than not that we would be required to sell a security before the recovery of its cost or amortized cost, less any recorded credit loss, we recognize a loss in other-than-temporary impairment losses on the consolidated statements of income for the difference between cost or amortized cost and fair value. If neither of these two conditions exists, then the recognition of the loss is bifurcated and we recognize the credit loss portion in other-than-temporary impairment losses on the consolidated statements of income and the non-credit loss portion in AOCI on the consolidated balance sheets. Impairment losses on equity securities were recognized in investment related gains (losses) on the consolidated statements of income prior to January 1, 2018. Effective January 1, 2018, equity securities are no longer evaluated for impairment as all changes in fair value are recognized in net income.

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

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

We impair a mortgage loan when it is probable we will not collect all amounts due under the agreement. We establish a general valuation allowance on mortgage loans based on loss history. Additionally, we establish a valuation allowance on individual loans based on expected losses from future dispositions or settlement, including foreclosures. We calculate the allowance based on how much the carrying value exceeds one of these values:

- the present value of expected future cash flows discounted at the loan's original effective interest rate;
- the value of the loan's collateral if it is in the process of foreclosure or otherwise collateral dependent; or
- the loan's fair value if the loan is being sold.

We first apply any interest accrued or received on the net carrying amount of the impaired loan to the principal of the loan, and once the principal is repaid, we include amounts received in net investment income. We limit accrued interest income on impaired loans to 90 days of interest. Once accrued interest on the impaired loan is received, we recognize interest income on a cash basis. Loans deemed uncollectible or in foreclosure are charged off against the valuation allowances, and subsequent recoveries, if any, are credited to the valuation allowances. Changes in valuation allowances are reported in investment related gains (losses) on the consolidated statements of income.

The cost of other invested assets is adjusted for impairments in value deemed to be other-than-temporary in the period in which the determination is made. These impairments are included within other-than-temporary impairment losses on the consolidated statements of income, and the cost basis of the investment securities is reduced accordingly. We do not change the revised cost basis for subsequent recoveries in value.

Derivative Instruments—We invest in derivatives to hedge the risks experienced in our ongoing operations, such as equity, interest rate and cash flow risks, or for other risk management purposes, which primarily involve managing liability risks associated with our indexed annuity products and reinsurance agreements. Derivatives are financial instruments whose values are derived from interest rates, foreign exchange rates, financial indices or other underlying notional amounts. Derivative assets and liabilities are carried at fair value on the consolidated balance sheets. We elect to present any derivatives subject to master netting provisions as a gross asset or liability and gross of collateral. Disclosures regarding balance sheet presentation of derivatives subject to master netting agreements are discussed in *Note 3 – Derivative Instruments*. We may designate derivatives as cash flow or fair value hedges.

Hedge Documentation and Hedge Effectiveness – To qualify for hedge accounting, at the inception of the hedging relationship, we formally document our designation of the hedge as a cash flow or fair value hedge and our risk management objective and strategy for undertaking the hedging transaction. In this documentation, we identify how the hedging instrument is expected to hedge the designated risks related to the hedged item, the method that will be used to retrospectively and prospectively assess the hedging instrument's effectiveness and the method which will be used to measure ineffectiveness. A derivative designated as a hedging instrument must be assessed as being highly effective in offsetting the designated risk of the hedged item. Hedge effectiveness is formally assessed at inception and periodically throughout the life of the designated hedging relationship.

For a cash flow hedge, all changes in the fair value of the hedging derivative are reported within AOCI beginning January 1, 2018, and the related gains or losses on the derivative are reclassified into the consolidated statements of income when the cash flows of the hedged item affect earnings. Prior to January 1, 2018, any portion deemed to be ineffective was reported in investment related gains (losses) on the consolidated statements of income each reporting period as effectiveness was assessed.

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For a fair value hedge, changes in the fair value of the hedging derivative and changes in the fair value of the hedged item related to the designated risk being hedged, are reported on the consolidated statements of income according to the nature of the risk being hedged. Additionally, changes in the fair value of amounts excluded from the assessment of effectiveness are recorded in earnings.

We discontinue hedge accounting prospectively when: (1) we determine the derivative is no longer highly effective in offsetting changes in the estimated cash flows or fair value of a hedged item; (2) the derivative expires, is sold, terminated, or exercised; or (3) the derivative is de-designated as a hedging instrument. When hedge accounting is discontinued, the derivative continues to be carried on the consolidated balance sheets at fair value, with changes in fair value recognized in investment related gains (losses) on the consolidated statements of income.

For a derivative not designated as a hedge, changes in the derivative's fair value and any income received or paid on derivatives at the settlement date are included in investment related gains (losses) on the consolidated statements of income.

Embedded Derivatives – We issue and reinsure products, primarily fixed indexed annuity products, or purchase investments that contain embedded derivatives. If we determine the embedded derivative has economic characteristics not clearly and closely related to the economic characteristics of the host contract, and a separate instrument with the same terms would qualify as a derivative instrument, the embedded derivative is bifurcated from the host contract and accounted for separately, unless the fair value option is elected on the host contract. Under the fair value option, bifurcation of the embedded derivative is not necessary as the entire contract is carried at fair value with all related gains and losses recognized in investment related gains (losses) on the consolidated statements of income. Embedded derivatives are carried on the consolidated balance sheets at fair value in the same line item as the host contract.

Fixed indexed annuity and indexed universal life insurance contracts allow the policyholder to elect a fixed interest rate return or an equity market component for which interest credited is based on the performance of certain stock market indices. The equity market option is an embedded derivative, similar to a call option. The benefit reserve is equal to the sum of the fair value of the embedded derivative and the host (or guaranteed) component of the contracts. The fair value of the embedded derivatives is computed as the present value of benefits attributable to the excess of the projected policy contract values over the projected minimum guaranteed contract values. The projections of policy contract values are based on assumptions for future policy growth, which include assumptions for expected index credits on the next policy anniversary date, future equity option costs, volatility, interest rates and policyholder behavior assumptions including lapses and the use of benefit riders. The projections of minimum guaranteed contract values include the same assumptions for policyholder behavior as were used to project policy contract values. The embedded derivative cash flows are discounted using a rate that reflects our own credit rating. The host contract is established at contract inception as the initial account value less the initial fair value of the embedded derivative and accreted over the policy's life. The host contract accretion rate is updated each quarter so that the present value of actual and expected guaranteed cash flows is equal to the initial host value. Changes in the fair value of embedded derivatives associated with fixed indexed annuities and indexed universal life insurance contracts are included in interest sensitive contract benefits on the consolidated statements of income.

Additionally, reinsurance agreements written on a funds withheld or modco basis contain embedded derivatives. The right to receive or obligation to pay the total return on the assets supporting the funds withheld at interest or funds withheld liability, respectively, represents a total return swap with a floating rate leg. The fair value of embedded derivatives on funds withheld and modco agreements is computed as the unrealized gain (loss) on the underlying assets and is included in the funds withheld at interest and funds withheld liability lines on the consolidated balance sheets for assumed and ceded agreements, respectively. The change in the fair value of the embedded derivatives is recorded in investment related gains (losses) on the consolidated statements of income. Assumed and ceded earnings from funds withheld at interest, funds withheld liability and changes in the fair value of embedded derivatives are reported in operating activities on the consolidated statements of cash flows. Contributions to and withdrawals from funds withheld at interest and funds withheld liability are reported in operating activities on the consolidated statements of cash flows.

Variable Interest Entities—An entity that does not have sufficient equity to finance its activities without additional financial support, or in which the equity investors, as a group, do not have the characteristics typically afforded to common shareholders is a VIE. The determination as to whether an entity qualifies as a VIE depends on the facts and circumstances surrounding each entity and may require significant judgment. Our investment funds generally qualify as VIEs and are evaluated for consolidation under the VIE model.

We are required to consolidate a VIE if we are the primary beneficiary, defined as the variable interest holder with both the power to direct the activities that most significantly impact the VIE's economic performance and rights to receive benefits or obligations to absorb losses that could be potentially significant to the VIE. We determine whether we are the primary beneficiary of an entity based on a qualitative assessment of the VIE's capital structure, contractual terms, nature of the VIE's operations and purpose and our relative exposure to the related risks of the VIE. Since affiliates of Apollo Global Management, Inc. (AGM and, together with its subsidiaries, Apollo), a related party, are the decision makers in certain of the investment funds, we and a member of our related party group may together have the characteristics of the primary beneficiary of

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an investment fund. In this situation, we have concluded we are not under common control, as defined by GAAP, with the related party, and therefore consolidate in the circumstances when substantially all of the activities of the VIE are conducted on our behalf. We reassess the VIE and primary beneficiary determinations on an ongoing basis.

For entities that we do not consolidate but have significant influence over the entities' operations, we record our investment under the equity method of accounting. If we do not consolidate and do not have significant influence, generally on investment funds in which we own a less than a 3% interest, we elect the fair value option.

See *Note 4 – Variable Interest Entities* for discussion of our interest in entities that meet the definition of a VIE.

Reinsurance—We assume and cede insurance and investment contracts under coinsurance, funds withheld and modco. We follow reinsurance accounting for transactions that provide indemnification against loss or liability relating to insurance risk (risk transfer). To meet risk transfer requirements, a reinsurance agreement must transfer insurance risk arising from uncertainties about both underwriting and timing risks. Cessions under reinsurance do not discharge our obligations as the primary insurer, unless the requirements of assumption reinsurance have been met. We generally have the right of offset on reinsurance contracts, but have elected to present reinsurance settlement amounts due to and from the Company on a gross basis.

Assets and liabilities assumed or ceded under coinsurance, funds withheld, or modco are presented gross on the consolidated balance sheets. For investment contracts, the change in assumed and ceded reserves are presented net in interest sensitive contract benefits on the consolidated statements of income. For insurance contracts, the change in assumed and ceded reserves and benefits are presented net in future policy and other policy benefits on the consolidated statements of income. Assumed or ceded premiums are included in premiums on the consolidated statements of income.

Accounting for reinsurance requires the use of assumptions, particularly related to the future performance of the underlying business and the potential impact of counterparty credit risks. We attempt to minimize our counterparty credit risk through the structuring of the terms of our reinsurance agreements, including the use of trusts, and we monitor credit ratings of counterparties for signs of declining credit quality. When a ceding company does not report information on a timely basis, we record accruals based on the best available information at the time, which includes the reinsurance agreement terms and historical experience. We periodically compare actual and anticipated experience to the assumptions used to establish reinsurance assets and liabilities. See *Note 6 – Reinsurance* for more information.

Funds Withheld and ModCo – For business assumed or ceded on a funds withheld or modco basis, a funds withheld segregated portfolio, comprised of invested assets and other assets is maintained by the ceding entity, which is sufficient to support the current balance of statutory reserves. The fair value of the funds withheld is recorded as a funds withheld asset or liability and any excess or shortfall in relation to statutory reserves is settled periodically.

Cash and Cash Equivalents—Cash and cash equivalents include deposits and short-term highly liquid investments with a maturity of less than 90 days from the date of acquisition. Amounts included are readily convertible to known amounts of cash and are subject to an insignificant risk of change in value.

Restricted Cash—Restricted cash primarily consists of cash and cash equivalents held in funds in trust as part of certain coinsurance agreements to secure statutory reserves and liabilities of the coinsured parties. Restricted cash is reported separately on the consolidated balance sheets, but is included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period amounts shown on the consolidated statements of cash flows.

Investments in Related Parties—Investments in related parties and associated earnings, other comprehensive income and cash flows are separately identified on the consolidated financial statements and accounted for consistently with the policies described above for each category of investment. Investments in related parties are primarily a result of investments over which Apollo can exercise significant influence.

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

Deferred Acquisition Costs and Deferred Sales Inducements – Costs related directly to the successful acquisition of new, or renewal of, insurance or investment contracts are deferred to the extent they are recoverable from future premiums or gross profits. These costs consist of commissions and policy issuance costs, as well as sales inducements credited to policyholder account balances, and are included in deferred acquisition costs, deferred sales inducements and value of business acquired on the consolidated balance sheets. We perform periodic tests, including at issuance, to determine if the deferred costs are recoverable. If we determine that the deferred costs are not recoverable, we record a cumulative charge to the current period.

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Deferred costs related to universal life-type policies and investment contracts with significant revenue streams from sources other than investment of the policyholder funds are amortized over the lives of the policies, based upon the proportion of the present value of actual and expected deferred costs to the present value of actual and expected gross profits to be earned over the life of the policies. Gross profits include investment spread margins, surrender charge income, policy administration, changes in the guaranteed lifetime withdrawal benefit (GLWB) and guaranteed minimum death benefit (GMDB) reserves and realized gains and losses on investments. Current period gross profits for fixed indexed annuities also include the change in fair value of both freestanding and embedded derivatives. Estimates of the expected gross profits and margins are based on assumptions using accepted actuarial methods related to policyholder behavior, including lapses and the use of benefit riders, mortality, yields on investments supporting the liabilities, future interest credited amounts (including indexed related credited amounts on fixed indexed annuity products), and other policy changes as applicable, and the level of expenses necessary to maintain the policies over their expected lives. Each reporting period, we update estimated gross profits with actual gross profits as part of the amortization process and adjust the DAC and DSI balances due to the other comprehensive income (OCI) effects of unrealized investment gains and losses on AFS securities. We also periodically revise the key assumptions used in the amortization calculation, which results in revisions to the estimated future gross profits. The effects of changes in assumptions are recorded as unlocking in the period in which the changes are made.

Deferred costs related to investment contracts without significant revenue streams from sources other than investment of the policyholder funds are amortized using the effective interest method. The effective interest method amortizes the deferred costs by discounting the future liability cash flows at a break-even rate. The break-even rate is solved such that the present value of future liability cash flows is equal to the net liability at the inception of the contract.

Value of Business Acquired – We establish VOBA for blocks of insurance contracts acquired through the acquisition of insurance entities. We record the fair value of the liabilities assumed in two components: reserves and VOBA. Reserves are established using our best estimate assumptions consistent with the policies described below for future policy benefits and interest sensitive contract liabilities. VOBA is the difference between the fair value of the liabilities and the reserves. VOBA can be either positive or negative. Any negative VOBA is recorded to the same financial statement line on the consolidated balance sheets as the associated reserves. Positive VOBA is recorded in deferred acquisition costs, deferred sales inducements and value of business acquired on the consolidated balance sheets. We perform periodic tests to determine if the VOBA remains recoverable. If we determine that VOBA is not recoverable, we record a cumulative charge to the current period.

VOBA associated with investment contracts without significant revenue streams from sources other than investment of the policyholder funds is amortized using the effective interest method. VOBA associated with immediate annuity contracts classified as long duration contracts is amortized at a constant rate in relation to net policyholder liabilities. For universal life-type policies and investment contracts with significant revenue streams from sources other than investment of policyholder funds, VOBA is amortized in relation to the present value of estimated gross profits using methods consistent with those used to amortize DAC and DSI. Negative VOBA is amortized at a constant rate in relation to applicable net policyholder liabilities.

See Note 7 – *Deferred Acquisition Costs, Deferred Sales Inducements and Value of Business Acquired* for further discussion.

Interest Sensitive Contract Liabilities—Universal life-type policies and investment contracts include fixed indexed and traditional fixed annuities in the accumulation phase, funding agreements, universal life insurance, fixed indexed universal life insurance, and immediate annuities without significant mortality risk (which includes pension risk transfer (PRT) annuities without life contingencies). We carry liabilities for fixed annuities, universal life insurance, and funding agreements at the account balances without reduction for potential surrender or withdrawal charges, except for a block of universal life business ceded to Global Atlantic Financial Group Limited (together with its subsidiaries, Global Atlantic) which we carry at fair value. Liabilities for immediate annuities without significant mortality risk are calculated as the present value of future liability cash flows and policy maintenance expenses discounted at contractual interest rates. For a discussion regarding our indexed products, refer above to the embedded derivative discussion.

Changes in the interest sensitive contract liabilities, excluding deposits and withdrawals, are recorded in interest sensitive contract benefits or product charges on the consolidated statements of income. Interest sensitive contract liabilities are not reduced for amounts ceded under reinsurance agreements which are reported as reinsurance recoverable on the consolidated balance sheets. See the reinsurance accounting policy discussed in *–Reinsurance* above and Note 6 – *Reinsurance* for more information on reinsurance.

Future Policy Benefits—We issue contracts classified as long-duration, which includes term and whole life, accident and health, disability, and deferred and immediate annuities with life contingencies (which includes PRT annuities with life contingencies). Liabilities for non-participating long-duration contracts are established using accepted actuarial valuation methods which require the use of assumptions related to expenses,

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investment yields, mortality, morbidity and persistency, with a provision for adverse deviation, at the date of issue or acquisition. As of December 31, 2019, the reserve investment yield assumptions for non-participating contracts range from 3.31% to 5.44% and are specific to our expected earned rate on the asset portfolio supporting the reserves. We base other key assumptions, such as mortality and morbidity, on industry standard data adjusted to align with actual company experience, if necessary.

For long-duration contracts, the assumptions are locked in at contract inception and only modified if we deem the reserves to be inadequate. We periodically review actual and anticipated experience compared to the assumptions used to establish policy benefits. If the net GAAP liability (gross reserves less DAC, DSI and VOBA) is less than the gross premium liability, impairment is deemed to have occurred, and the DAC, DSI and VOBA asset balances are reduced until the net GAAP liability is equal to the gross premium liability. If the DAC, DSI and VOBA asset balances are completely written off and the net GAAP liability is still less than the gross premium liability, then an additional liability is recorded to arrive at the gross premium liability.

We issue and reinsure deferred annuity contracts which contain GLWB and GMDB riders. We establish future policy benefits for GLWB and GMDB riders by estimating the expected value of withdrawal and death benefits in excess of the projected account balance. We recognize the excess proportionally over the accumulation period based on total actual and expected assessments. The methods we use to estimate the liabilities have assumptions about policyholder behavior, which includes lapses, withdrawals and use of benefit riders; mortality, expected yield on investments supporting the liability; and market conditions affecting the account balance growth.

Future policy benefits includes liabilities for no-lapse guarantees on universal life insurance and fixed indexed universal life insurance. We establish future policy benefits for no-lapse guarantees by estimating the expected value of death benefits paid after policyholder account balances have been exhausted. We recognize these benefits proportionally over the life of the contracts based on total actual and expected assessments. The methods we use to estimate the liabilities have assumptions about policyholder behavior, mortality, expected yield on investments supporting the liability, and market conditions affecting the account balance growth.

For the liabilities associated with GLWB and GMDB riders and no-lapse guarantees, each reporting period, we update expected excess benefits and assessments with actual excess benefits and assessments and adjust the liability balances due to the OCI effects of unrealized investment gains and losses on AFS securities. We also periodically revise the key assumptions used in the calculation of the liabilities which results in revisions to the expected excess benefits and assessments. The effects of changes in assumptions are recorded as unlocking in the period in which the changes are made.

Changes in future policy benefits other than the adjustment for the OCI effects of unrealized investment gains and losses on AFS securities, are recorded in future policy and other policy benefits on the consolidated statements of income. Future policy benefits are not reduced for amounts ceded under reinsurance agreements which are reported as reinsurance recoverable on the consolidated balance sheets. See the reinsurance accounting policy discussed in *Reinsurance* above and *Note 6 – Reinsurance* for more information on reinsurance.

Closed Block Business—Two closed blocks of policies were established in connection with the reorganization of two predecessor subsidiaries from mutual companies to stock companies, collectively referred to as the Closed Blocks, and individually referred to as the AmerUs Life Insurance Company (AmerUs) closed block (AmerUs Closed Block) and the Indianapolis Life Insurance Company (ILICO) closed block (ILICO Closed Block). Insurance policies which had a dividend scale in effect as of each closed block establishment date were included in the respective closed block. The Closed Blocks were designed to give reasonable assurance to owners of insurance policies included therein that, after the reorganization, assets would be available to maintain the dividend scales and interest credits in effect prior to the reorganization, if the experience underlying such scales and crediting continued. The assets, including related revenue, allocated to the Closed Blocks will accrue solely to the benefit of the policyholders included in the Closed Blocks until they no longer exist. A policyholder dividend obligation is required to be established for earnings in the Closed Blocks that are not available to the shareholders. We have elected the fair value option for the AmerUs Closed Block and the ILICO Closed Block. See *Note 8 – Closed Block* for more information on the Closed Blocks.

Other Policy Claims and Benefits—Other policy claims and benefits include amounts payable relating to in course of settlements (ICOS) and incurred but not reported (IBNR) liabilities associated with interest sensitive contract liabilities and future policy benefits. For traditional life and universal life policies, ICOS claim liabilities are established when we are notified of the death of the policyholder but the claim has not been paid as of the reporting date. For immediate annuities and supplemental contracts, ICOS claim liabilities are established to accrue suspended benefit payments between the date of notification of death and the date of verification of death.

We determine IBNR claim liabilities using studies of past experience. The time that elapses from the death or claim date to when the claim is reported to us can vary significantly by product type, but generally ranges between one to six months for life business. We estimate IBNR claims

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on an undiscounted basis, using actuarial estimates of historical claims expense, adjusted for current trends and conditions. These estimates are continually reviewed and the ultimate liability may vary significantly from the amount recognized.

Dividends Payable to Policyholders—Participating policies entitle the policyholders to receive dividends based on actual interest, mortality, morbidity and expense experience for the year. Dividends are distributed to the policyholders through annual or terminal dividends which the board of directors of the applicable insurance subsidiary approves. As of December 31, 2019 and 2018, 10% and 10%, respectively, of life policies, inclusive of ceded policies, were participating, and the related liability is recorded in dividends payable to policyholders on the consolidated balance sheets. Premiums related to participating policies represented 30%, 26% and 52% of total life insurance direct premiums and deposits for the years ended December 31, 2019, 2018 and 2017, respectively.

Policyholder dividend liabilities are recorded in dividends payable to policyholders on the consolidated balance sheets and policyholder dividends are recorded in dividends to policyholders on the consolidated statements of income. For participating policies issued by our previously consolidated German subsidiaries, dividends payable to policyholders includes an adjustment to recognize timing differences between GAAP and local statutory earnings that reverse and enter into future calculations of dividends to policyholders. Except for changes due to unrealized gains or losses on AFS securities, the change in this adjustment is recorded in dividends to policyholders on the consolidated statements of income. Changes in this adjustment due to unrealized gains or losses on AFS securities are recorded in OCI.

Foreign Currency—The accounts of foreign-based subsidiaries and equity method investments are measured using their functional currency. Revenue and expenses of these subsidiaries are translated into U.S. dollars at the average exchange rate for the period. Assets and liabilities are translated at the exchange rate as of the end of the reporting period. For the equity method investments, our proportionate share of the investee's income is translated into U.S. dollars at the average exchange rate for the period and our investment is translated using the exchange rate as of the end of the reporting period. The resulting translation adjustments are included in equity as a component of AOCI. Gains or losses arising from transactions denominated in a currency other than the functional currency of the entity that is party to the transaction are included in net income. The impacts of any non-U.S. dollar denominated AFS securities are included in AOCI along with the change in its fair value unless in a fair value hedging relationship as discussed in *Derivative Instruments* above.

Recognition of Revenues and Related Expenses—Revenues for universal life-type policies and investment contracts, including surrender and market value adjustments, costs of insurance, policy administration, GMDB, GLWB and no-lapse guarantee charges, are earned when assessed against policyholder account balances during the period. Interest credited to policyholder account balances and the change in fair value of embedded derivatives within fixed indexed annuity contracts is included in interest sensitive contract benefits on the consolidated statements of income.

Premiums for long-duration contracts, including products with fixed and guaranteed premiums and benefits, are recognized as revenue when due from policyholders. When premiums are due over a significantly shorter period than the period over which benefits are provided, such as immediate annuities with life contingencies (which includes PRT annuities), a deferred profit liability is established equal to the excess of the gross premium over the net premium. The deferred profit liability is recognized in future policy benefits on the consolidated balance sheets and amortized into income in a constant relationship to the benefit reserve through future policy and other policy benefits on the consolidated statements of income.

All insurance related revenue is reported net of reinsurance ceded.

Income Taxes—We compute income taxes using the asset and liability method, under which deferred income taxes are provided for the temporary differences between the financial statement carrying amounts and the tax basis of our assets and liabilities using estimated tax rates expected to be in effect for the year in which the differences are expected to reverse. Such temporary differences are primarily due to the tax basis of reserves, DAC, VOBA, unrealized investment gains/losses, reinsurance related differences, embedded derivatives and net operating loss carryforwards. Changes in deferred income tax assets and liabilities associated with components of OCI are recorded directly to OCI. We evaluate the likelihood of realizing the benefit of our deferred tax assets and may record a valuation allowance if, based on all available evidence, we determine that it is more likely than not that some portion of the tax benefit will not be realized. We adjust the valuation allowance if, based on our evaluation, there is a change in the amount of deferred income tax assets that are deemed more-likely-than-not to be realized. Changes in deferred tax assets and liabilities attributable to changes in enacted income tax rates are recorded through net income in the period of enactment. We recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the relevant taxing authorities, based on the technical merits of our position. For those tax positions that meet the more-likely-than-not recognition threshold, we recognize the largest amount of tax benefit that is more than 50 percent likely to be realized upon ultimate settlement with the related tax authority. We recognize any income tax interest and penalties in income tax expense.

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See *Note 11 – Income Taxes* for discussion on withholding taxes for undistributed earnings of subsidiaries.

Reclassifications—Certain reclassifications have been made to conform with current year presentation.

Adopted Accounting Pronouncements

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 adopt this update effective January 1, 2020, with a cumulative-effect adjustment that will decrease retained earnings by approximately \$216 million on a pre-tax basis, excluding the offsetting impacts to DAC, DSI, VOBA and the SOP 03-1 reserve, as a result of further refinement of our models and assumptions. The adjustment to retained earnings primarily relates to the establishment of an allowance on our commercial mortgage loan portfolio, which will represent approximately 1.72% of the amortized cost of the portfolio, but also includes immaterial impacts relating to other assets in scope, including residential mortgage loans, funds withheld at interest, and reinsurance recoverable.

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. We do not expect the adoption of this update will have a material effect on our consolidated financial statements.

Consolidation (ASU 2018-17)

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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. We do not expect the adoption of this update will have a material effect on our consolidated financial statements.

Cloud Computing Arrangements (ASU 2018-15)

The amendments in this update align the requirements for capitalizing implementation costs incurred in a cloud computing service arrangement with the requirements for capitalizing implementation costs incurred for internal-use software. The update is effective January 1, 2020 and will be adopted prospectively. We do not expect the adoption of this update will have a material effect on our consolidated financial statements.

Fair Value Measurement – Disclosure Requirements (ASU 2018-13)

The amendments in this update modify the disclosure requirements for fair value measurements by removing, modifying or adding certain disclosures. We early adopted the removal and modification of certain disclosures as permitted. The additional disclosures in the update are effective January 1, 2020. 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 2019-09, 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.

The amendments in ASU 2018-12 were originally effective January 1, 2021; however, with the issuance of ASU 2019-09, we will not be required to adopt the amendments until January 1, 2022. 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. The update is effective January 1, 2020 and will be adopted prospectively. We do not expect the adoption of this update will have a material effect on our consolidated financial statements.

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2. Investments

AFS Securities—The following table represents the amortized cost, gross unrealized gains and losses, fair value and OTTI in AOCI of our AFS investments by asset type:

<i>(In millions)</i>	December 31, 2019				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	OTTI in AOCI
AFS securities					
U.S. government and agencies	\$ 35	\$ 3	\$ —	\$ 38	\$ —
U.S. state, municipal and political subdivisions	1,322	220	(1)	1,541	—
Foreign governments	298	29	—	327	—
Corporate	43,259	3,327	(178)	46,408	1
CLO	7,523	21	(196)	7,348	—
ABS	5,017	123	(24)	5,117	4
CMBS	2,299	104	(8)	2,395	1
RMBS	6,872	513	(10)	7,375	19
Total AFS securities	66,625	4,340	(417)	70,549	25
AFS securities – related party					
Corporate	18	1	—	19	—
CLO	949	3	(18)	934	—
ABS	2,814	37	(2)	2,849	—
Total AFS securities – related party	3,781	41	(20)	3,802	—
Total AFS securities including related party	\$ 70,406	\$ 4,381	\$ (437)	\$ 74,351	\$ 25

<i>(In millions)</i>	December 31, 2018				
	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	37,972	394	(1,314)	37,052	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	59,979	1,008	(1,767)	59,220	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	\$ 61,441	\$ 1,012	\$ (1,796)	\$ 60,657	\$ 19

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

<i>(In millions)</i>	December 31, 2019	
	Amortized Cost	Fair Value
AFS securities		
Due in one year or less	\$ 1,108	\$ 1,113
Due after one year through five years	9,164	9,468
Due after five years through ten years	11,260	11,917
Due after ten years	23,381	25,814
CLO, ABS, CMBS and RMBS	21,712	22,236
Total AFS securities	66,625	70,548
AFS securities – related party		
Due after one year through five years	18	19
CLO and ABS	3,763	3,783
Total AFS securities – related party	3,781	3,802
Total AFS securities including related party	\$ 70,406	\$ 74,350

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:

<i>(In millions)</i>	December 31, 2019					
	Less than 12 months		12 months or more		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
AFS securities						
U.S. government and agencies	\$ 3	\$ —	\$ —	\$ —	\$ 3	\$ —
U.S. state, municipal and political subdivisions	78	(1)	11	—	89	(1)
Corporate	2,130	(108)	902	(69)	3,032	(177)
CLO	1,959	(38)	3,241	(158)	5,200	(196)
ABS	642	(6)	254	(18)	896	(24)
CMBS	217	(4)	41	(3)	258	(8)
RMBS	445	(6)	163	(4)	608	(10)
Total AFS securities	5,474	(163)	4,612	(252)	10,086	(416)
AFS securities – related party						
CLO	362	(7)	242	(11)	604	(18)
ABS	357	(2)	—	—	357	(2)
Total AFS securities – related party	719	(9)	242	(11)	961	(20)
Total AFS securities including related party	\$ 6,193	\$ (172)	\$ 4,854	\$ (263)	\$ 11,047	\$ (436)

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<i>(In millions)</i>	December 31, 2018					
	Less than 12 months		12 months or more		Total	
	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	20,183	(941)	4,118	(373)	24,301	(1,314)
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	29,190	(1,323)	5,450	(444)	34,640	(1,767)
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	\$ 30,030	\$ (1,350)	\$ 5,566	\$ (446)	\$ 35,596	\$ (1,796)

As of December 31, 2019, we held 1,239 AFS securities that were in an unrealized loss position. Of this total, 493 were in an unrealized loss position 12 months or more. As of December 31, 2019, we held 47 related party AFS securities that were in an unrealized loss position. Of this total, fifteen 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 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 year ended December 31, 2019, we incurred \$38 million of net OTTI, of which \$24 million related to intent-to-sell impairments. The net remaining OTTI of \$14 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 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:

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Beginning balance	\$ 10	\$ 7	\$ 16
Initial impairments – credit loss OTTI recognized on securities not previously impaired	11	3	8
Additional impairments – credit loss OTTI recognized on securities previously impaired	2	2	—
Reduction in impairments from securities sold, matured or repaid	—	(2)	(11)
Reduction for credit loss that no longer has a portion of the OTTI loss recognized in AOCI	—	—	(6)
Ending balance	\$ 23	\$ 10	\$ 7

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

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
AFS securities	\$ 3,086	\$ 2,840	\$ 2,497
Trading securities	189	200	200
Equity securities	16	12	9
Mortgage loans	670	457	369
Investment funds	301	234	206
Funds withheld at interest	529	492	148
Other	156	109	62
Investment revenue	4,947	4,344	3,491
Investment expenses	(436)	(356)	(320)
Net investment income	\$ 4,511	\$ 3,988	\$ 3,171

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

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
AFS securities			
Gross realized gains on investment activity	\$ 178	\$ 156	\$ 99
Gross realized losses on investment activity	(53)	(123)	(67)
Net realized investment gains on AFS securities	125	33	32
Net recognized investment gains (losses) on trading securities	152	(255)	29
Net recognized investment gains (losses) on equity securities	17	(19)	57
Derivative gains (losses)	4,400	(1,099)	2,338
Other gains (losses)	18	2	(14)
Investment related gains (losses)	\$ 4,712	\$ (1,338)	\$ 2,442

Proceeds from sales of AFS securities were \$6,885 million, \$6,966 million and \$4,300 million for the years ended December 31, 2019, 2018 and 2017, respectively.

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

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Trading securities	\$ 193	\$ (143)	\$ 107
Trading securities – related party	(21)	(25)	(3)
VIE trading securities – related party	3	—	4
Equity securities	19	(18)	3
Equity securities – related party	(17)	—	—
VIE equity securities – related party	(1)	24	25

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

<i>(In millions)</i>	Fixed maturity securities		Mortgage loans	
	December 31,		December 31,	
	2019	2018	2019	2018
Contractually required payments receivable	\$ 6,772	\$ 8,179	\$ 3,647	\$ 2,675
Less: Cash flows expected to be collected ¹	(6,064)	(7,195)	(3,606)	(2,628)
Non-accretable difference	\$ 708	\$ 984	\$ 41	\$ 47
Cash flows expected to be collected ¹	\$ 6,064	\$ 7,195	\$ 3,606	\$ 2,628
Less: Amortized cost	(4,603)	(5,518)	(2,575)	(1,931)
Accretable difference	\$ 1,461	\$ 1,677	\$ 1,031	\$ 697
Fair value	\$ 5,007	\$ 5,828	\$ 2,756	\$ 1,933
Outstanding balance	5,740	6,773	2,925	2,210

¹ Represents the undiscounted principal and interest cash flows expected.

During the respective years ended December 31, we acquired PCI investments with the following amounts at the time of purchase:

<i>(In millions)</i>	Fixed maturity securities		Mortgage loans	
	2019	2018	2019	2018
	Contractually required payments receivable	\$ 176	\$ 623	\$ 1,198
Cash flows expected to be collected	146	562	1,179	1,601
Fair value	124	454	910	1,178

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

<i>(In millions)</i>	Fixed maturity securities		Mortgage loans	
	2019	2018	2019	2018
	Beginning balance at January 1	\$ 1,677	\$ 2,020	\$ 697
Purchases of PCI investments, net of sales	1	65	191	407
Accretion	(307)	(405)	(115)	(48)
Net reclassification from (to) non-accretable difference	90	(3)	258	65
Ending balance at December 31	\$ 1,461	\$ 1,677	\$ 1,031	\$ 697

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

<i>(In millions)</i>	December 31, 2019				
	Remaining Contractual Maturity				
	Overnight and continuous	Up to 30 days	30-90 days	Greater than 90 days	Total
Payables for repurchase agreements ¹	\$ —	\$ 102	\$ 200	\$ 211	\$ 513

¹ Included in payables for collateral on derivatives on the consolidated balance sheets.

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

<i>(In millions)</i>	December 31, 2019	
	Amortized Cost	Fair Value
AFS securities - Corporate	498	534
Total securities pledged under repurchase agreements	\$ 498	\$ 534

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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 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 December 31, 2019 and December 31, 2018, amounts loaned under reverse repurchase agreements were \$190 million and \$0 million, respectively, and collateral received was \$630 million and \$0 million, respectively.

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

<i>(In millions)</i>	December 31,	
	2019	2018
Commercial mortgage loans	\$ 10,412	\$ 7,217
Commercial mortgage loans under development	93	80
Total commercial mortgage loans	10,505	7,297
Residential mortgage loans	4,454	3,334
Mortgage loans, net of allowances	\$ 14,959	\$ 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:

<i>(In millions, except for percentages)</i>	December 31,			
	2019		2018	
	Net Carrying Value	Percentage of Total	Net Carrying Value	Percentage of Total
Property type				
Office building	\$ 2,899	27.6%	\$ 2,221	30.5%
Retail	2,182	20.8%	1,660	22.7%
Hotels	1,104	10.5%	1,040	14.3%
Industrial	1,448	13.8%	1,196	16.4%
Apartment	2,142	20.4%	791	10.8%
Other commercial	730	6.9%	389	5.3%
Total commercial mortgage loans	\$ 10,505	100.0%	\$ 7,297	100.0%
U.S. Region				
East North Central	\$ 1,036	9.9%	\$ 855	11.7%
East South Central	428	4.1%	295	4.0%
Middle Atlantic	2,580	24.6%	1,131	15.5%
Mountain	528	5.0%	616	8.4%
New England	340	3.2%	374	5.1%
Pacific	2,502	23.8%	1,540	21.1%
South Atlantic	1,920	18.3%	1,468	20.2%
West North Central	146	1.4%	173	2.4%
West South Central	791	7.5%	845	11.6%
Total U.S. Region	10,271	97.8%	7,297	100.0%
International Region - Ireland	234	2.2%	—	—%
Total commercial mortgage loans	\$ 10,505	100.0%	\$ 7,297	100.0%

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

	December 31,	
	2019	2018
U.S. States		
California	27.0%	30.3%
Florida	12.7%	16.3%
Texas	6.2%	3.3%
New York	3.3%	7.7%
Other ¹	38.4%	42.4%
Total U.S. percentage	87.6%	100.0%
International percentage - Ireland	12.4%	—%
Total residential mortgage loan percentage	100.0%	100.0%

¹ Represents all other states, with each individual state comprising less than 5% of the portfolio.

Mortgage Loan Valuation Allowance—The assessment of mortgage loan impairments and valuation allowances is substantially the same for residential and commercial mortgage loans. As of December 31, 2019 and 2018, the valuation allowance was \$11 million and \$2 million, respectively. We did not record any material activity in the valuation allowance during the years ended December 31, 2019, 2018 or 2017.

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 December 31, 2019 and 2018, \$67 million and \$48 million, respectively, of our residential mortgage loans were nonperforming.

Commercial mortgage loans – As of December 31, 2019 and 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:

<i>(In millions)</i>	December 31,	
	2019	2018
Less than 50%	\$ 2,640	\$ 1,883
50% to 60%	2,486	1,988
61% to 70%	4,093	2,394
71% to 80%	1,162	898
81% to 100%	31	54
Commercial mortgage loans	\$ 10,412	\$ 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

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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:

<i>(In millions)</i>	December 31,	
	2019	2018
Greater than 1.20x	\$ 9,212	\$ 6,576
1.00x – 1.20x	1,166	474
Less than 1.00x	34	167
Commercial mortgage loans	\$ 10,412	\$ 7,217

Investment Funds—Our investment fund portfolio consists of funds that employ various strategies and include investments in real estate, real assets, credit, equity and natural resources. Investment funds can meet the definition of VIEs, which are discussed further in *Note 4 – Variable Interest Entities*. Our investment funds do not specify timing of distributions on the funds’ underlying assets.

The following summarizes our investment funds, including related party and those owned by consolidated VIEs:

<i>(In millions, except for percentages and years)</i>	December 31, 2019		December 31, 2018 ¹	
	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Investment funds				
Real estate	\$ 277	37.9%	\$ 215	30.6%
Credit funds	153	20.9%	172	24.5%
Private equity	236	32.3%	253	36.0%
Real assets	64	8.8%	56	7.9%
Natural resources	1	0.1%	4	0.6%
Other	—	—%	3	0.4%
Total investment funds	731	100.0%	703	100.0%
Investment funds – related parties				
Differentiated investments				
AmeriHome Mortgage Company, LLC (AmeriHome) ²	487	17.7%	463	21.8%
Catalina Holdings Ltd. (Catalina)	271	9.8%	233	11.0%
Venerable Holdings, Inc. (Venerable) ²	99	3.6%	92	4.3%
Other	222	8.1%	196	9.2%
Total differentiated investments	1,079	39.2%	984	46.3%
Real estate	737	26.8%	497	23.4%
Credit funds	370	13.4%	316	14.8%
Private equity	102	3.8%	18	0.8%
Real assets	183	6.6%	145	6.8%
Natural resources	163	5.9%	104	4.9%
Public equities	119	4.3%	63	3.0%
Other	—	—%	—	—%
Total investment funds – related parties	2,754	100.0%	2,127	100.0%
Investment funds owned by consolidated VIEs				
MidCap FinCo Designated Activity Company (MidCap) ²	547	80.1%	553	88.6%
Real estate	117	17.1%	30	4.8%
Real assets	19	2.8%	41	6.6%
Total investment funds owned by consolidated VIEs	683	100.0%	624	100.0%
Total investment funds including related parties and funds owned by consolidated VIEs	\$ 4,168		\$ 3,454	

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

² See further discussion on AmeriHome, Venerable and MidCap in Note 13 – Related Parties.

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Notes to Consolidated Financial Statements

Summarized Ownership of Investment Funds—The following is the aggregated summarized financial information of equity method investees, including those for which we elected the fair value option and would otherwise be accounted for as an equity method investment, and may be presented on a lag due to the availability of financial information from the investee:

<i>(In millions)</i>	December 31,	
	2019	2018
Assets	\$ 31,876	\$ 27,335
Liabilities	14,152	11,330
Equity	17,724	16,005

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Net income	\$ 857	\$ 1,094	\$ 1,536

The following table presents the carrying value by ownership percentage of equity method investment funds, including related party investment funds and investment funds owned by consolidated VIEs:

<i>(In millions)</i>	December 31,	
	2019	2018
Ownership Percentage		
100%	\$ 11	\$ 17
50% – 99%	1,378	1,044
3% – 49%	1,939	1,617
Equity method investment funds	<u>\$ 3,328</u>	<u>\$ 2,678</u>

The following table presents the carrying value by ownership percentage of investment funds held at fair value, either due to election of the fair value option or requirement, including related party investment funds and investment funds owned by consolidated VIEs:

<i>(In millions)</i>	December 31,	
	2019	2018
Ownership Percentage		
50% - 99%	\$ 28	\$ —
3% – 49%	\$ 640	\$ 582
Less than 3%	173	194
Fair value option investment funds	<u>\$ 841</u>	<u>\$ 776</u>

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.

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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:

<i>(In millions)</i>	December 31,			
	2019		2018	
	Carrying Value	Maximum Loss Exposure	Carrying Value	Maximum Loss Exposure
Investment funds	\$ 731	\$ 1,246	\$ 703	\$ 1,329
Investment in related parties – investment funds	2,754	5,113	2,127	3,919
Assets of consolidated VIEs – investment funds	683	861	624	727
Investment in fixed maturity securities	22,694	22,170	21,188	21,139
Investment in related parties – fixed maturity securities	4,570	4,878	1,686	1,788
Investment in related parties – equity securities	58	58	120	120
Total non-consolidated investments	\$ 31,490	\$ 34,326	\$ 26,448	\$ 29,022

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.

The funds withheld at interest is comprised of the host contract and an embedded derivative. We are subject to the investment performance on the withheld assets with the total return directly impacting the host contract and the embedded derivative. Interest accrues at a risk free rate on the host receivable and is recorded as net investment income in the consolidated statements of income. The change in the embedded derivative in our reinsurance agreements, which is similar to a total return swap on the income generated by the underlying assets held by the ceding companies, 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 Insurance Group Solutions LLC (ISG) 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 party:

<i>(In millions, except percentages)</i>	December 31, 2019		December 31, 2018	
	Carrying Value	Percent of Total	Carrying Value	Percent of Total
Fixed maturity securities				
U.S. government and agencies	\$ 15	0.1 %	\$ 77	0.3 %
U.S. state, municipal and political subdivisions	481	1.6 %	563	2.0 %
Foreign governments	143	0.5 %	145	0.5 %
Corporate	15,434	52.8 %	16,267	56.9 %
CLO	2,586	8.8 %	1,990	7.0 %
ABS	2,510	8.6 %	1,601	5.6 %
CMBS	756	2.6 %	575	2.0 %
RMBS	1,482	5.1 %	1,876	6.6 %
Equity securities	74	0.3 %	66	0.2 %
Mortgage loans	4,357	14.9 %	3,815	13.3 %
Investment funds	807	2.8 %	660	2.3 %
Derivative assets	224	0.8 %	77	0.3 %
Short-term investments	157	0.5 %	641	2.2 %
Cash and cash equivalents	239	0.8 %	455	1.6 %
Other assets and liabilities	(21)	(0.1)%	(208)	(0.8)%
Total funds withheld at interest, including related party	\$ 29,244	100.0 %	\$ 28,600	100.0 %

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Notes to Consolidated Financial Statements
3. Derivative Instruments

We use a variety of derivative instruments to manage risks, primarily equity, interest rate, credit, foreign currency and market volatility. See *Note 1 – Business, Basis of Presentation and Significant Accounting Policies* for a description of our accounting policies for derivatives and *Note 5 – Fair Value* for information about the fair value hierarchy for derivatives.

The following table presents the notional amount and fair value of derivative instruments:

	December 31,						
	2019			2018			
	Notional Amount	Fair Value		Notional Amount	Fair Value		
(In millions)	Assets	Liabilities	Assets	Liabilities			
Derivatives designated as hedges							
Foreign currency swaps	3,018	\$ 112	\$ 55	2,041	\$ 83	\$ 55	
Foreign currency forwards	717	1	9	85	—	1	
Foreign currency forwards on net investments	139	—	2	—	—	—	
Total derivatives designated as hedges		113	66		83	56	
Derivatives not designated as hedges							
Equity options	49,549	2,746	6	49,821	942	11	
Futures	11	10	1	4	9	3	
Total return swaps	106	6	—	62	—	3	
Hedge fund total return swaps	—	—	—	—	—	—	
Foreign currency swaps	35	2	1	38	3	2	
Interest rate swaps	310	—	1	326	—	1	
Credit default swaps	10	—	3	10	—	4	
Foreign currency forwards	1,924	4	16	646	6	5	
Embedded derivatives							
Funds withheld including related party		1,363	31		(53)	(1)	
Interest sensitive contract liabilities		—	10,942		—	7,969	
Total derivatives not designated as hedges		4,131	11,001		907	7,997	
Total derivatives		\$ 4,244	\$ 11,067		\$ 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 March 2052. During the years ended December 31, 2019, 2018 and 2017, we had foreign currency swap gains of \$29 million and \$146 million and losses of \$105 million, respectively, recorded in AOCI. There were no amounts reclassified to income and no amounts deemed ineffective for the years ended December 31, 2019, 2018 or 2017. As of December 31, 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 are designated and accounted for as fair value hedges. As of December 31, 2019 and 2018, the carrying amount of the hedged AFS securities was \$456 million and \$88 million, respectively, and the cumulative amount of fair value hedging adjustments included in the hedged AFS securities included gains of \$1 million and \$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 consolidated statements of income. During the years ended December 31, 2019 and 2018 the derivatives had gains of \$2 million and losses of \$1 million, respectively, and the related hedged items had gains of \$0 million and \$1 million, respectively.

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Foreign currency forwards on net investments - We have foreign currency forwards designated as net investment hedges. These forwards hedge the foreign currency exchange rate risk of our investments in subsidiaries that have a reporting currency other than the U.S. dollar. We assess hedge effectiveness based on the changes in forward rates. During the year ended December 31, 2019, these derivatives had losses of \$2 million, (\$1 million loss at December 31, 2018), which are included in the foreign currency translation and other adjustments on the consolidated statements of comprehensive income. As of December 31, 2019, the cumulative foreign currency translation loss recorded in AOCI related to these net investment hedges was \$2 million, (\$1 million at December 31, 2018). There were no amounts deemed ineffective for the year ended December 31, 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.

Credit default swaps – Credit default swaps provide a measure of protection against the default of an issuer or allow us to gain credit exposure to an issuer or traded index. We use credit default swaps coupled with a bond to synthetically create the characteristics of a reference bond. These transactions have a lower cost and are generally more liquid relative to the cash market. We receive a periodic premium for these transactions as compensation for accepting credit risk.

Hedging credit risk involves buying protection for existing credit risk. The exposure resulting from the agreements, which is usually the notional amount, is equal to the maximum proceeds that must be paid by a counterparty for a defaulted security. If a credit event occurs on a reference entity, then a counterparty who sold protection is required to pay the buyer the trade notional amount less any recovery value of the security.

Embedded derivatives – We have embedded derivatives which are required to be separated from their host contracts and reported as derivatives. Host contracts include reinsurance agreements structured on modco or funds withheld basis and indexed annuity products.

The following is a summary of the gains (losses) related to derivatives not designated as hedges:

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Equity options	\$ 2,169	\$ (877)	\$ 1,939
Futures	(13)	2	(24)
Swaps	39	(8)	27
Foreign currency forwards	(2)	16	(11)
Embedded derivatives on funds withheld	2,246	(232)	407
Amounts recognized in investment related gains (losses)	4,439	(1,099)	2,338
Embedded derivatives in indexed annuity products ¹	(2,526)	923	(1,744)
Total gains (losses) on derivatives not designated as hedges	\$ 1,913	\$ (176)	\$ 594

¹ Included in interest sensitive contract benefits on the consolidated statements of income.

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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:

<i>(In millions)</i>	Gross amount recognized ¹	Gross amounts not offset on the consolidated balance sheets		Net amount	Off-balance sheet securities collateral ³	Net amount after securities collateral
		Financial instruments ²	Collateral received/pledged			
December 31, 2019						
Derivative assets	\$ 2,885	\$ (67)	\$ (2,743)	\$ 75	\$ (145)	\$ (70)
Derivative liabilities	(93)	67	31	5	—	5
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 consolidated balance sheets. As of December 31, 2019 and 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 consolidated balance sheets.

³ For non-cash collateral received, we do not recognize the collateral on our balance sheet unless the obligor (transferor) has defaulted under the terms of the secured contract and is no longer entitled to redeem the pledged asset. Amounts do not include any excess of collateral pledged or received.

Certain derivative instruments contain provisions for credit-related events, such as downgrades in our credit ratings or for a negative credit event of a credit default swap’s reference entity. If a credit event were to occur, we may be required to settle an outstanding liability. The following is a summary of our exposure to credit-related events:

<i>(In millions)</i>	December 31,	
	2019	2018
Fair value of derivative liabilities with credit related provisions	\$ 3	\$ 4
Maximum exposure for credit default swaps	10	10

As of December 31, 2019 and 2018, no additional collateral would be required if a default or termination event were to occur.

4. Variable Interest Entities

We consolidate the following investment funds as VIEs:

- AAA Investments (Co-Invest VI), L.P. (CoInvest VI);
- AAA Investments (Co-Invest VII), L.P. (CoInvest VII);
- AAA Investments (Other), L.P. (CoInvest Other);
- ALR Aircraft Investment Ireland Limited (ALR); and
- Entities included under our agreement to purchase funds managed by Apollo entities (Strategic Partnership). See *Note 13 – Related Parties* for further discussion on the Strategic Partnership.

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Notes to Consolidated Financial Statements

We are the only limited partner or holder of profit participating notes in these investment funds and receive all of the economic benefits and losses, other than management fees and carried interest, as applicable, paid to the general partner in each entity, or a related entity, which are related parties. We do not have any voting rights as limited partner and, as the limited partner or holder of profit participating notes, do not solely satisfy the power criteria to direct the activities that significantly impact the economics of the VIE. However, the criteria for the primary beneficiary are satisfied by our related party group and, because substantially all of the activities are conducted on our behalf, we consolidate the investment funds.

No arrangement exists requiring us to provide additional funding in excess of our committed capital investment, liquidity, or the funding of losses or an increase to our loss exposure in excess of our investment in the VIEs. We elected the fair value option for certain fixed maturity and equity securities, and investment funds, which are reported in the consolidated variable interest entity sections on the consolidated balance sheets.

CoInvest VI, CoInvest VII and CoInvest Other were formed to make investments, including co-investments alongside private equity funds sponsored by Apollo. Investments held by CoInvest VI, CoInvest VII and CoInvest Other are related party investments because Apollo affiliates exercise significant influence over the management or operations of the investees. We received our interests in CoInvest VI, CoInvest VII and CoInvest Other as part of a contribution agreement in 2012 with AAA Guarantor – Athene, L.P. (AAA Investor) and its subsidiary, Apollo Life Re Ltd., in order to provide a capital base to support future acquisitions.

ALR was formed to invest in a joint venture that provides airplane lease financing to a major commercial airline. We are the only investor in the profit participating notes and, as substantially all of the activities of ALR are conducted on our behalf, we are the primary beneficiary and consolidate ALR.

5. Fair Value

Fair value is the price we would receive to sell an asset or pay to transfer a liability (exit price) in an orderly transaction between market participants. We determine fair value based on the following fair value hierarchy:

Level 1 – Unadjusted quoted prices for identical assets or liabilities in an active market.

Level 2 – Quoted prices for inactive markets or valuation techniques that require observable direct or indirect inputs for substantially the full term of the asset or liability. Level 2 inputs include the following:

- Quoted prices for similar assets or liabilities in active markets,
- Observable inputs other than quoted market prices, and
- Observable inputs derived principally from market data through correlation or other means.

Level 3 – Prices or valuation techniques with unobservable inputs significant to the overall fair value estimate. These valuations use critical assumptions not readily available to market participants. Level 3 valuations are based on market standard valuation methodologies, including discounted cash flows, matrix pricing or other similar techniques.

NAV – Investment funds are typically measured using NAV as a practical expedient in determining fair value and are not classified in the fair value hierarchy. The underlying investments of the investment funds may have significant unobservable inputs, which may include but are not limited to, comparable multiples and weighted average cost of capital rates applied in valuation models or a discounted cash flow model.

The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). If the inputs used to measure fair value fall within different levels of the hierarchy, the category level is based on the lowest priority level input that is significant to the instrument's fair value measurement.

We use a number of valuation sources to determine fair values. Valuation sources can include quoted market prices; third-party commercial pricing services; third-party brokers; industry-standard, vendor modeling software that uses market observable inputs; and other internal modeling techniques based on projected cash flows. We periodically review the assumptions and inputs of third-party commercial pricing services through internal valuation price variance reviews, comparisons to internal pricing models, back testing to recent trades, or monitoring trading volumes.

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The following represents the hierarchy for our assets and liabilities measured at fair value on a recurring basis:

<i>(In millions)</i>	December 31, 2019				
	Total	NAV	Level 1	Level 2	Level 3
Assets					
AFS securities					
U.S. government and agencies	\$ 36	\$ —	\$ 36	\$ —	\$ —
U.S. state, municipal and political subdivisions	1,541	—	—	1,501	40
Foreign governments	327	—	—	327	—
Corporate	46,408	—	—	45,683	725
CLO	7,348	—	—	7,227	121
ABS	5,117	—	—	3,743	1,374
CMBS	2,398	—	—	2,351	47
RMBS	7,374	—	—	7,374	—
Total AFS securities	70,549	—	36	68,206	2,307
Trading securities					
U.S. government and agencies	11	—	8	3	—
U.S. state, municipal and political subdivisions	135	—	—	135	—
Corporate	1,456	—	—	1,456	—
CLO	6	—	—	—	6
ABS	92	—	—	92	—
CMBS	51	—	—	51	—
RMBS	303	—	—	251	52
Total trading securities	2,054	—	8	1,988	58
Equity securities	247	—	43	201	3
Mortgage loans	27	—	—	—	27
Investment funds	154	132	—	—	22
Funds withheld at interest – embedded derivative	769	—	—	—	769
Derivative assets	2,884	—	10	2,874	—
Short-term investments	406	—	46	319	41
Other investments	93	—	—	93	—
Cash and cash equivalents	4,009	—	4,009	—	—
Restricted cash	331	—	331	—	—
Investments in related parties					
AFS securities					
Corporate	19	—	—	19	—
CLO	934	—	—	934	—
ABS	2,848	—	—	524	2,324
Total AFS securities – related party	3,801	—	—	1,477	2,324
Trading securities					
CLO	74	—	—	36	38
ABS	711	—	—	—	711
Total trading securities – related party	785	—	—	36	749
Equity securities	58	—	—	—	58
Investment funds	248	121	—	—	127
Funds withheld at interest – embedded derivative	594	—	—	—	594
Reinsurance recoverable	1,821	—	—	—	1,821
Assets of consolidated VIEs					
Trading securities	16	—	—	—	16
Equity securities	6	—	—	—	6
Investment funds	567	567	—	—	—
Cash and cash equivalents	3	—	3	—	—
Total assets measured at fair value	\$ 89,422	\$ 820	\$ 4,486	\$ 75,194	\$ 8,922

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<i>(In millions)</i>	December 31, 2019				
	Total	NAV	Level 1	Level 2	Level 3
					<i>(Continued)</i>
Liabilities					
Interest sensitive contract liabilities					
Embedded derivative	\$ 10,942	\$ —	\$ —	\$ —	\$ 10,942
Universal life benefits	1,050	—	—	—	1,050
Future policy benefits					
AmerUs Closed Block	1,546	—	—	—	1,546
ILICO Closed Block and life benefits	755	—	—	—	755
Derivative liabilities	93	—	1	89	3
Funds withheld liability – embedded derivative	31	—	—	31	—
Total liabilities measured at fair value	\$ 14,417	\$ —	\$ 1	\$ 120	\$ 14,296
					<i>(Concluded)</i>

<i>(In millions)</i>	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	37,052	—	—	36,154	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	59,220	—	54	56,303	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
					<i>(Continued)</i>
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	2,797	—	2,797	—	—
Restricted cash	492	—	492	—	—
Investments in related parties					
AFS securities					
CLO	562	—	—	562	—
ABS	875	—	—	547	328
Total AFS securities – related party	1,437	—	—	1,109	328

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	December 31, 2018				
<i>(In millions)</i>	Total	NAV	Level 1	Level 2	Level 3
Trading securities					
CLO	100	—	—	22	78
ABS	149	—	—	—	149
Total trading securities – related party	249	—	—	22	227
Equity securities					
Investment funds	96	96	—	—	—
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	\$ 70,353	\$ 801	\$ 3,500	\$ 60,629	\$ 5,423
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.

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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.

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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:

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Trading securities	\$ 152	\$ (255)	\$ 30
Mortgage loans	—	—	(1)
Investment funds	(11)	37	35
Future policy benefits	(103)	182	(19)
Total gains (losses)	\$ 38	\$ (36)	\$ 45

Gains and losses on trading securities are recorded in investment related gains (losses) on the consolidated statements of income. For fair value option mortgage loans, we record interest income in net investment income and subsequent changes in fair value in investment related gains (losses) on the consolidated statements of income. Gains and losses related to investment funds, including related party investment funds, are recorded in net investment income on the consolidated statements of income. We record the change in fair value of future policy benefits to future policy and other policy benefits on the consolidated statements of income.

The following summarizes information for fair value option mortgage loans:

<i>(In millions)</i>	December 31,	
	2019	2018
Unpaid principal balance	\$ 25	\$ 30
Mark to fair value	2	2
Fair value	\$ 27	\$ 32

There was one fair value option mortgage loans 90 days or more past due as of December 31, 2019 and 2018.

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

<i>(In millions)</i>	Year ended December 31, 2019							
	Beginning balance	Total realized and unrealized gains (losses)		Net purchases, issuances, sales and settlements	Transfers		Ending balance	Total gains (losses) included in earnings ¹
		Included in income	Included in OCI		In	Out		
Assets								
AFS securities								
U.S. state, municipal and political subdivisions	\$ —	\$ —	\$ —	\$ 40	\$ —	\$ —	\$ 40	\$ —
Foreign governments	—	—	—	—	—	—	—	—
Corporate	898	14	12	(61)	5	(143)	725	\$ —
CLO	107	—	3	50	—	(39)	121	—
ABS	1,615	7	32	120	30	(430)	1,374	—
CMBS	187	2	7	(131)	—	(19)	46	—
RMBS	56	2	2	(13)	—	(47)	—	—
Trading securities								
U.S. state, municipal and political subdivisions	—	—	—	—	—	—	—	—
Corporate	—	—	—	—	—	—	—	—
CLO	1	(1)	—	—	5	—	5	6
ABS	—	—	—	—	—	—	—	—
RMBS	134	(21)	—	10	4	(75)	52	1
Equity securities	3	—	—	—	—	—	3	—
Mortgage loans	32	—	—	(5)	—	—	27	—
Investment funds	29	(3)	—	(4)	—	—	22	(3)
Funds withheld at interest – embedded derivative	57	712	—	—	—	—	769	—
Short-term investments	—	—	—	41	—	—	41	—
Investments in related parties								
AFS securities								
CLO	—	—	—	—	—	—	—	—
ABS	328	2	22	2,076	—	(104)	2,324	—
Trading securities								
CLO	78	(7)	—	(14)	17	(36)	38	2
ABS	149	(14)	—	473	104	—	712	(6)
Equity securities	120	—	—	(62)	—	—	58	—
Investment funds	—	—	—	—	—	—	—	—
Funds withheld at interest – embedded derivative	(110)	704	—	—	—	—	594	—
Short-term investments	—	—	—	—	—	—	—	—
Reinsurance recoverable	1,676	145	—	—	—	—	1,821	—
Investments of consolidated VIEs								
Trading securities	35	—	—	(44)	25	—	16	1
Equity securities	13	(2)	—	(5)	—	—	6	(1)
Investment funds	15	(1)	—	—	—	(13)	1	(1)
Total Level 3 assets	\$ 5,423	\$ 1,539	\$ 78	\$ 2,471	\$ 190	\$ (906)	\$ 8,795	\$ (1)
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	\$ (7,969)	\$ (2,526)	\$ —	\$ (447)	\$ —	\$ —	\$ (10,942)	\$ —
Universal life benefits	(932)	(118)	—	—	—	—	(1,050)	—
Future policy benefits								
AmerUs Closed Block	(1,443)	(103)	—	—	—	—	(1,546)	—
ILICO Closed Block and life benefits	(730)	(25)	—	—	—	—	(755)	—

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Derivative liabilities	(4)	1	—	—	—	—	(3)	1
Total Level 3 liabilities	\$ (11,078)	\$ (2,771)	\$ —	\$ (447)	\$ —	\$ —	\$ (14,296)	\$ 1

¹ Related to instruments held at end of period.

Year ended December 31, 2018

(In millions)	Total realized and unrealized gains (losses)			Net purchases, issuances, sales and settlements	Transfers		Ending balance	Total gains (losses) included in earnings ¹
	Beginning balance	Included in income	Included in OCI		In	Out		
Assets								
AFS securities								
Corporate	\$ 578	\$ (16)	\$ (6)	\$ 249	\$ 97	\$ (4)	\$ 898	\$ —
CLO	64	2	(2)	36	7	—	107	—
ABS	1,457	8	(11)	252	—	(91)	1,615	—
CMBS	137	1	—	132	15	(98)	187	—
RMBS	301	4	(11)	21	—	(259)	56	—
Trading securities								
U.S. state, municipal and political subdivisions	17	1	—	—	—	(18)	—	1
CLO	17	(9)	—	—	—	(7)	1	(6)
ABS	77	(6)	—	—	—	(71)	—	(2)
RMBS	342	(65)	—	—	—	(143)	134	5
Equity securities	—	2	—	1	—	—	3	2
Mortgage loans	41	—	—	(9)	—	—	32	—
Investment funds	41	(3)	—	(9)	—	—	29	(3)
Funds withheld at interest – embedded derivative	312	(255)	—	—	—	—	57	—
Investments in related parties								
AFS securities, ABS	4	—	(2)	326	—	—	328	—
Trading securities								
CLO	105	(13)	—	(18)	25	(21)	78	(5)
ABS	—	—	—	—	149	—	149	—
Equity securities	—	—	—	120	—	—	120	—
Funds withheld at interest – embedded derivative	—	(110)	—	—	—	—	(110)	—
Reinsurance recoverable	1,824	(148)	—	—	—	—	1,676	—
Investments of consolidated VIEs								
Trading securities	48	—	—	(13)	—	—	35	—
Equity securities	28	(12)	—	(3)	—	—	13	—
Investment funds	21	(3)	—	(3)	—	—	15	—
Total Level 3 assets	\$ 5,414	\$ (622)	\$ (32)	\$ 1,082	\$ 293	\$ (712)	\$ 5,423	\$ (8)
Liabilities								
Interest sensitive contract liabilities								
Embedded derivative	\$ (7,411)	\$ 923	\$ —	\$ (1,481)	\$ —	\$ —	\$ (7,969)	\$ —
Universal life benefits	(1,005)	73	—	—	—	—	(932)	—
Future policy benefits								
AmerUs Closed Block	(1,625)	182	—	—	—	—	(1,443)	—
ILICO Closed Block and life benefits	(803)	73	—	—	—	—	(730)	—
Derivative liabilities	(5)	1	—	—	—	—	(4)	1
Total Level 3 liabilities	\$ (10,849)	\$ 1,252	\$ —	\$ (1,481)	\$ —	\$ —	\$ (11,078)	\$ 1

¹ Related to instruments held at end of period.

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

<i>(In millions)</i>	Year ended December 31, 2019				
	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements
Assets					
AFS securities					
U.S. state, municipal and political subdivisions	\$ 40	\$ —	\$ —	\$ —	\$ 40
Corporate	116	—	(2)	(174)	(60)
CLO	95	—	—	(44)	51
ABS	409	—	(172)	(117)	120
CMBS	—	—	(4)	(127)	(131)
RMBS	1	—	—	(14)	(13)
Trading securities					
RMBS	10	—	—	—	10
Mortgage loans	—	—	—	(5)	(5)
Investment funds	—	—	(4)	—	(4)
Short-term investments	74	—	—	(33)	41
Investments in related parties					
Fixed maturity securities					
AFS securities					
ABS	2,207	—	—	(131)	2,076
Trading securities					
CLO	—	—	(14)	—	(14)
ABS	511	—	—	(38)	473
Equity securities	75	—	—	(137)	(62)
Investments of consolidated VIEs					
Trading securities	—	—	(44)	—	(44)
Equity securities	—	—	(5)	—	(5)
Total Level 3 assets	\$ 3,538	\$ —	\$ (245)	\$ (820)	\$ 2,473
Liabilities					
Interest sensitive contract liabilities – embedded derivative	\$ —	\$ (937)	\$ —	\$ 490	\$ (447)
Total Level 3 liabilities	\$ —	\$ (937)	\$ —	\$ 490	\$ (447)

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<i>(In millions)</i>	Year ended December 31, 2018				
	Purchases	Issuances	Sales	Settlements	Net purchases, issuances, sales and settlements
Assets					
AFS securities					
Corporate	\$ 351	\$ —	\$ (29)	\$ (73)	\$ 249
CLO	67	—	—	(31)	36
ABS	599	—	(35)	(312)	252
CMBS	151	—	(3)	(16)	132
RMBS	56	—	—	(35)	21
Trading securities					
CLO	7	—	(7)	—	—
Equity securities	1	—	—	—	1
Mortgage loans	—	—	—	(9)	(9)
Investment funds	—	—	—	(9)	(9)
Investments in related parties					
AFS securities, ABS	326	—	—	—	326
Trading securities, CLO	30	—	(48)	—	(18)
Equity securities	120	—	—	—	120
Investments of consolidated VIEs					
Trading securities	—	—	(13)	—	(13)
Equity securities	1	—	(4)	—	(3)
Investment funds	14	—	(17)	—	(3)
Total Level 3 assets	\$ 1,723	\$ —	\$ (156)	\$ (485)	\$ 1,082
Liabilities					
Interest sensitive contract liabilities – embedded derivative	\$ —	\$ (1,888)	\$ —	\$ 407	\$ (1,481)
Total Level 3 liabilities	\$ —	\$ (1,888)	\$ —	\$ 407	\$ (1,481)

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 December 31, 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 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.

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Notes to Consolidated Financial Statements

The following summarizes the unobservable inputs for the embedded derivatives of fixed indexed annuities:

December 31, 2019						
<i>(In millions, except for percentages)</i>	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	\$ 10,942	Option budget method	Nonperformance risk	0.2% – 1.1%		Decrease
			Option budget	0.7% – 3.7%		Increase
			Surrender rate	3.5% – 8.1%		Decrease

December 31, 2018						
<i>(In millions, except for percentages)</i>	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 consolidated balance sheets:

December 31, 2019						
<i>(In millions)</i>	Carrying Value	Fair Value	NAV	Level 1	Level 2	Level 3
Financial assets						
Mortgage loans	\$ 14,279	\$ 14,719	\$ —	\$ —	\$ —	\$ 14,719
Investment funds	577	577	577	—	—	—
Policy loans	417	417	—	—	417	—
Funds withheld at interest	15,255	15,255	—	—	—	15,255
Short-term investments	190	190	—	—	—	190
Other investments	66	66	—	—	—	66
Investments in related parties						
Mortgage loans	653	641	—	—	—	641
Investment funds	2,634	2,634	2,634	—	—	—
Funds withheld at interest	12,626	12,626	—	—	—	12,626
Other investments	487	537	—	—	—	537
Assets of consolidated VIEs						
Investment funds	116	116	116	—	—	—
Total financial assets not carried at fair value	\$ 47,300	\$ 47,778	\$ 3,327	\$ —	\$ 417	\$ 44,034
Financial liabilities						
Interest sensitive contract liabilities	\$ 57,272	\$ 58,027	\$ —	\$ —	\$ —	\$ 58,027
Short-term debt	475	475	—	—	475	—
Funds withheld liability	377	377	—	—	377	—
Total financial liabilities not carried at fair value	\$ 58,124	\$ 58,879	\$ —	\$ —	\$ 852	\$ 58,027

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Notes to Consolidated Financial Statements

<i>(In millions)</i>	December 31, 2018					
	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
Funds withheld liability	722	722	—	—	722	—
Total financial liabilities not carried at fair value	\$ 55,377	\$ 52,377	\$ —	\$ —	\$ 722	\$ 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 consolidated balance sheets; however, in the case of policy loans, funds withheld at interest and liability, short-term investments, short-term debt and securities to repurchase, the carrying amount approximates fair value.

Investment in related parties – Other investments – The fair value of related party other investments is determined using a discounted cash flow model using discount rates for similar investments.

Interest sensitive contract liabilities – The carrying and fair value of interest sensitive contract liabilities above includes fixed indexed and traditional fixed annuities without mortality or morbidity risks, funding agreements and payout annuities without life contingencies. The embedded derivatives within fixed indexed annuities without mortality or morbidity risks are excluded, as they are carried at fair value. The valuation of these investment contracts is based on discounted cash flow methodologies using significant unobservable inputs. The estimated fair value is determined using current market risk-free interest rates, adding a spread to reflect our nonperformance risk and subtracting a risk margin to reflect uncertainty inherent in the projected cash flows.

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Notes to Consolidated Financial Statements

6. Reinsurance

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

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Premiums			
Direct	\$ 5,449	\$ 2,813	\$ 2,502
Reinsurance assumed	1,092	1,066	21
Reinsurance ceded	(159)	(417)	(176)
Total premiums	<u>\$ 6,382</u>	<u>\$ 3,462</u>	<u>\$ 2,347</u>
Future policy and other policy benefits			
Direct	\$ 6,697	\$ 3,739	\$ 3,287
Reinsurance assumed	1,223	1,093	25
Reinsurance ceded	(333)	(551)	(298)
Total future policy and other policy benefits	<u>\$ 7,587</u>	<u>\$ 4,281</u>	<u>\$ 3,014</u>

Reinsurance typically provides for recapture rights on the part of the ceding company for certain events of default. Additionally, some agreements require us to place assets in trust accounts for the benefit of the ceding entity. The required minimum assets are equal to or greater than statutory reserves, as defined by the agreement, and were \$8,377 million and \$5,719 million as of December 31, 2019 and 2018, respectively. Although we own the assets placed in trust, their use is restricted based on the trust agreement terms. If the statutory book value of the assets, or in certain cases fair value, in a trust declines because of impairments or other reasons, we may be required to contribute additional assets to the trust. In addition, the assets within a trust may be subject to a pledge in favor of the applicable reinsurance company.

Reinsurance transactions

We have entered into various coinsurance and modco agreements to reinsure blocks of fixed deferred and fixed indexed and PRT annuities. The following summarizes those agreements at inception:

<i>(In millions)</i>	Years ended December 31,	
	2019	2018
Liabilities assumed	\$ 791	\$ 27,238
Less: Assets received	818	26,255
Ceding commission (paid) received	—	(660)
Net cost of reinsurance	<u>\$ (27)</u>	<u>\$ 1,643</u>
DAC	\$ —	\$ 1,777
Unearned revenue reserve ¹	—	(69)
Deferred profit liability ²	(27)	(65)
Net cost of reinsurance	<u>\$ (27)</u>	<u>\$ 1,643</u>

¹ Included within interest sensitive contract liabilities on the consolidated balance sheets.

² Included within future policy benefits on the consolidated balance sheets.

DAC and unearned revenue reserve balances are amortized over the life of the reinsurance agreements on a basis consistent with our DAC amortization policy. The deferred profit liability balance is amortized over the life of the reinsurance agreement on a constant relationship to the benefit reserves.

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Certain of these reinsurance agreements were with related parties. See *Note 13 - Related Parties* for further information.

Global Atlantic – We have a 100% coinsurance and assumption agreement with Global Atlantic. The agreement ceded all existing open block life insurance business issued by Athene Annuity and Life Company (AAIA), with the exception of enhanced guarantee universal life insurance products. We also entered into a 100% coinsurance agreement with Global Atlantic to cede all policy liabilities of the ILICO Closed Block. The ILICO Closed Block consists primarily of participating whole life insurance policies. We also have an excess of loss arrangement with Global Atlantic to reimburse us for any payments required from our general assets to meet the contractual obligations of the AmerUs Closed Block not covered by existing reinsurance through Athene Re USA IV. The AmerUs Closed Block consists primarily of participating whole life insurance policies. Since all liabilities were covered by the existing reinsurance at close, no reinsurance premiums were ceded. The assets backing the AmerUs Closed Block are managed, on AAIA’s behalf, by Goldman Sachs Asset Management, an affiliate of Global Atlantic.

As of December 31, 2019 and 2018, Global Atlantic maintained a series of trust and custody accounts under the terms of these agreements with assets equal to or greater than a required aggregate statutory balance of \$3,478 million and \$3,967 million, respectively.

Protective Life Insurance Company (Protective) – We reinsured substantially all of the existing life and health business of Athene Annuity & Life Assurance Company (AADE) to Protective under a coinsurance agreement in 2011. As of December 31, 2019 and 2018, Protective maintained a trust for our benefit with assets having a fair value of \$1,640 million and \$1,525 million, respectively.

Novations - We have novated certain open blocks of business ceded to Global Atlantic, in accordance with the terms of the coinsurance and assumption agreement. Additionally, we have novated the reinsurance agreement for blocks of endowment contracts and annuities assumed from Athora Lebensversicherung AG (ALV) to Athora Life Re Ltd. (ARE). The below table summarizes the decreases in amounts on the consolidated balance sheets as a result of the novations. Novations during the year ended December 31, 2018 did not have a material effect on the consolidated balance sheets.

<i>(In millions)</i>	Year ended December 31, 2019
Interest sensitive contract liabilities	407
Future policy benefits	305
Funds withheld liability	347
Investments	320
Policy Loans	38
Reinsurance recoverable	674
Other assets and liabilities	27

Reinsurance Recoverables—The following summarizes our reinsurance recoverable from the following:

<i>(In millions)</i>	December 31,	
	2019	2018
Global Atlantic	\$ 2,981	\$ 3,166
Protective	1,605	1,652
ARE	—	337
Other ¹	277	379
Reinsurance recoverable	\$ 4,863	\$ 5,534

¹ Represents all other reinsurers, with no single reinsurer having a carrying value in excess of 5% of total recoverable.

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Notes to Consolidated Financial Statements

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

The following represents a rollforward of DAC, DSI and VOBA:

<i>(In millions)</i>	DAC	DSI	VOBA	Total
Balance at December 31, 2016	\$ 1,145	\$ 462	\$ 1,352	\$ 2,959
Additions	493	161	—	654
Unlocking	13	4	(1)	16
Amortization	(194)	(67)	(162)	(423)
Impact of unrealized investment (gains) losses	(82)	(40)	(112)	(234)
Balance at December 31, 2017	1,375	520	1,077	2,972
Additions	2,481	264	—	2,745
Unlocking	21	7	54	82
Amortization	(108)	(61)	(141)	(310)
Impact of unrealized investment (gains) losses	152	69	197	418
Balance at December 31, 2018	3,921	799	1,187	5,907
Additions	645	226	—	871
Unlocking	(117)	(9)	(24)	(150)
Amortization	(749)	(65)	(68)	(882)
Impact of unrealized investment (gains) losses	(426)	(131)	(181)	(738)
Balance at December 31, 2019	\$ 3,274	\$ 820	\$ 914	\$ 5,008

The expected amortization of VOBA for the next five years is as follows:

<i>(In millions)</i>	Expected Amortization
2020	\$ 94
2021	85
2022	75
2023	71
2024	66

8. Closed Block

We pay guaranteed benefits under all policies included in the Closed Blocks. In the event the performance of the Closed Blocks' assets is insufficient to maintain dividend scales and interest credits, we may reduce the policyholder dividend scales. In the event dividends have been reduced to zero and the Closed Blocks' assets remain insufficient to fund the Closed Blocks' guaranteed benefits, we would use assets supporting open block policies or surplus to meet the contractual benefits of the Closed Blocks' policyholders. The ILICO Closed Block has been ceded to Global Atlantic. Therefore, Global Atlantic would be required to provide funding for any asset insufficiency related to the ILICO Closed Block. Additionally, the AmerUs Closed Block has a letter of credit and tail risk reinsurance agreement in place that limits our exposure to potential asset insufficiency.

We elected the fair value option for the AmerUs Closed Block. The fair value of liabilities of the AmerUs Closed Block was derived at election as the sum of the fair value of the AmerUs Closed Block assets plus our cost of capital in the AmerUs Closed Block. The cost of capital was then determined to be the present value of the projected release of required capital and future after tax earnings on required capital supporting the AmerUs Closed Block, discounted at a rate which represents a market participant's required rate of return, less the initial required capital. At each reporting period, we record the fair value of the AmerUs Closed Block by adjusting the change in liabilities, exclusive of the cost of capital, to equal the change in assets. We do not record additional policyholder dividend obligations, as there are no future GAAP earnings available to the policyholders.

The excess of the fair value of the liabilities over the fair value of the assets represents our cost of capital in the AmerUs Closed Block. The maximum amount of future earnings from the assets and liabilities of the AmerUs Closed Block is represented by the reduction in the cost of capital in future years based on the operations of the AmerUs Closed Block and recalculation of the cost of capital each reporting period.

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Notes to Consolidated Financial Statements

Summarized financial information of the AmerUs Closed Block is presented below.

<i>(In millions)</i>	December 31,	
	2019	2018
Liabilities		
Future policy benefits	\$ 1,546	\$ 1,443
Other policy claims and benefits	18	14
Dividends payable to policyholders	87	89
Total liabilities	1,651	1,546
Assets		
Trading securities	1,353	1,228
Mortgage loans, net of allowances	27	32
Policy loans	139	154
Total investments	1,519	1,414
Cash and cash equivalents	30	31
Accrued investment income	44	41
Reinsurance recoverable	19	22
Other assets	9	2
Total assets	1,621	1,510
Maximum future earnings to be recognized from AmerUs Closed Block	\$ 30	\$ 36

The following represents the contribution from AmerUs Closed Block.

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Revenues			
Premiums	\$ 54	\$ 48	\$ 58
Net investment income	74	77	79
Investment related gains (losses)	147	(118)	61
Total revenues	275	7	198
Benefits and Expenses			
Future policy and other policy benefits	234	(49)	144
Dividends to policyholders	36	36	51
Total benefits and expenses	270	(13)	195
Contribution from AmerUs Closed Block before income taxes	5	20	3
Income tax benefit	(1)	—	(5)
Contribution from AmerUs Closed Block, net of income taxes	\$ 6	\$ 20	\$ 8

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

9. Debt

Credit Facility—In the fourth quarter of 2019, we and AHL entered into a five-year revolving credit agreement, subject to up to two one-year extensions (Credit Facility) with Citibank, N.A., as administrative agent, which replaced our previous revolving credit agreement. The borrowing capacity under the Credit Facility is \$1.25 billion, with potential increases up to \$1.75 billion. In connection with the Credit Facility, AHL and Athene USA guaranteed all of the obligations of AHL, ALRe, Athene Annuity Re Ltd. (AARe) and Athene USA under this facility, and ALRe and AARe guaranteed certain of the obligations of AHL, ALRe, AARe and Athene USA under this facility. The Credit Facility contains various standard covenants with which we must comply, including the following with respect to AHL:

1. Consolidated debt to capitalization ratio of not greater than 35%;
2. Minimum consolidated net worth of no less than \$7.3 billion; and
3. Restrictions on our ability to incur debt and liens, in each case with certain exceptions.

As of December 31, 2019 and 2018, we had no amounts outstanding under the respective revolving credit agreements and were in compliance with all covenants under these facilities.

Interest accrues on outstanding borrowings at either the Eurodollar Rate (as defined in the Credit Facility) plus a margin or a base rate plus a margin, with the applicable margin varying based on AHL's Debt Rating (as defined in the Credit Facility). The Credit Facility has a commitment fee that is determined by reference to AHL's Debt Rating, and ranges from 0.10% to 0.30% of the undrawn commitment. As of December 31, 2019 and 2018, the commitment fee was 0.15% and 0.225%, respectively, of the undrawn commitment.

Short-term Borrowings —In the fourth quarter of 2019, we borrowed \$475 million from the Federal Home Loan Bank (FHLB) through their variable rate short-term federal funds program. As of December 31, 2019, the borrowings had maturity dates ranging from February 10, 2020 to May 11, 2020 with a weighted average interest rate of 1.79%, with interest due at maturity. In connection with short-term borrowings, the FHLB requires the borrower to purchase member stock and post sufficient collateral to secure the borrowings. See *Note 14 – Commitments and Contingencies* for further discussion regarding existing collateral posting with the FHLB.

10. Equity

Common Stock—We have one class of common stock, which represents 100% of the total voting power, and is beneficially owned by AHL. We have an authorized share capital of US\$1,500,000 comprised of 1,500,000 shares of par value \$1.00 each, all of which have been issued to AHL.

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Notes to Consolidated Financial Statements

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

<i>(In millions)</i>	Unrealized investment gains (losses) on AFS securities	DAC, DSI, VOBA, future policy benefits and dividends payable to policyholders adjustments on AFS	Noncredit component of OTTI losses on AFS securities	Unrealized gains (losses) on hedging instruments	Foreign currency translation and other adjustments	Accumulated other comprehensive income (loss)
Balance at December 31, 2016	\$ 486	\$ (131)	\$ (11)	\$ 6	\$ (5)	\$ 345
Adoption of accounting standards	273	(72)	(2)	(12)	—	187
Other comprehensive income (loss) before reclassifications	1,786	(403)	(5)	(105)	1	1,274
Less: Reclassification adjustments for gains (losses) realized in net income	74	(19)	(9)	—	—	46
Less: Income tax expense (benefit)	497	(125)	1	(35)	—	338
Balance at December 31, 2017	1,974	(462)	(10)	(76)	(4)	1,422
Adoption of accounting standards	(46)	4	—	—	—	(42)
Other comprehensive income (loss) before reclassifications	(3,149)	733	(9)	146	(1)	(2,280)
Less: Reclassification adjustments for gains (losses) realized in net income	4	(1)	(3)	—	—	—
Less: Income tax expense (benefit)	(613)	155	(1)	31	—	(428)
Balance at December 31, 2018	(612)	121	(15)	39	(5)	(472)
Other comprehensive income (loss) before reclassifications	4,922	(1,321)	1	28	1	3,631
Less: Reclassification adjustments for gains (losses) realized in net income	218	(54)	7	—	—	171
Less: Income tax expense (benefit)	959	(267)	(1)	6	—	697
Less: Other comprehensive income (loss) attributable to NCI	5	—	—	—	—	5
Balance at December 31, 2019	<u>\$ 3,128</u>	<u>\$ (879)</u>	<u>\$ (20)</u>	<u>\$ 61</u>	<u>\$ (4)</u>	<u>\$ 2,286</u>

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

11. Income Taxes

Income tax expense consists of the following:

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Current	\$ 53	\$ 78	\$ 4
Deferred	64	44	101
Income tax expense (benefit)	<u>\$ 117</u>	<u>\$ 122</u>	<u>\$ 105</u>

Income tax expense was calculated based on the following components of income before income taxes:

<i>(In millions)</i>	Years ended December 31,		
	2019	2018	2017
Income before income taxes – Bermuda	\$ 1,863	\$ 713	\$ 1,348
Income before income taxes – U.S.	528	534	274
Income before income taxes¹	<u>\$ 2,391</u>	<u>\$ 1,247</u>	<u>\$ 1,622</u>

¹ UK income insignificant so not presented

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

The expected tax provision computed on pre-tax income at the weighted average tax rate has been calculated as the sum of the pre-tax income in each jurisdiction multiplied by that jurisdiction's applicable statutory tax rate. Statutory tax rates of 0%, 21% and 19% have been used for Bermuda, the U.S., and the United Kingdom (UK), respectively, for the year ended December 31, 2019. Statutory tax rates of 0% and 21% have been used for Bermuda and the U.S., respectively, for the tax year ended December 31, 2018. Statutory tax rates of 0% and 35% have been used for Bermuda and the U.S., respectively, for the year ended December 31, 2017. A reconciliation of the difference between the expected tax provision at the weighted average tax rate and income tax expense (benefit) is as follows:

	Years ended December 31,		
	2019	2018	2017
<i>(In millions, except for percentages)</i>			
Expected tax provision computed on pre-tax income at weighted average income tax rate	\$ 111	\$ 112	\$ 96
Increase in income taxes resulting from:			
Deferred tax valuation allowance	—	—	2
Non-deductible expenses			
Prior year true-up	2	11	8
Corporate owned life insurance	(6)	(3)	(8)
Stock compensation expense	2	1	5
Change in statutory tax rates	—	—	(7)
State taxes and other	8	1	9
Income tax expense (benefit)	\$ 117	\$ 122	\$ 105
Effective tax rate	5%	10%	6%

Public Law no. 115-97, an Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018 (Tax Act) was enacted on December 22, 2017 and made key changes to the U.S. tax law, including the reduction of the U.S. statutory tax rate from 35% to 21%. As such, the December 31, 2017 deferred tax balances were remeasured to reflect the reduction in rate and the resulting decrease to the net deferred tax liability is included in change in statutory tax rates of the reconciliation above.

Total income taxes were as follows:

	Years ended December 31,		
	2019	2018	2017
<i>(In millions)</i>			
Income tax expense	\$ 117	\$ 122	\$ 105
Income tax expense (benefit) from OCI	697	(429)	339
Total income taxes	\$ 814	\$ (307)	\$ 444

Current income tax recoverable and deferred tax assets are included in other assets on the consolidated balance sheets, and current income tax payable and deferred tax liabilities are included in other liabilities on the consolidated balance sheets. Current and deferred income tax assets and liabilities were as follows:

	December 31,	
	2019	2018
<i>(In millions)</i>		
Current income tax recoverable	\$ —	\$ 36
Current income tax payable	14	33
Net current income tax recoverable	\$ (14)	\$ 3
Deferred tax assets	\$ —	\$ 340
Deferred tax liabilities	422	—
Net deferred tax assets (liabilities)	\$ (422)	\$ 340

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

Deferred income tax assets and liabilities consisted of the following:

<i>(In millions)</i>	December 31,	
	2019	2018
Deferred tax assets		
Insurance liabilities	\$ 1,753	\$ 1,186
Net unrealized losses on AFS	—	112
Net operating and capital loss carryforwards	126	78
Fixed assets	—	43
Employee benefits	21	24
Other	10	38
Total deferred tax assets	1,910	1,481
Valuation allowance	(47)	(52)
Deferred tax assets, after valuation allowance	1,863	1,429
Deferred tax liabilities		
Investments, including derivatives	928	296
Net unrealized gains on AFS	585	—
DAC, DSI and VOBA	757	790
Other	15	3
Total deferred tax liabilities	2,285	1,089
Net deferred tax assets (liabilities)	\$ (422)	\$ 340

As of December 31, 2019, we have gross deferred tax assets associated with U.S. federal and state net operating losses of \$793 million, which will begin to expire in 2022.

The valuation allowance consists of the following:

<i>(In millions)</i>	December 31,	
	2019	2018
U.S. federal and state net operating losses and other deferred tax assets	\$ 47	\$ 52
Total valuation allowance	\$ 47	\$ 52

AHL and its Bermuda subsidiaries file protective U.S. income tax returns and its U.S. subsidiaries file income tax returns with the U.S. federal government and various U.S. state governments. AADE is not subject to U.S. federal and state examinations by tax authorities for years prior to 2011, while Athene Annuity & Life Assurance Company of New York (AANY) is not subject to examinations for years prior to 2015. The Internal Revenue Service is currently auditing the 2013 consolidated tax return filed by Athene USA Corporation, and is conducting a limited scope audit of the 2015 consolidated tax return filed by AADE. One state jurisdiction is auditing the 2016 and 2017 combined tax returns filed by Athene USA. No material adverse proposed adjustments have been issued with respect to any examination.

Under current Bermuda law, we are not required to pay any taxes in Bermuda on either income or capital gains. We have received an undertaking from the Bermuda Minister of Finance that, in the event of any such taxes being imposed, the Company will be exempted from taxation until the year 2035.

We expect that earnings from AHL's U.S. subsidiaries will not be subject to U.S. dividend withholding tax under the benefits provided by the income tax treaty between the U.S. and the UK. Any dividends remitted to AHL from ALRe are not subject to withholding tax.

12. Statutory Requirements

Our insurance and reinsurance subsidiaries are subject to insurance laws and regulations in the jurisdictions in which they operate including Bermuda, all U.S. states and the District of Columbia. Certain regulations include restrictions that limit the dividends or other distributions, such as loans or cash advances, available to shareholders without prior approval of the insurance regulatory authorities. The differences between financial statements prepared for insurance regulatory authorities and GAAP financial statements vary by jurisdiction.

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Notes to Consolidated Financial Statements

Bermuda statutory requirements—ALRe, AARe, and Athene Co-Invest Reinsurance Affiliate 1A Ltd. (ACRA 1A, and together with its subsidiaries, ACRA) are each licensed by the Bermuda Monetary Authority (BMA) as long-term insurers and are subject to the Insurance Act 1978, as amended (Bermuda Insurance Act) and regulations promulgated thereunder. The BMA implemented the Economic Balance Sheet (EBS) framework into the Bermuda Solvency Capital Requirement (BSCR), which was granted equivalence to the European Union’s Directive (2009/138/EC) (Solvency II).

Under the Bermuda Insurance Act, long-term insurers are required to maintain minimum statutory capital and surplus to meet the minimum margin of solvency (MMS) and minimum economic statutory capital and surplus (EBS capital and surplus) to meet the Enhanced Capital Requirement (ECR). For the Class C reinsurer, ACRA 1A, MMS is equal to the greater of \$500,000, 1.5% of the total statutory assets or 25% of ECR. For the Class E reinsurers, ALRe and AARe, MMS is equal to the greater of \$8 million, 2% of the first \$500 million of statutory assets plus 1.5% of statutory assets above \$500 million or 25% of ECR. For each class, the ECR is calculated based on a risk-based capital model where risk factor charges are applied to the EBS. The ECR is floored at the MMS. As of December 31, 2019, our Bermuda entities were in excess of the minimum levels required. For our Bermuda reinsurance entities, the ECR is the binding regulatory constraint. The following represents the EBS capital and surplus and BSCR ratios:

<i>(In millions)</i>	EBS capital & surplus		BSCR ratio	
	December 31,		December 31,	
	2019	2018	2019	2018
ALRe	\$ 14,073	\$ 12,000	310%	340%
AARe	2,898	3,029	257%	176%
ACRA 1A	1,237	575	341%	295%

Under the EBS framework, statutory financial statements are generally equivalent to GAAP financial statements, with the exception of permitted practices granted by the BMA. Our Bermuda entities have permission in the statutory financial statements to use amortized cost instead of fair value as the basis for certain investments. Additionally, our Bermuda entities use U.S. statutory reserving principles for the calculation of insurance reserves instead of GAAP, subject to the reserves being proved adequate based on cash flow testing. The following represents the effect of the permitted practices to the statutory financial statements:

<i>(In millions)</i>	December 31, 2019		
	ALRe	AARe ¹	ACRA 1A
Increase (decrease) to capital and surplus due to permitted practices	\$ (3,765)	\$ (5,047)	\$ (311)
Increase (decrease) to statutory net income due to permitted practices	(1,035)	(4,988)	(43)

¹ AARe has permission to use amortized cost instead of fair value as the basis for certain investments but does not produce GAAP financial statements. The effect of the permitted practices to the AARe statutory financial statements reflects the impact of the difference between amortized cost and fair value for certain investments

Under the Bermuda Insurance Act, our Bermuda entities are prohibited from paying a dividend in an amount exceeding 25% of the prior year’s statutory capital and surplus, unless at least two members of the companies’ respective board of directors and its principal representative in Bermuda sign and submit to the BMA an affidavit attesting that a dividend in excess of this amount would not cause the subsidiary to fail to meet its relevant margins. In certain instances, the Bermuda entity would also be required to provide prior notice to the BMA in advance of the payment of dividends. In the event that such an affidavit is submitted to the BMA, and further subject to meeting the MMS and ECR requirements, a Bermuda entity is permitted to distribute up to the sum of 100% of statutory surplus and an amount less than 15% of statutory capital. Distributions in excess of this amount require the approval of the BMA. The following represents the maximum distribution our Bermuda entities would be permitted to remit to its parent without the need for prior approval:

<i>(In millions)</i>	December 31,	
	2019	2018
ALRe	\$ 8,141	\$ 5,942
AARe	1,216	997
ACRA 1A	59	—

ATHENE LIFE RE LTD.**Notes to Consolidated Financial Statements**

U.S. statutory requirements—Our regulated U.S. subsidiaries and the corresponding insurance regulatory authorities are as follows:

Subsidiary	Regulatory Authority
AADE	Delaware Department of Insurance
AANY	New York Department of Financial Services
AAIA	Iowa Insurance Division
Athene Re USA IV	State of Vermont Department of Financial Regulation

Each entity's statutory statements are presented on the basis of accounting practices determined by the respective regulatory authority. The regulatory authority recognizes only statutory accounting practices prescribed or permitted by the corresponding state for determining and reporting the financial condition and results of operations of an insurance company and for determining its solvency under insurance law.

The maximum dividend these subsidiaries can pay to ALRe, without prior approval of the respective state insurance department, is subject to restrictions relating to statutory surplus or net gain from operations. The maximum dividend payment over a twelve-month period may not, without prior approval, be paid from a source other than earned surplus and may not exceed the greater of (1) the prior year's net gain from operations or (2) 10% of policyholders' surplus. Based on these restrictions, the maximum dividend AADE could pay to Athene USA absent regulatory approval was \$152 million and \$154 million as of December 31, 2019 and 2018, respectively. Any dividends from ALRe's other U.S. statutory entities in excess of the amounts allowed for AADE would not be able to be remitted to Athene USA without regulatory approval from the Delaware Department of Insurance.

As of December 31, 2019, our U.S. subsidiaries' solvency, liquidity and risk-based capital amounts were significantly in excess of the minimum levels required.

In some instances, the states of domicile of our U.S. subsidiaries have adopted prescribed accounting practices that differ from the required accounting outlined in National Association of Insurance Commissioners (NAIC) Statutory Accounting Principles (SAP). These subsidiaries also have certain accounting practices permitted by the states of domicile that differ from those found in NAIC SAP. These prescribed and permitted practices are described as follows:

AAIA – Among the products issued by AAIA are indexed universal life insurance and fixed indexed annuities. These products allow a portion of the premium to earn interest based on certain indices, primarily the S&P 500. We purchase call options, futures and variance swaps to hedge the growth in interest credited to the customer as a direct result of increases in the related index. The Iowa Insurance Division allows an insurer to elect (1) to use an amortized cost method to account for certain derivative instruments, such as call options, purchased to hedge the growth in interest credited to the customer on indexed insurance products and (2) to use an indexed annuity reserve calculation methodology under which call options associated with the current index interest crediting term are valued at zero. AAIA has elected to apply this option to its over-the-counter call options and reserve liabilities. As a result, AAIA's statutory surplus decreased by \$80 million and increased by \$39 million as of December 31, 2019 and 2018, respectively.

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

Athene Re USA IV – AAIA has ceded the AmerUs Closed Block to Athene Re USA IV on a 100% funds withheld basis. A permitted practice in the State of Vermont allows Athene Re USA IV to include as admitted assets the face amount of all issued and outstanding letters of credit used to fund its reinsurance obligations to AAIA in its statutory financial statements. If Athene Re USA IV had not followed this permitted practice, then it would not have exceeded authorized control level risk based capital requirements. As of December 31, 2019 and 2018, Athene Re USA IV included as admitted assets \$137 million and \$153 million, respectively, related to the outstanding letters of credit.

Statutory capital and surplus and net income (loss)—The following table presents, for each of our primary insurance subsidiaries, the statutory capital and surplus and the statutory net income (loss), based on the most recent statutory financial statements to be filed with insurance regulators:

<i>(In millions)</i>	Statutory capital & surplus		Statutory net income (loss)		
	December 31,		Years ended December 31,		
	2019	2018	2019	2018	2017
ALRe	\$ 11,000	\$ 9,659	\$ 1,247	\$ 418	\$ 828
AARe	2,343	2,095	248	997	—
ACRA 1A	808	393	265	(287)	—
AADE	1,526	1,544	(86)	18	24
AANY	318	282	33	6	29
AAIA	1,209	1,234	241	81	239

13. Related Parties

Unsecured Revolving Notes Receivable and Payables—We have an unsecured revolving notes receivable and payables with AHL. The unsecured revolving notes receivable from AHL permits AHL to borrow up to \$1 billion with a fixed interest rate of 1.25% and a maturity date of March 31, 2024. As of December 31, 2019 and 2018, we had \$38 million and \$105 million, respectively, outstanding under this agreement.

We have an unsecured revolving notes receivable with Athene Life Re International Ltd. (ALREI). The unsecured revolving notes receivable from ALREI permits ALREI to borrow up to \$100 million with a 3 month LIBOR rate on principal plus applicable margin interest rate and a maturity date of December 11, 2024. As of December 31, 2019, we had \$27.5 million outstanding under this agreement.

The unsecured revolving notes payable from Athene USA to AHL has a borrowing capacity of \$250 million and an outstanding balance of \$0 million and \$0 million as of December 31, 2019 and 2018, respectively. Interest accrues at the U.S. short-term applicable federal rate per year, and the balance is due on June 1, 2020, or earlier at AHL’s request.

The unsecured revolving notes payable from ALRe to AHL has a borrowing capacity of \$1 billion and had no outstanding balance as of December 31, 2019 and 2018. Interest accrues at a fixed rate of 1.25% and has a maturity date of March 31, 2024, or earlier at AHL’s request.

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.

ATHENE LIFE RE LTD.

Notes to Consolidated Financial Statements

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 (Incremental Value), by which the aggregate market value of substantially all of the assets in the Accounts at the end of the respective month exceeds the Backbook Value; plus
- (2) with respect to each asset in an Account, subject to certain exceptions, that is managed by Apollo and that belongs to a specified asset class tier (Core, Core Plus, Yield, and High Alpha), a sub-allocation fee as follows, which will, in the case of assets acquired after January 1, 2019, be subject to a cap of 10% of the applicable asset’s gross book yield:
 - (i) 0.065% of the market value of Core assets, which include public investment grade corporate bonds, municipal securities, agency RMBS or CMBS, and obligations of governmental agencies or government sponsored entities that are not expressly backed by the 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:

<i>(In millions, except percentages)</i>	December 31, 2019	Percent of Total
Core	\$ 31,938	25.2%
Core Plus	30,053	23.7%
Yield	48,551	38.4%
High Alpha	5,062	4.0%
Other	11,068	8.7%
Total sub-allocation assets	\$ 126,672	100.0%

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

ATHENE LIFE RE LTD.**Notes to Consolidated Financial Statements**

For the years ended December 31, 2019, 2018 and 2017, we incurred management fees of \$426 million, \$349 million and \$315 million, respectively. Management fees are included within net investment income on the consolidated statements of income. As of December 31, 2019 and 2018, management fees payable were \$41 million and \$53 million, respectively, and are included in other liabilities on the 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:

<i>(In millions, except for percentages)</i>	<u>December 31, 2018</u>
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 – AHL’s bye-laws currently provide that it may not, and will cause its subsidiaries not to, terminate any IMA among them or any of its 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 AHL’s 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 AHL’s 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, AHL’s board of directors may only elect to terminate an IMA on an IMA Termination Election Date if two-thirds of its 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 AHL’s Independent Directors, AHL or its 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

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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 AHL 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 AHL's bye-laws as "AHL Cause").

Governance – AHL has a management investment committee, which includes members of senior management and reports to the risk committee of AHL's 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 AHL is held by shareholders who are members of the Apollo Group, as defined in AHL's bye-laws. Also, James Belardi, AHL's Chief Executive Officer, is also an employee of ISG, receives remuneration from acting as Chief Executive Officer of ISG. Mr. Belardi also owns a 5% profit interest in ISG (Interest). It is expected that the Interest will be revised such that Mr. Belardi will receive a lesser interest in the equity of ISG and also receive a specified percentage of other fee streams earned by Apollo, potentially comprised of or including the sub-allocation fees. Additionally, six of the fifteen members of AHL's 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, AHL's bye-laws require it to maintain a conflicts committee comprised solely of AHL directors who are not officers or employees of any member of the Apollo Group. The conflicts committee reviews and approves material transactions between AHL 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 \$487 million and \$463 million as of December 31, 2019 and 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 \$411 million, \$722 million and \$57 million of residential mortgage loans under this agreement during the years ended December 31, 2019, 2018 and 2017, respectively. Additionally, we hold ABS securities issued by AmeriHome affiliates of \$170 million and \$121 million as of December 31, 2019 and 2018, respectively, which are included in related party AFS securities on the consolidated balances sheets. We also have commitments to make additional equity investments in A-A Mortgage of \$169 million as of December 31, 2019.

MidCap – CoInvest VII holds a significant investment in MidCap, which is included in investment funds of consolidated VIEs on the consolidated balance sheets. We have also advanced amounts under a subordinated debt facility to Midcap and, as of December 31, 2019 and 2018, the principal balance was \$345 million and \$245 million, respectively, which is included in other related party investments on the consolidated balance sheets. Our total investment in MidCap, including amounts advanced under credit facilities, was \$886 million and \$792 million as of December 31, 2019 and 2018, respectively. Additionally, we hold ABS and CLO securities issued by MidCap affiliates of \$624 million and \$226 million as of December 31, 2019 and 2018, respectively, which are included in related party AFS securities on the consolidated balance sheets.

Athora – AHL has 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) AHL provides Athora with a right of first refusal to pursue acquisition and reinsurance transactions in Europe (other than the UK) and (4) Athora provides us and our subsidiaries with a right of first refusal to pursue acquisition and reinsurance transactions in North America and the UK. Notwithstanding the foregoing, pursuant to the cooperation agreement, Athora is only required to use its reasonable best efforts to cause its subsidiaries to adhere to the provisions set forth in the cooperation agreement and therefore Athora's ability to cause its subsidiaries to act pursuant to the cooperation agreement may be limited by, among other things, legal prohibitions or the inability to obtain the approval of the board of directors or other applicable governing body of the applicable subsidiary, which approval is solely at the discretion of such governing body. As of December 31, 2019, we have not exercised our right of first refusal to reinsure liabilities ceded to Athora's insurance or reinsurance subsidiaries.

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During the fourth quarter of 2018, we entered into a coinsurance agreement with ALV to reinsure endowment contracts and annuities, in which we assumed liabilities of \$325 million. ALV coinsurance assets were recorded as receivable in other assets on the December 31, 2018 consolidated balance sheet, as the assets were not received prior to December 31, 2018. We then retroceded these endowment contracts and annuities through a modco agreement to ARE, in which we recorded a funds withheld liability of \$337 million. ARE modco assets were recorded as reinsurance recoverable on the consolidated balance sheets. During the fourth quarter of 2019, we novated the reinsurance agreement for the ALV endowment contracts and annuities to ARE, which resulted in a decrease of \$663 million of liabilities and related assets on the consolidated balance sheets.

Venerable – On June 1, 2018, we entered into coinsurance and modco agreements with Voya Insurance and Annuity Company (VIAC) to reinsure a block of fixed and fixed indexed annuities, in which we assumed liabilities of \$18,578 million. VIAC is a related party pursuant to GAAP due to our minority equity investment in its holding company's parent, VA Capital Company LLC (VA Capital), which was \$99 million and \$92 million as of December 31, 2019 and December 31, 2018, respectively. The minority equity investment in VA Capital is included in related party investment funds on the consolidated balance sheets and accounted for as an equity method investment. VA Capital is owned by a consortium of investors, led by affiliates of AGM, Crestview Partners and Reverence Capital Partners, and is the parent of Venerable, which is the parent of VIAC. Additionally, as of December 31, 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 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 December 31, 2019 and 2018, we had \$97 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 fourth quarter of 2019, we, and Apollo purchased PK AirFinance (PK), an aviation lending business, including PK's in force loan portfolio (Aviation Loans), from the Aviation Services Unit of GE Capital (GE). The Aviation Loans are generally fully secured by aircraft leases and aircraft. In connection with such transaction, Apollo acquired the PK loan origination platform, including personnel and systems and, pursuant to certain agreements entered into between us, Apollo, and certain entities managed by Apollo (collectively, PK Transaction Agreements), the existing Aviation Loans were acquired and securitized by a newly formed SPV for which Apollo acts as ABS manager (ABS-SPV). The ABS-SPV issued tranches of senior notes and subordinated notes, which are secured by the Aviation Loans.

In connection with the acquisition of the existing Aviation Loans by the ABS-SPV, (i) a tranche of senior notes was acquired by third-party investors and (ii) we purchased mezzanine tranches of the senior notes and the subordinated notes.

In addition to the investment in the senior notes and subordinated notes, we also have a right to acquire, whether directly, through the ABS-SPV or through a similar vehicle, all Aviation Loans originated by PK (Forward Flow Loans). All servicing and administrative costs and expenses of Apollo (determined at cost, without mark-up) that are incurred in connection with the sourcing, origination, servicing and maintaining the Forward Flow Loans, net of any service fees and servicing and administrative cost and expense reimbursement amounts received directly from the ABS-SPV or other entities investing in the Forward Flow Loans 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 have paid or expect to pay the following fees to Apollo or certain service providers that are affiliates of, or are companies managed by, Apollo in connection with the PK Transaction Agreements:

- (A) To Apollo, sub-allocation fees on the senior notes based on the rates applicable to Yield assets and sub-allocation fees on the subordinated notes based on the rates applicable to High Alpha assets.
- (B) To Redding Ridge Asset Management LLC, a company in which certain funds managed by Apollo have an interest, as consideration for assistance with the structuring, monitoring, support and maintenance of the securitization transactions, a one-

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- time structuring fee, as well as ongoing support fees equal to 1.5 bps on the total capitalization amount and certain other fees, which may become due upon the occurrence of certain events; and
- (C) To Merx Aviation Servicing Limited, a company externally managed by Apollo Investment Management, L.P., with respect to certain diligence, technical support and enforcement, remarketing and restructuring services with respect to the existing Aviation Loans and the Forward Flow Loans, a one-time servicing fee, as well as certain special situations fees, which may become due upon the occurrence of certain events.

Apollo/Athene Dedicated Investment Program (ADIP) – On October 1, 2019, we sold 67% of our equity interests in our subsidiary, ACRA to ADIP, which is managed by AGM, for \$575 million. As a result, we reduced APIC and AOCI by \$145 million and \$34 million, respectively, and recorded \$754 million for the issuance of equity to noncontrolling interests. The shares held by ADIP are non-voting and our shares represent 100% of the voting power and 33% of the equity interests in ACRA.

Apollo Share Exchange and Related Transactions – On October 27, 2019 AHL entered into a transaction agreement (Transaction Agreement) with AGM and certain affiliates of AGM which collectively comprise the Apollo Operating Group (AOG), pursuant to which, among other things, (i) AHL 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) AHL 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 AHL’s Class A common shares on October 25, 2019) (collectively, (i) and (ii), Share Issuance), (iii) AHL 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 (Contingent 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) AHL 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, the receipt of all necessary regulatory and governmental approvals and certain other closing conditions. Subject to certain assumptions, including those regarding the exercise of the Contingent Right 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 AHL’s 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, AHL’s Chief Executive Officer, and William Wheeler, its 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 AHL’s shareholders occurring following the Closing Date and in connection with any written consent of AHL’s 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 AHL’s Class A common shares.

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

AA Infrastructure Fund 1 LLC (AA Infrastructure) - We have an investment in preferred shares of AA Infrastructure, which is a fund managed by ISG. As of December 31, 2019 and 2018, we held \$58 million and \$120 million, respectively, of preferred shares, which are included in related party equity securities on the consolidated balance sheets. In the fourth quarter of 2019, AA Infrastructure issued \$267 million of ABS securities as a return of capital on the preferred shares. As of December 31, 2019, we held AA Infrastructure ABS securities of \$267 million, which are included in related party trading securities on the consolidated balance sheets. Additionally, as of December 31, 2019, we had commitments to make additional investments in AA Infrastructure of \$42 million.

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Contingent Commitments—We had commitments to make investments, primarily capital contributions to investment funds, inclusive of related party commitments discussed previously, of \$4,339 million and \$2,729 million as of December 31, 2019 and 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—Our U.S. subsidiaries are members of the FHLB and, through membership, they have issued funding agreements to the FHLB in exchange for cash advances. As of December 31, 2019 and 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 December 31, 2019 and 2018, we had \$3,700 million and \$2,700 million, respectively, of FABN funding agreements outstanding. We had \$6.0 billion of remaining FABN capacity as of December 31, 2019.

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

<i>(In millions)</i>	December 31,	
	2019	2018
AFS securities	\$ 9,369	\$ 5,439
Trading securities	45	68
Equity securities	22	2
Mortgage loans	2,535	1,830
Investment funds	84	53
Derivative assets	105	24
Short-term investments	92	77
Other investments	88	47
Restricted cash	331	492
Total restricted assets	\$ 12,671	\$ 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 \$198 million as of December 31, 2019. This letter of credit was issued for our reinsurance program and expires by December 31, 2020.

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Litigation, Claims and Assessments

Corporate-owned Life Insurance (COLI) Matter – In 2000 and 2001, two insurance companies which were subsequently merged into AAIA, purchased broad based variable COLI policies from American General Life Insurance Company (American General) that, as of December 31, 2019, had an asset value of \$387 million, and is included in other assets on the consolidated balance sheets. In January 2012, the COLI policy administrator delivered to AAIA a supplement to the existing COLI policies and advised that American General and ZC Resource Investment Trust (ZC Trust) had unilaterally implemented changes set forth in the supplement that if effective, would: (1) potentially negatively impact the crediting rate for the policies and (2) change the exit and surrender protocols set forth in the policies. In March 2013, AAIA filed suit against American General, ZC Trust, and ZC Resource LLC in Chancery Court in Delaware, seeking, among other relief, a declaration that the changes set forth in the supplement were ineffectual and in breach of the parties' agreement. The parties filed cross motions for judgment as a matter of law, and the court granted defendants' motion and dismissed without prejudice on ripeness grounds. The issue that negatively impacts the crediting rate for one of the COLI policies has subsequently been triggered and on April 3, 2018, AHL filed suit against the same defendants in Chancery Court in Delaware seeking substantially similar relief. Defendants moved to dismiss and the court heard oral arguments on February 13, 2019. The court issued an opinion on July 31, 2019 that did not address the merits, but found that the Chancery Court did not have jurisdiction over our claims and directed us to either amend our complaint or transfer the matter to Delaware Superior Court. The matter has been transferred to the Delaware Superior Court. Defendants renewed their motion to dismiss and the Superior Court heard oral arguments on December 18, 2019. The Superior Court took the matter under advisement and we expect an opinion in the next few months. 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 \$188 million as of December 31, 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, AHL has received notifications from several state regulators, including but not limited to the New York State Department of Financial Services (NYDFS), 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 AHL's 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 AHL entered into a consent order with the NYDFS resolving that matter in a manner that, when considering the indemnification received from affiliates of Global Atlantic, did not have a material impact on AHL's 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. AHL does not expect any settlement to be material to our financial condition, results of operations or cash flows.

In addition to the foregoing, AHL has received inquiries, and expects 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 AHL does not expect the amount of any such fines, penalties or payments arising from these matters to be material to its 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 AHL 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 AHL, including for administration issues.

On January 23, 2019, AHL received a letter from the NYDFS, with respect to a recent PRT transaction, which expressed concerns with AHL's 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. AHL is currently in discussions with the NYDFS to resolve its concerns.

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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 and AGM, as defendants, and AHL, as a nominal defendant, in New York State Court (the New York Actions). CLPF and Cambria, both purporting to be AHL's shareholders, each allege that AAM and AGM injured AHL by causing AHL to pay excessive management fees to AAM and AGM. The complaints do not name any of AHL's 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 AHL.

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 AHL's 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. AHL moved for default judgments in the Supreme Court of Bermuda and, on October 15, 2019, the Court granted AHL's applications and permanently enjoined CLPF and Cambria from taking any further steps in the New York Actions. The Supreme Court of Bermuda has awarded costs in AHL's favor against CLPF and Cambria, which are in the process of being enforced.

Note 15 – Subsequent Events

The Company has evaluated the impact of subsequent events through April 29, 2020, the date at which the financial statements were available to be issued.

After the outbreak of Coronavirus 2019 ('COVID-19') in early 2020, a series of precautionary and control measures have been and continue to be implemented globally. The Company will pay close attention to the development of the COVID-19 outbreak and evaluate its impact on the Company's financial position and operating results. As of April 29, 2020, the Company is not aware of any material adverse effects on the financial statements as a result of the COVID-19 outbreak.

As previously disclosed, on October 27, 2019, AHL entered into a Transaction Agreement with Apollo Global Management, Inc. ("AGM") and certain of its affiliates (the "Transaction Agreement") under which affiliates of AGM agreed to make a significant investment in AHL. Pursuant to the Transaction Agreement, AHL agreed to (i) make certain amendments to the Twelfth Amended and Restated Bye-laws (the "Bye-laws"), by way of amending and restating the Bye-laws (the "Thirteenth Amended and Restated Bye-laws"), which, among other items, would result in the elimination of AHL's multi-class share structure (the "Multi-Class Share Elimination"), (ii) issue 35,534,942 new Class A common shares of AHL ("Class A Common Shares") that AHL (or its subsidiaries) would transfer to certain affiliates of AGM which comprise the Apollo Operating Group (collectively, the "AOG") in exchange for (A) 29,154,519 equity interests of the AOG and (B) \$350 million in cash (the "Share Issuance") and (iii) grant AGM the right to purchase additional Class A Common Shares from the Closing Date (as defined herein) until 180 days thereafter to the extent the issued and outstanding Class A Common Shares beneficially owned by Apollo and certain of its related parties and employees (inclusive of Class A Common Shares over which any such persons have a valid proxy) do not equal at least 35% of the issued and outstanding Class A Common Shares, on a fully diluted basis. In connection with the Multi-Class Share Elimination, (i) all of the Class B common shares of AHL would be converted into an equal number of Class A Common Shares on a one-for-one basis and (ii) all of the Class M common shares of AHL would be converted into a combination of Class A Common Shares and warrants to purchase Class A Common Shares.

As previously disclosed on January 23, 2019, we received a letter from the NYSDFS, with respect to a pension risk transfer (PRT) transaction, which expressed concerns with our interpretation and reliance upon certain exemptions from licensing in New York in connection with certain activities performed by employees in our PRT channel, including specific activities performed within New York. On April 13, 2020, we entered into a consent order with the NYSDFS to resolve this matter. Pursuant to the consent order, the NYSDFS imposed a fine of \$45 million, which was accrued in other liabilities on the consolidated balance sheets as of December 31, 2019.

In March 2020, the Company's subsidiary ACRA 1A received a capital contribution from its investors of \$358 million comprised of \$118 million from ALRE and \$240 million from ADIP.