

ATHENE HOLDING LTD. REPORTS FOURTH QUARTER AND FULL YEAR 2019 RESULTS

PEMBROKE, Bermuda – February 18, 2020 – Athene Holding Ltd. ("Athene") (NYSE: ATH), a leading provider of retirement savings products, announced financial results for the fourth quarter and full year 2019.

Net income available to AHL common shareholders for the fourth quarter 2019 was \$432 million, or \$2.42 per diluted Class A common share ("diluted share"), compared to a net loss for the fourth quarter 2018 of \$104 million, or \$0.53 per common share. The increase from the prior year quarter was driven by higher adjusted operating income, as well as a favorable net change in fixed indexed annuity ("FIA") derivatives including the impact of favorable equity market performance and discount rates. Net income available to AHL common shareholders for the full year 2019 was \$2,136 million, or \$11.41 per diluted share, compared to \$1,053 million, or \$5.32 per diluted share for the full year 2018. The increase from the prior year was primarily driven by a favorable change in the fair value of reinsurance assets due to a decrease in U.S. Treasury rates and tightening credit spreads.

Adjusted operating income available to common shareholders¹ for the fourth quarter 2019 was \$389 million, or \$2.21 per adjusted operating common share, a quarterly record, compared to \$240 million, or \$1.23 per adjusted operating common share for the fourth quarter 2018. The increase from the prior year quarter was primarily driven by higher net investment earnings due to an increase in net invested assets, stronger alternative investment performance and higher bond call income, as well as a lower cost of funds attributable to favorable rider reserves and deferred acquisition costs ("DAC") amortization due to strong equity market performance. Excluding notable items, adjusted operating income available to common shareholders for the fourth quarter 2019 was \$346 million, or \$1.97 per adjusted operating common share, compared to \$293 million, or \$1.50 per adjusted operating common share for the fourth quarter 2018.

Adjusted operating income available to common shareholders for the full year 2019 reached a new annual high of \$1,289 million, or \$6.97 per adjusted operating common share, compared to \$1,140 million, or \$5.82 per adjusted operating common share for the full year 2018. Excluding notable items, adjusted operating income available to common shareholders for the full year 2019 was \$1,294 million, or \$7.00 per adjusted operating common share, compared to \$1,171 million, or \$5.98 per adjusted operating common share for the full year 2018.

Highlights

- Book value per common share of \$76.21, an increase of 3% and 80% for the quarter-over-quarter and year-over-year periods ended December 31, 2019, respectively
- Adjusted book value per common share of \$54.02, an increase of 6% and 18% for the quarter-over-quarter and year-over-year periods ended December 31, 2019, respectively
- ROE of 19.7%, Consolidated adjusted operating ROE of 14.1%, and Retirement Services adjusted operating ROE of 17.3% for the full year ended December 31, 2019. ROE of 12.8%, Consolidated adjusted operating ROE of 16.7%, and Retirement Services adjusted operating ROE of 21.6% for the quarter ended December 31, 2019
- ROA of 1.19% and 1.55% for the fourth quarter and full year ended December 31, 2019, respectively. Adjusted operating ROA of 1.34% and 1.11% for the fourth quarter and full year ended December 31, 2019, respectively
- Gross deposits of \$3.6 billion and \$18.1 billion underwritten to attractive returns for the fourth quarter and year ended December 31, 2019, respectively
- Repurchased \$927 million of common stock from December 2018 through February 18, 2020, including \$283 million in the fourth quarter
- Athene's previously announced transaction² with Apollo³ is expected to close during the first quarter 2020, having recently received shareholder approval. Upon close, the transaction will simplify Athene's share class structure, broaden its investor appeal, and enhance eligibility for S&P index inclusion
- Through February 18, 2020, Apollo/Athene Dedicated Investment Program ("ADIP"), the investment fund managed by Apollo that will help fund Athene Co-Invest Reinsurance Affiliate ("ACRA"), has raised \$3.2 billion of capital commitments
- ALRe RBC of 443%⁴ and U.S. RBC of 429% as of December 31, 2019

"Athene's robust fourth quarter results capped a year of record adjusted operating earnings and record organic growth, which was profitably underwritten to very attractive returns above our historical average. Our strong operating performance culminated in 18% year-over-year growth in adjusted book value, which now exceeds \$54 per share," said Jim Belardi, CEO of Athene.

Mr. Belardi continued, "Over the past year, we undertook several important initiatives that will create shareholder value in 2020 and beyond. First, we formed a multi-billion dollar strategic capital solution, ACRA, which greatly enhances our capital flexibility and positions us as a solutions provider of choice amid a restructuring industry. Second, we opportunistically deployed over \$900 million of capital toward share repurchases, securing high-teens returns with limited execution risk. And finally, we structured a pending strategic transaction with our partners at Apollo to eliminate our multi-class share structure, which will serve to broaden Athene's index eligibility and investor appeal. Overall, we see an abundance of opportunity in front of us and we will continue to judiciously allocate capital in order to build long-term shareholder value."

Fourth Quarter 2019 Results

Net income available to AHL common shareholders for the fourth quarter 2019 was \$432 million, compared to a net loss of \$104 million in the fourth quarter 2018. The increase from the prior year quarter was primarily driven by a favorable change in the fair value of net FIA derivatives due to strong equity market performance and a favorable change in discount rates as well as higher adjusted operating income available to common shareholders.

Adjusted operating income available to common shareholders for the fourth quarter 2019 was \$389 million, an increase of \$149 million, or 62%, from the fourth quarter 2018. The increase from the prior year quarter was primarily driven by higher net investment income due to an increase in net invested assets, stronger alternative investment performance and higher bond call income, as well as a lower cost of funds attributable to favorable rider reserves and DAC amortization driven by strong equity market performance.

Adjusted operating income available to common shareholders, excluding notable items, was \$346 million, an increase of \$53 million, or 18%, from the prior year. The increase from the prior year quarter was primarily driven by an increase in net investment earnings.

Full Year 2019 Results

Net income available to AHL common shareholders for the full year 2019 was \$2,136 million, an increase of \$1,083 million, or 103%, from the full year 2018. The increase from the prior year was primarily driven by favorable changes in the fair value of reinsurance assets reflecting a decrease in U.S. Treasury rates and tightening credit spreads. The increase was also driven by higher adjusted operating income available to common shareholders.

Adjusted operating income available to common shareholders for the full year 2019 was \$1,289 million, an increase of \$149 million, or 13%, from the prior year. The increase from the prior year was primarily driven by growth in net invested assets as well as better alternative investment performance and higher bond call income.

Adjusted operating income available to common shareholders, excluding notable items, was \$1,294 million, an increase of \$123 million, or 11%, from the prior year. The increase from the prior year was primarily driven by growth in net invested assets and higher alternative investment performance, as well as higher bond call income.

Deposit Highlights

For the full year 2019, gross organic deposits were a record \$18.1 billion, an increase of 37% compared to the full year 2018, demonstrating the strength of Athene's multi-channel distribution model. Importantly, the liabilities supporting these deposits were underwritten to attractive returns above historical averages. In the fourth quarter 2019, Athene generated quarterly gross organic deposits of \$3.6 billion, a decrease of 30% compared to the fourth quarter 2018, primarily due to lower Retail deposits.

Retail: For the full year 2019, Athene generated new deposits of \$6.8 billion, a 10% decrease from the prior year, mostly driven by a sharp decline in multi-year guaranteed annuity (MYGA) sales, reflecting Athene's disciplined approach to pricing and maintaining mid-teens return targets in a low interest rate environment. In the fourth quarter 2019, Athene generated \$1.1 billion of new deposits, decreasing 44% from the prior year quarter and 41% from the

prior quarter, reflecting the lag effect of pricing adjustments made during the third quarter 2019 in response to lower interest rates. Athene continues to expand distribution particularly through financial institutions, and newer products should generate momentum in the months ahead.

Flow Reinsurance: For the full year 2019, new deposits were \$4.0 billion, an increase of 63% from the prior year. In the fourth quarter 2019, Athene generated \$1.2 billion of new deposits, nearly double the prior quarter result and up slightly from the prior year quarter. The quarter-over-quarter increase was mostly driven by strong volumes from partnerships established over the last 18 months.

Institutional: For the full year 2019, new institutional deposits were \$7.3 billion, an increase of 127% from the prior year, comprised of a record \$6.0 billion of deposits from pension risk transfer transactions as well as \$1.3 billion of funding agreements. In the fourth quarter 2019, Athene generated \$1.3 billion of new deposits from institutional products, including \$809 million of pension risk transfer deposits which includes an inaugural UK pension risk transfer transaction in which Athene acted as a reinsurer to a leading UK insurance company, as well as \$499 million from a funding agreement issuance.

Selected Results

	As of and for the three months ended December 31,						or the twelve d December 31,	
(In millions, except percentages and per share data)		2018		2019		2018		2019
Book value per common share	\$	42.45	\$	76.21	\$	42.45	\$	76.21
Adjusted book value per common share	\$	45.59	\$	54.02	\$	45.59	\$	54.02
Common shares outstanding ¹		195.0		175.7		195.0		175.7
Adjusted operating common shares outstanding ²		193.5		174.9		193.5		174.9
Return on equity (ROE)		(4.8)%		12.8%		12.1%		19.7%
Adjusted operating ROE		10.8 %		16.7%		13.9%		14.1%
Adjusted operating ROE – Retirement Services		16.0 %		21.6%		18.4%		17.3%
Return on assets (ROA)		(0.34)%		1.19%		0.95%		1.55%
Adjusted operating ROA		0.88 %		1.34%		1.22%		1.11%
Net investment spread – Retirement Services		1.43 %		1.84%		1.70%		1.50%
Investments, including related parties	\$	107,632	\$	129,845	\$	107,632	\$	129,845
Net invested assets	\$	111,034	\$	117,486	\$	111,034	\$	117,486
Debt to capital ratio		10.7 %		9.9%		10.7%		9.9%
Adjusted debt to capital ratio		10.1 %		12.1%		10.1%		12.1%
Total AHL shareholders' equity	\$	8,276	\$	13,391	\$	8,276	\$	13,391
Adjusted AHL common shareholders' equity	\$	8,823	\$	9,445	\$	8,823	\$	9,445
Gross organic deposits	\$	5,164	\$	3,640	\$	13,196	\$	18,075
Gross inorganic deposits		7,878		_		26,982		_
Gross deposits		13,042		3,640		40,178		18,075
Deposits attributable to ACRA noncontrolling interest		_		(544)		_		(544)
Net deposits	\$	13,042	\$	3,096	\$	40,178	\$	17,531

¹ Represents common shares outstanding for all classes eligible to participate in dividends for each period presented. Used for the book value per common share calculation.

² Adjusted operating common shares outstanding assumes conversion or settlement of all outstanding items that are able to be converted to or settled in Class A common shares, including the impacts of Class B common shares outstanding on a one-for-one basis, the impacts of all Class M common shares outstanding net of the conversion price and any other stock-based awards outstanding, but excluding any awards for which the exercise or conversion price exceeds the market value of Class A common shares on the applicable measurement date. Our Class B common shares are economically equivalent to Class A common shares and can be converted to Class A common shares on a one-for-one basis at any time. Our Class M common shares are in the legal form of shares but economically function as options as they are convertible into Class A common shares after vesting and settlement of the conversion price. We believe this non-GAAP measure is an appropriate economic representation of our share counts for use in an economic view of book value metrics.

	Three mor Decem			Years Decem		
(In millions, except per share data)	2018		2019	2018		2019
Net income (loss) available to AHL common shareholders	\$ (104)	\$	432	\$ 1,053	\$	2,136
Non-operating adjustments						
Investment gains (losses), net of offsets	(114)		(47)	(274)		994
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	(288)		136	242		(65)
Integration, restructuring and other non-operating expenses	(4)		(24)	(22)		(70)
Stock compensation expense	(3)		(3)	(11)		(12)
Income tax (expense) benefit – non-operating	65		(19)	(22)		
Less: Total non-operating adjustments	 (344)		43	 (87)		847
Adjusted operating income available to common shareholders	\$ 240	\$	389	\$ 1,140	\$	1,289
Adjusted operating income available to common shareholders by segment						
Retirement Services	\$ 296	\$	404	\$ 1,201	\$	1,322
Corporate and Other	(56)		(15)	(61)		(33)
Adjusted operating income available to common shareholders	\$ 240	\$	389	\$ 1,140	\$	1,289
Earnings per common share – basic ¹	\$ (0.53)	\$	2.43	\$ 5.34	\$	11.44
Earnings per common share – diluted Class A ²	\$ (0.53)	\$	2.42	\$ 5.32	\$	11.41
Adjusted operating earnings per common share ³	\$ 1.23	\$	2.21	\$ 5.82	\$	6.97
Weighted average common shares outstanding – basic ¹	197.1		177.3	197.1		186.6
Weighted average common shares outstanding – diluted Class A ²	164.2		145.1	161.1		154.3
Weighted average common shares outstanding – adjusted operating ³	195.5		175.7	195.9		184.8
	Three mor		31,	 Years Decem		31,
(In millions)	 2018	_	2019	 2018		2019
Notable items						
Retirement Services adjusted operating income available to common shareholders	\$ 296	\$	404	\$ 1,201	\$	1,322
Rider reserve and DAC equity market performance	58		(25)	21		(51)
Actuarial updates	_		(22)	_		(22)
Out of period actuarial adjustments	_		_	_		30
Unlocking	_		_	13		48
Tax impact of notable items	(5)		4	 (3)		
Retirement Services notable items	53		(43)	31	_	5
Retirement Services adjusted operating income available to common shareholders excluding notable items	349		361	1,232		1,327
Corporate and Other adjusted operating loss available to common shareholders	(56)		(15)	(61)		(33)
Consolidated adjusted operating income available to common shareholders excluding notable items	\$ 293	\$	346	\$ 1,171	\$	1,294
Adjusted operating earnings per common share excluding notables ³	\$ 1.50	\$	1.97	\$ 5.98	\$	7.00

¹ Basic earnings per common share, including basic weighted average common shares outstanding includes all classes eligible to participate in dividends for each period presented.

² Diluted earnings per common share on a GAAP basis for Class A common shares, including diluted Class A weighted average common shares outstanding, includes the dilutive impacts, if any, of Class B common shares, Class M common shares and any other stock-based awards. Dilutive securities totaled 550,886 weighted average shares for the quarter. Diluted earnings per common share on a GAAP basis for Class A common shares are based on allocated net income available to AHL common shareholders of \$351 million (81% of net income available to AHL common shareholders) for the three months ended December 31, 2019 and 2018, respectively. Dilutive securities totaled 434,596 weighted average shares for the year. Diluted earnings per common share on a GAAP basis for Class A common shares are based on allocated net income available to AHL common shareholders of \$1,760 million (82% of net income available to AHL common shareholders) for the years ended December 31, 2019 and 2018, respectively.

³ Weighted average common shares outstanding – adjusted operating assumes conversion or settlement of all outstanding items that are able to be converted to or settled in Class A common shares, including the impacts of Class B common shares on a one-for-one basis, the impacts of all Class M common shares net of the conversion price and any other stock-based awards, but excluding any awards for which the exercise or conversion price exceeds the market value of Class A common shares on the applicable measurement date. Our Class B common shares are economically equivalent to Class A common shares and can be converted to Class A common shares on a one-for-one basis at any time. Our Class M common shares are in the legal form of shares but economically function as options as they are convertible into Class A common shares after vesting and settlement of the conversion price. In calculating Class A diluted earnings per common share on a GAAP basis, we are required to apply sequencing rules to determine the dilutive impacts, if any, of our Class B common shares, Class M common shares and or any other stock-based awards. To the extent our Class B common shares, Class M common shares and/or any other stock-based awards are not dilutive they are excluded. We believe this non-GAAP measure is an appropriate economic representation of our share counts for use in an economic view of adjusted operating earnings per common share.

Segment Results

Retirement Services

Fourth Quarter 2019 Results

For the fourth quarter 2019, adjusted operating income available to common shareholders in Retirement Services was \$404 million, an increase of \$108 million, or 36%, from the fourth quarter 2018, resulting in an adjusted operating ROE of 21.6%. The increase in adjusted operating income available to common shareholders over the prior year quarter was primarily driven by higher investment income as a result of net invested asset growth as well as a lower cost of funds.

Excluding notable items, adjusted operating income available to common shareholders in Retirement Services was \$361 million, resulting in an adjusted operating ROE of 19.4%.

The net investment spread, which measures net investment earnings less cost of funds, was 1.84% of average net invested assets for the fourth quarter 2019, an increase of 41 basis points from the fourth quarter 2018. The increase from the prior year quarter was primarily driven by a decrease in the cost of funds including favorable rider reserves and DAC amortization due to strong equity market performance as well as favorable actuarial updates, partially offset by higher gross profits.

The net investment earned rate (NIER) was 4.57% for the fourth quarter 2019, unchanged from the prior year quarter. The annualized return on fixed income and other investments during the fourth quarter 2019 was 4.29%, compared to 4.35% in the prior year quarter, a decline of 6 basis points during a period in which the average level of interest rates as measured by the 10-year U.S. Treasury fell 125 basis points. The annualized return on alternative investments during the fourth quarter 2019 was 10.94% with particular strength in the Venerable investment, compared to 11.00% in the prior year quarter.

Cost of funds, which is comprised of the total cost of crediting on deferred annuities and institutional products as well as other liability costs, was 2.73% for the fourth quarter 2019, a decrease of 41 basis points from the fourth quarter 2018.

Total cost of crediting was 1.83% for the fourth quarter 2019, a decrease of 8 basis points from the prior year quarter, primarily driven by a decrease in the institutional crediting rate. The cost of crediting on institutional business was 2.85%, a decrease of 89 basis points from the fourth quarter 2018, mostly driven by favorable actuarial updates. Cost of crediting on deferred annuities was 1.95%, a decrease of 5 basis points from the fourth quarter 2018 due to rate actions and the impact of selling two-thirds of ACRA to ADIP.

Other liability costs were 0.90% for the fourth quarter 2019, a decrease of 33 basis points from the prior year quarter primarily due to favorable rider reserves and DAC amortization due to strong equity market performance.

Full Year 2019 Results

For the full year 2019, adjusted operating income available to common shareholders in Retirement Services was \$1,322 million, an increase of \$121 million, or 10%, from the full year 2018, resulting in an adjusted operating ROE of 17.3%. The increase in adjusted operating income available to common shareholders over the prior year was primarily driven by net invested asset growth and higher bond call income, as well as a lower operating expense ratio resulting from Athene's scalable platform.

Excluding notable items, adjusted operating income available to common shareholders in Retirement Services was \$1,327 million, resulting in an adjusted operating ROE of 17.4%.

The net investment spread, which measures net investment earnings less cost of funds, was 1.50% of average net invested assets for full year 2019, a decrease of 20 basis points from the full year 2018. The decrease from the prior year was primarily driven by a decrease in the NIER as well as a slightly higher cost of funds.

The NIER was 4.43% for the full year 2019, a decrease of 17 basis points from the prior year, mostly driven by a lower fixed income and other NIER primarily due to the runoff of higher yielding assets, partially offset by higher

bond call income. The return on alternative investments during the full year 2019 was 9.32%, compared to 11.15% in the prior year.

Cost of funds, which is comprised of the total cost of crediting on deferred annuities and institutional products as well as other liability costs, was 2.93% for the full year 2019, an increase of 3 basis points from the full year 2018. Total cost of crediting was 1.91% for the full year 2019, an increase of 9 basis points from the prior year, primarily driven by growth in the institutional business, which carries a higher cost of crediting compared to deferred annuities. Cost of crediting on deferred annuities was 1.97% and the cost of crediting on institutional business was 3.47%. Other liability costs were 1.02% for the full year 2019, a decrease of 6 basis points from the prior year primarily due to favorable equity market performance, partially offset by adverse unlocking.

Corporate & Other

Fourth Quarter 2019 Results

In the fourth quarter 2019, the adjusted operating loss available to common shareholders was \$15 million in Corporate & Other, a decrease of \$41 million from adjusted operating loss available to common shareholders of \$56 million in the fourth quarter 2018. The lower operating loss was primarily driven by an increase in alternative investment income due to favorable changes in public equities, partially offset by dividends on preferred shares that were issued in 2019.

Full Year 2019 Results

For the full year 2019, the adjusted operating loss available to common shareholders was \$33 million in Corporate & Other, a decrease of \$28 million from adjusted operating loss available to common shareholders of \$61 million for the full year 2018. The lower operating loss was driven by higher alternative investment income due to favorable changes in public equities, partially offset by lower earnings on excess capital and preferred stock dividends.

Share Repurchase Activity

From December 2018 through February 2020, Athene repurchased 22.4 million shares of its common stock for \$927 million under previously announced share repurchase programs. During this period, shares were purchased at an average cost of \$41.44 per share and an average price-to-adjusted book value multiple of 0.86x. This activity includes 7.1 million shares repurchased during the fourth quarter 2019 for \$283 million. As of February 18, 2020, remaining share repurchase authorization totaled \$640 million.

Update on Strategic Capital Solution (ACRA)

To date, capital commitments raised for ADIP, the investment fund managed by Apollo Global Management, Inc. that will help capitalize ACRA, total \$3.2 billion, and additional commitments are expected to close in the coming months. As previously announced, Athene sold two-thirds of its interests in ACRA to ADIP for \$575 million on October 1, 2019, in exchange for economics on approximately \$6.7 billion of invested assets. Following this partial sale, ADIP's noncontrolling interest in ACRA is now being reflected in Athene's financial statements. Additional information on ACRA and ADIP can be found in a presentation previously posted on Athene's website at ir athene.com.

Conference Call Information

Athene will host a conference call today, Tuesday, February 18, 2020, at 10 a.m. ET. During the call, members of Athene's senior management team will review Athene's financial results for the fourth quarter and full-year ended December 31, 2019. This press release, the fourth quarter and full-year 2019 earnings presentation and financial supplement are posted to Athene's website at ir.athene.com.

- Live conference call: Toll-free at (866) 901-0811 (domestic) or (346) 354-0810 (international)
- Conference call replay available through March 5, 2020 at (800) 585-8367 (domestic) or (404) 537-3406 (international)
- Conference ID number: 4098423
- Live and archived webcast available at ir.athene.com

Investor Relations Contact: Media Contact:

Noah Gunn Karen Lynn

+1 441-279-8534 +1 441-279-8460 +1 646-768-7309 +1 515-342-3910 ngunn@athene.com klynn@athene.com

About Athene Holding Ltd.

Athene, through its subsidiaries, is a leading retirement services company that issues, reinsures and acquires retirement savings products designed for the increasing number of individuals and institutions seeking to fund retirement needs. The products offered by Athene include:

- Retail fixed, fixed indexed and index-linked annuity products:
- Reinsurance arrangements with third-party annuity providers; and
- Institutional products, such as funding agreements and group annuity contracts related to pension risk transfers.

Athene had total assets of \$146.9 billion as of December 31, 2019. Athene's principal subsidiaries include Athene Annuity & Life Assurance Company, a Delaware-domiciled insurance company, Athene Annuity and Life Company, an Iowa-domiciled insurance company, Athene Annuity & Life Assurance Company of New York, a New York-domiciled insurance company and Athene Life Re Ltd., a Bermuda-domiciled reinsurer.

Further information about our companies can be found at athene.com.

Non-GAAP Measures

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

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

- · Investment Gains (Losses), Net of Offsets
- · Change in Fair Values of Derivatives and Embedded Derivatives FIAs, Net of Offsets
- Integration, Restructuring and Other Non-Operating Expenses
- Stock Compensation Expense
- · Bargain Purchase Gain
- Income Tax (Expense) Benefit Non-Operating

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

Adjusted operating ROA is a non-GAAP measure used to evaluate our financial performance and profitability. Adjusted operating ROA is computed using our adjusted operating income available to common shareholders divided by average net invested assets for the relevant period. To enhance the ability to analyze these measures across periods, interim periods are annualized. While we believe each of these metrics are meaningful financial metrics and enhance our understanding of the underlying profitability drivers of our business, they should not be used as a substitute for ROA presented under GAAP.

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

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

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

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

- Net investment earned rate is a non-GAAP measure we use to evaluate the performance of our net invested assets that does not correspond to GAAP net investment income. Net investment earned rate is computed as the income from our net invested assets divided by the average net invested assets for the relevant period. To enhance the ability to analyze these measures across periods, interim periods are annualized. The adjustments to arrive at our net investment earned rate add alternative investment gains and losses, gains and losses related to trading securities for CLOs, net VIE impacts (revenues, expenses and noncontrolling interest) and the change in fair value of reinsurance assets. We include the income and assets supporting our change in fair value of reinsurance assets by evaluating the underlying investments of the funds withheld at interest receivables and we include the net investment income from those underlying investments which does not correspond to the GAAP presentation of change in fair value of reinsurance assets. We exclude the income and assets supporting business that we have exited through ceded reinsurance including funds withheld agreements. We believe the adjustments for reinsurance provide a net investment earned rate on the assets for which we have economic exposure.
- Cost of funds includes liability costs related to cost of crediting on both deferred annuities and institutional
 products as well as other liability costs. Cost of funds is computed as the total liability costs divided by the
 average net invested assets for the relevant period. To enhance the ability to analyze these measures across
 periods, interim periods are annualized.
 - Cost of crediting includes the costs for both deferred annuities and institutional products. Cost of crediting on deferred annuities is the interest credited to the policyholders on our fixed strategies as well as the option costs on the indexed annuity strategies. With respect to FIAs, the cost of providing index credits includes the expenses incurred to fund the annual index credits, and where applicable, minimum guaranteed interest credited. Cost of crediting on institutional products is comprised of PRT costs including interest credited, benefit payments and other reserve changes, net of premiums received when issued, as well as funding agreement costs including the interest payments and other reserve changes. Cost of crediting is computed as the cost of crediting for deferred annuities and institutional products divided by the average net invested assets for the relevant periods. Cost of crediting on deferred annuities is computed as the net interest credited on fixed strategies and option costs on indexed annuity strategies divided by the average net account value of our deferred annuities. Cost of crediting on institutional products is computed as the PRT and funding agreement costs divided by the average net institutional reserve liabilities. Our average net invested assets, net account values and net institutional reserve liabilities are averaged over the number of quarters in the relevant period to obtain our associated cost of crediting for such period. To enhance the ability to analyze these measures across periods, interim periods are annualized.
 - Other liability costs include DAC, DSI and VOBA amortization, change in rider reserves, the cost of liabilities on products other than deferred annuities and institutional products, excise taxes, premiums, product charges and other revenues. We believe a measure like other liability costs is useful in analyzing the trends of our core business operations and profitability. While we believe other liability costs is a meaningful financial metric and enhances our understanding of the underlying profitability drivers of our business, it should not be used as a substitute for total benefits and expenses presented under GAAP.

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

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

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

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

Safe Harbor for Forward-Looking Statements

This press release contains, and certain oral statements made by Athene's representatives from time to time may contain, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are subject to risks and uncertainties that could cause actual results, events and developments to differ materially from those set forth in, or implied by, such statements. These statements are based on the beliefs and assumptions of Athene's management and the management of Athene's subsidiaries. Generally, forward-looking statements include actions, events, results, strategies and expectations and are often identifiable by use of the words "believes," "expects," "intends," "anticipates," "plans," "seeks," "estimates," "projects," "may," "will," "could," "might," or "continues" or similar expressions. Forward-looking statements within this press release include, but are not limited to, discussions related to the issuance and exchange of common equity interests of Athene and Apollo and the results to be derived therefrom; amendments to the bye-laws of Athene to eliminate its multi-class share structure; potential inclusion of Athene's common shares in certain specified indices; the ACRA capital raise and the benefits to be derived therefrom; the future outcome of Athene's capital allocation determinations; and future financial performance. Factors that could cause actual results, events and developments to differ include, without limitation: Athene's and/or Apollo's failure to obtain approval of the transaction by its shareholders or regulators; Athene's failure to recognize the benefits expected to be derived from the transaction with Apollo; unexpected difficulties or expenditures related to the transaction with Apollo; disruption of Athene's current plans, operations and relationships with policyholders, reinsurance counterparties or other business partners caused by the announcement and pendency of the transaction with Apollo; legal proceedings, including those that may be instituted against Athene, Athene's board of directors, Athene's executive officers and others following announcement of the transaction with Apollo; failure to close the ACRA capital raise or failure to achieve the benefits expected to be derived therefrom; the accuracy of Athene's assumptions and estimates; Athene's ability to maintain or improve financial strength ratings; Athene's ability to manage its business in a highly regulated industry; regulatory changes or actions; the impact of Athene's reinsurers failing to meet their assumed obligations; the impact of interest rate fluctuations; changes in the federal income tax laws and regulations; the accuracy of Athene's interpretation of the Tax Cuts and Jobs Act; litigation (including class action litigation), enforcement investigations or regulatory scrutiny; the performance of third parties; the loss of key personnel; telecommunication, information technology and other operational systems failures; the continued availability of capital; new accounting rules or changes to existing accounting rules; general economic conditions; Athene's ability to protect our intellectual property; the ability to maintain or obtain approval of the Delaware Department of Insurance, the Iowa Insurance Division and other regulatory authorities as required for our operations; and other factors discussed from time to time in Athene's filings with the SEC, including its annual report on Form 10-K for the year ended December 31, 2018, its quarterly report on Form 10-Q for the quarterly period ended September 30, 2019 and its other SEC filings, which can be found at the SEC's website www.sec.gov.

All forward-looking statements described herein are qualified by these cautionary statements and there can be no assurance that the actual results, events or developments referenced herein will occur or be realized. Athene does not undertake any obligation to update or revise forward-looking statements to reflect changed assumptions, the occurrence of unanticipated events or changes to future operating results.

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	Dec	December 31, 2018		cember 31, 2019
Assets				
Investments				
Available-for-sale securities, at fair value	\$	59,265	\$	71,374
Trading securities, at fair value		1,949		2,054
Equity securities, at fair value		216		247
Mortgage loans, net of allowances		10,340		14,306
Investment funds		703		731
Policy loans		488		417
Funds withheld at interest		15,023		15,181
Derivative assets		1,043		2,888
Short-term investments		191		596
Other investments		122		158
Total investments		89,340		107,952
Cash and cash equivalents		2,911		4,237
Restricted cash		492		402
Investments in related parties				
Available-for-sale securities, at fair value		1,437		3,804
Trading securities, at fair value		249		785
Equity securities, at fair value		120		58
Mortgage loans		291		653
Investment funds		2,232		2,886
Funds withheld at interest		13,577		13,220
Other investments		386		487
Accrued investment income		682		807
Reinsurance recoverable		5,534		4,863
Deferred acquisition costs, deferred sales inducements and value of business acquired		5,907		5,008
Other assets		1,635		985
Assets of consolidated variable interest entities				
Investments				
Trading securities, at fair value – related party		35		16
Equity securities, at fair value – related party		50		6
Investment funds		624		683
Cash and cash equivalents		2		3
Other assets		1		20
Total assets	\$	125,505	\$	146,875
				(04:

(Continued)

Condensed Consolidated Balance Sheets (unaudited, in millions)

	December 31,	December 31,
	2018	2019
Liabilities		
Interest sensitive contract liabilities	\$ 96,6	10 \$ 102,745
Future policy benefits	16,70	23,330
Other policy claims and benefits	14	138
Dividends payable to policyholders	11	18 113
Short-term debt	-	— 475
Long-term debt	99	91 992
Derivative liabilities	8	97
Payables for collateral on derivatives and securities to repurchase	96	3,255
Funds withheld liability	72	21 408
Other liabilities	88	1,181
Total liabilities	117,22	132,734
Equity		
Preferred stock	-	
Common stock	-	
Additional paid-in capital	3,46	62 4,171
Retained earnings	5,28	6,939
Accumulated other comprehensive income (loss)	(47	72) 2,281
Total Athene Holding Ltd. shareholders' equity	8,27	76 13,391
Noncontrolling interests	-	750
Total equity	8,27	76 14,141
Total liabilities and equity	\$ 125,50	05 \$ 146,875

(Concluded)

Condensed Consolidated Statements of Income (unaudited, in millions)

	Three months ended December 31,			Years Decem		
		2018		2019	2018	2019
Revenue						
Premiums	\$	1,857	\$	907	\$ 3,462	\$ 6,382
Product charges		128		132	449	524
Net investment income		1,121		1,225	4,004	4,522
Investment related gains (losses)		(1,902)		976	(1,324)	4,752
OTTI investment losses						
OTTI losses		(14)		(1)	(24)	(44)
OTTI losses reclassified to (from) OCI		2		(5)	6	6
Net OTTI losses		(12)		(6)	(18)	(38)
Other revenues		4		10	26	37
Revenues of consolidated variable interest entities						
Net investment income		17		17	56	74
Investment related gains (losses)		(35)		(5)	(18)	5
Total revenues		1,178		3,256	6,637	16,258
Benefits and Expenses						
Interest sensitive contract benefits		(825)		1,146	290	4,557
Amortization of DSI		(12)		36	54	74
Future policy and other policy benefits		2,018		1,192	4,281	7,587
Amortization of DAC and VOBA		(33)		143	174	958
Dividends to policyholders		5		6	37	36
Policy and other operating expenses		172		200	626	744
Total benefits and expenses		1,325		2,723	5,462	13,956
Income (loss) before income taxes		(147)		533	1,175	2,302
Income tax expense (benefit)		(43)		69	122	117
Net income (loss)		(104)		464	1,053	2,185
Less: Net income attributable to noncontrolling interests		_		13	_	13
Net income (loss) attributable to Athene Holding Ltd. shareholders		(104)		451	1,053	2,172
Less: Preferred stock dividends		_		19	_	36
Net income (loss) available to Athene Holding Ltd. common shareholders	\$	(104)	\$	432	\$ 1,053	\$ 2,136

Non-GAAP Measure Reconciliations

The reconciliation of net income available to Athene Holding Ltd. common shareholders to adjusted operating income available to common shareholders excluding notable items is as follows:

	Three months ended December 31,					Years Decem	
(In millions)		2018		2019		2018	2019
Net income available to Athene Holding Ltd. common shareholders	\$	(104)	\$	432	\$	1,053	\$ 2,136
Less: Total non-operating adjustments		(344)		43		(87)	847
Adjusted operating income available to common shareholders		240		389		1,140	1,289
Notable items		53		(43)		31	5
Adjusted operating income available to common shareholders excluding notable items	\$	293	\$	346	\$	1,171	\$ 1,294
		······································					
Retirement Services adjusted operating income available to common shareholders	\$	296	\$	404	\$	1,201	\$ 1,322
Rider reserve and DAC equity market performance		58		(25)		21	(51)
Actuarial updates		_		(22)		_	(22)
Out of period actuarial adjustments		_		_		_	30
Unlocking		_		_		13	48
Tax impact of notable items		(5)		4		(3)	 _
Retirement Services notable items		53		(43)		31	5
Retirement Services adjusted operating income available to common shareholders excluding notable items		349		361		1,232	1,327
Corporate and Other adjusted operating loss available to common shareholders		(56)		(15)		(61)	(33)
Consolidated adjusted operating income available to common shareholders excluding notable items	\$	293	\$	346	\$	1,171	\$ 1,294

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

	Three months ended December 31,			Years ended December 31			-	
		2018		2019		2018		2019
Basic earnings (loss) per share – Class A common shares	\$	(0.53)	\$	2.43	\$	5.34	\$	11.44
Non-operating adjustments								
Investment gains (losses), net of offsets		(0.59)		(0.26)		(1.40)		5.39
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets		(1.47)		0.77		1.24		(0.36)
Integration, restructuring and other non-operating expenses		(0.02)		(0.13)		(0.12)		(0.37)
Stock compensation expense		(0.01)		(0.02)		(0.05)		(0.07)
Income tax (expense) benefit – non-operating		0.33		(0.11)		(0.11)		_
Less: Total non-operating adjustments		(1.76)		0.25		(0.44)		4.59
Less: Effect of items convertible to or settled in Class A common shares		_		(0.03)		(0.04)		(0.12)
Adjusted operating earnings per common share	\$	1.23	\$	2.21	\$	5.82	\$	6.97

The reconciliation of basic weighted average Class A common shares to weighted average common shares outstanding – adjusted operating, is as follows:

	Three month December		Years er Decembe	
(In millions)	2018	2019	2018	2019
Basic weighted average common shares outstanding – Class A	164.2	144.5	160.5	153.9
Conversion of Class B common shares to Class A common shares	25.5	25.4	29.3	25.4
Conversion of Class M common shares to Class A common shares	5.2	5.2	5.6	5.1
Effect of other stock compensation plans	0.6	0.6	0.5	0.4
Weighted average common shares outstanding – adjusted operating	195.5	175.7	195.9	184.8

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

		December 31,					
(In millions)	2018			2019			
Total AHL shareholders' equity	\$	8,276	\$	13,391			
Less: Preferred stock				1,172			
Total AHL common shareholders' equity		8,276		12,219			
Less: AOCI		(472)		2,281			
Less: Accumulated change in fair value of reinsurance assets		(75)		493			
Total adjusted AHL common shareholders' equity	\$	8,823	\$	9,445			
Retirement Services	\$	7,807	\$	7,443			
Corporate and Other		1,016		2,002			
Total adjusted AHL common shareholders' equity	\$	8,823	\$	9,445			

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

	Three months ended December 31,				Years ended December 31,			
(In millions)		2018		2019		2018		2019
Average AHL shareholders' equity	\$	8,627	\$	13,468	\$	8,726	\$	10,834
Less: Average preferred stock		_		1,172		_		586
Less: Average AOCI		(220)		2,362		489		905
Less: Average accumulated change in fair value of reinsurance assets		(53)		610		43		209
Average adjusted AHL common shareholders' equity	\$	8,900	\$	9,324	\$	8,194	\$	9,134
Retirement Services	\$	7,416	\$	7,468	\$	6,522	\$	7,625
Corporate and Other		1,484		1,856		1,672		1,509
Average adjusted AHL common shareholders' equity	\$	8,900	\$	9,324	\$	8,194	\$	9,134

The reconciliation of basic Class A common shares outstanding to adjusted operating common shares outstanding is as follows:

	Decemb	er 31,
(In millions)	2018	2019
Class A common shares outstanding	162.2	142.8
Conversion of Class B common shares to Class A common shares	25.4	25.4
Conversion of Class M common shares to Class A common shares	4.9	5.5
Effect of other stock compensation plans	1.0	1.2
Adjusted operating common shares outstanding	193.5	174.9

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

	December 31,					
		2018		2019		
Book value per common share	\$	42.45	\$	76.21		
Preferred stock		_		(6.67)		
AOCI		2.42		(12.98)		
Accumulated change in fair value of reinsurance assets		0.39		(2.80)		
Effect of items convertible to or settled in Class A common shares		0.33		0.26		
Adjusted book value per common share	\$	45.59	\$	54.02		

The reconciliation of debt to capital ratio to adjusted debt to capital ratio is as follows:

	 December 31,				
(In millions, except percentages)	2018 2019				
Total debt	\$ 991	\$	1,467		
Total AHL shareholders' equity	 8,276		13,391		
Total capitalization	9,267		14,858		
Less: AOCI	(472)		2,281		
Less: Accumulated change in fair value of reinsurance assets	 (75)		493		
Total adjusted capitalization	\$ 9,814	\$	12,084		
Debt to capital ratio	10.7 %		9.9%		
AOCI	(0.5)%		1.8%		
Accumulated change in fair value of reinsurance assets	(0.1)%		0.4%		
Adjusted debt to capital ratio	10.1 %		12.1%		

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

	Three months ended December 31,				Years ended December 31,						
	201	8	20 ⁻	19	20	18	20	19			
(In millions)	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate			
GAAP net investment income	\$ 1,121	4.10 %	\$ 1,225	4.22 %	\$ 4,004	4.30 %	\$ 4,522	3.91 %			
Change in fair value of reinsurance assets	132	0.48 %	188	0.65 %	301	0.32 %	680	0.59 %			
Net VIE earnings	(18)	(0.07)%	12	0.04 %	37	0.04 %	80	0.07 %			
Alternative income gain (loss)	(20)	(0.07)%	(12)	(0.04)%	(34)	(0.04)%	1	— %			
ACRA noncontrolling interest	_	— %	(61)	(0.21)%	_	— %	(61)	(0.05)%			
Held for trading amortization and other	(11)	(0.04)%	(13)	(0.04)%	(76)	(0.08)%	(43)	(0.04)%			
Total adjustments to arrive at net investment earnings/earned rate	83	0.30 %	114	0.40 %	228	0.24 %	657	0.57 %			
Total net investment earnings/earned rate	\$ 1,204	4.40 %	\$ 1,339	4.62 %	\$ 4,232	4.54 %	\$ 5,179	4.48 %			
Retirement Services	\$ 1,231	4.57 %	\$ 1,306	4.57 %	\$ 4,188	4.60 %	\$ 5,062	4.43 %			
Corporate and Other	(27)	(7.57)%	33	7.16 %	44	1.99 %	117	8.33 %			
Total net investment earnings/earned rate	\$ 1,204	4.40 %	\$ 1,339	4.62 %	\$ 4,232	4.54 %	\$ 5,179	4.48 %			
Retirement Services	\$107,939		\$114,149		\$ 90,995		\$114,310				
Corporate and Other	1,484		1,837		2,182		1,409				
Consolidated average net invested assets	\$109,423		\$115,986		\$ 93,177		\$115,719				

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

	Three months ended December 31,				Years ended December 31,					
	201	8	20	19	201	18	201	9		
(In millions)	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate		
GAAP interest sensitive contract benefits	\$ (825)	(3.06)%	\$ 1,146	4.02 %	\$ 290	0.32 %	\$ 4,557	3.99 %		
Interest credited other than deferred annuities and institutional products	35	0.13 %	64	0.23 %	65	0.07 %	232	0.20 %		
FIA option costs	275	1.02 %	269	0.94 %	886	0.97 %	1,109	0.97 %		
Product charges (strategy fees)	(28)	(0.10)%	(31)	(0.11)%	(98)	(0.11)%	(119)	(0.10)%		
Reinsurance embedded derivative impacts	14	0.05 %	14	0.05 %	49	0.05 %	57	0.05 %		
Change in fair values of embedded derivatives – FIAs	1,039	3.85 %	(905)	(3.17)%	436	0.48 %	(3,644)	(3.19)%		
Negative VOBA amortization	9	0.03 %	8	0.03 %	31	0.04 %	36	0.03 %		
ACRA noncontrolling interest	_	— %	(42)	(0.15)%	_	— %	(42)	(0.03)%		
Other changes in interest sensitive contract liabilities	(3)	(0.01)%	(2)	(0.01)%	_	— %	(7)	(0.01)%		
Total adjustments to arrive at cost of crediting	1,341	4.97 %	(625)	(2.19)%	1,369	1.50 %	(2,378)	(2.08)%		
Retirement Services cost of crediting	\$ 516	1.91 %	\$ 521	1.83 %	\$ 1,659	1.82 %	\$ 2,179	1.91 %		
Retirement Services cost of crediting on deferred annuities	\$ 443	2.00 %	\$ 429	1.95 %	\$ 1,431	1.95 %	\$ 1,774	1.97 %		
Retirement Services cost of crediting on institutional products	73	3.74 %	92	2.85 %	228	3.42 %	405	3.47 %		
Retirement Services cost of crediting	\$ 516	1.91 %	\$ 521	1.83 %	\$ 1,659	1.82 %	\$ 2,179	1.91 %		
Retirement Services average net invested assets	\$107,939		\$114,149	_	\$ 90,995		\$114,310	_		
Average net account value on deferred annuities	88,874		87,660		73,567		89,878			
Average institutional net reserve liabilities	7,827		12,931		6,683		11,632			

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

	Three months ended December 31,				ed 31,			
(In millions)		2018		2019	2018 20			2019
GAAP benefits and expenses	\$	1,325	\$	2,723	\$	5,462	\$	13,956
Premiums		(1,857)		(907)		(3,462)		(6,382)
Product charges		(128)		(132)		(449)		(524)
Other revenues		(4)		(10)		(26)		(37)
Cost of crediting		(227)		(238)		(724)		(1,013)
Change in fair value of embedded derivatives – FIA, net of offsets		1,266		(1,003)		327		(3,577)
DAC, DSI and VOBA amortization related to investment gains and losses		36		28		110		(477)
Rider reserves		8		3		16		(58)
Policy and other operating expenses, excluding policy acquisition expenses		(102)		(138)		(395)		(488)
AmerUs closed block fair value liability		14		6		112		(152)
ACRA noncontrolling interest		_		(74)		_		(74)
Other		1_		1		10		(2)
Total adjustments to arrive at other liability costs		(993)		(2,464)		(4,481)		(12,784)
Other liability costs	\$	332	\$	259	\$	981	\$	1,172
Retirement Services	\$	332	\$	259	\$	981	\$	1,172
Corporate and Other								_
Consolidated other liability costs	\$	332	\$	259	\$	981	\$	1,172

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

	Three months ended December 31,			Years ended				
					1,			
(In millions)		2018	2019		2018		2019	
Policy and other operating expenses	\$	172	\$ 200	\$	626	\$	744	
Interest expense		(13)	(20)	(57)		(67)	
Policy acquisition expenses, net of deferrals		(70)	(62)	(233)		(256)	
Integration, restructuring and other non-operating expenses		(4)	(24)	(22)		(70)	
Stock compensation expenses		(3)	(3)	(11)		(12)	
ACRA noncontrolling interest		_	(5)	_		(5)	
Total adjustments to arrive at operating expenses		(90)	(114)	(323)		(410)	
Operating expenses	\$	82	\$ 86	\$	303	\$	334	
Retirement Services	\$	65	\$ 69	\$	242	\$	266	
Corporate and Other		17	17		61		68	
Consolidated operating expenses	\$	82	\$ 86	\$	303	\$	334	

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

	Decer	December 31,				
(In millions)	2018	2019				
Total investments, including related parties	\$ 107,632	\$ 129.	,845			
Derivative assets	(1,043) (2.	,888)			
Cash and cash equivalents (including restricted cash)	3,403	4.	,639			
Accrued investment income	682		807			
Payables for collateral on derivatives	(969) (2.	2,743)			
Reinsurance funds withheld and modified coinsurance	223	(1.	,440)			
VIE and VOE assets, liabilities and noncontrolling interest	718		730			
Unrealized (gains) losses	808	(4.	,095)			
Ceded policy loans	(281) ((235)			
Net investment receivables (payables)	(139)	(57)			
ACRA noncontrolling interest		(7.	,077)			
Total adjustments to arrive at net invested assets	3,402	(12	,359)			
Net invested assets	\$ 111,034	\$ 117,	,486			