



Athene 3Q'18 Earnings Presentation

Disclaimer

This presentation does not constitute an offer to sell, or the solicitation of an offer to buy, any security of Athene Holding Ltd. ("Athene").

Certain information contained herein and certain oral statements made in reference thereto may be "forward-looking" in nature. These statements include, but are not limited to, discussions related to the financial results to be achieved as a result of Athene's consummation of the reinsurance arrangement with Voya Financial, Inc.; the impact of tax reform on Athene's effective tax rate, overall tax rate and on its business more broadly; the performance of its business; its liquidity and capital resources and the other non-historical statements. These forward-looking statements are based on management's beliefs, as well as assumptions made by, and information currently available to, management. When used in this presentation, the words "believe," "anticipate," "estimate," "expect," "intend" and similar expressions are intended to identify forward-looking statements. Although management believes that the expectations reflected in these forward-looking statements are reasonable, it can give no assurance that these expectations will prove to be correct. These statements are subject to certain risks, uncertainties and assumptions. For a discussion of the risks and uncertainties related to Athene's forward-looking statements, see its annual report on Form 10-K for the year ended December 31, 2017, its quarterly report on Form 10-Q for quarterly period ended June 30, 2018, and its other SEC filings, which can be found at the SEC's website www.sec.gov. Due to these various risks, uncertainties and assumptions, actual events or results or the actual performance of Athene may differ materially from that reflected or contemplated in such forward-looking statements. Athene undertakes no obligation to publicly update or review any forward-looking statements, whether as a result of new information, future developments or otherwise.

Information contained herein may include information respecting prior performance of Athene. Information respecting prior performance, while a useful tool, is not necessarily indicative of actual results to be achieved in the future, which is dependent upon many factors, many of which are beyond Athene's control. The information contained herein is not a guarantee of future performance by Athene, and actual outcomes and results may differ materially from any historic, pro forma or projected financial results indicated herein. Certain of the financial information contained herein is unaudited or based on the application of non-GAAP financial measures. These non-GAAP financial measures should be considered in addition to and not as a substitute for, or superior to, financial measures presented in accordance with GAAP. Furthermore, certain financial information is based on estimates of management. These estimates, which are based on the reasonable expectations of management, are subject to change and there can be no assurance that they will prove to be correct. The information contained herein does not purport to be all-inclusive or contain all information that an evaluator may require in order to properly evaluate the business, prospects or value of Athene. Athene does not have any obligation to update this presentation and the information may change at any time without notice.

Certain of the information used in preparing this presentation was obtained from third parties or public sources. No representation or warranty, express or implied, is made or given by or on behalf of Athene or any other person as to the accuracy, completeness or fairness of such information, and no responsibility or liability is accepted for any such information.

This document is not intended to be, nor should it be construed or used as, financial, legal, tax, insurance or investment advice. There can be no assurance that Athene will achieve its objectives. Past performance is not indicative of future success.

All information is as of the dates indicated herein.

Athene 3Q'18 Financial Results Highlights

Record adjusted operating income, strong ROEs, and robust growth in adjusted book value per share

Earnings

- Adjusted operating income of \$381 million or \$1.95 per adjusted operating share
- Adjusted operating income, excluding notable items of \$358 million or \$1.83 per adjusted operating share
- Operating expenses as a percentage of average invested assets of 0.31%

Assets

- Total invested assets of \$100.6 billion, up 38% year-over-year, excluding Germany
- Consolidated net investment earned rate (NIER) of 4.52%
 - Fixed income and other NIER: 4.33%
 - Alternatives NIER: 9.13%

Liabilities

- Total organic deposits of \$3.3 billion (\$8.0 billion YTD)
 - Retail: \$2.2 billion (\$5.5 billion YTD)
 - Flow Reinsurance: \$0.6 billion (\$1.3 billion YTD)
 - Pension Risk Transfer: \$0.5 billion (\$0.8 billion YTD)
 - Funding Agreements: (\$0.4 billion YTD)

Capital

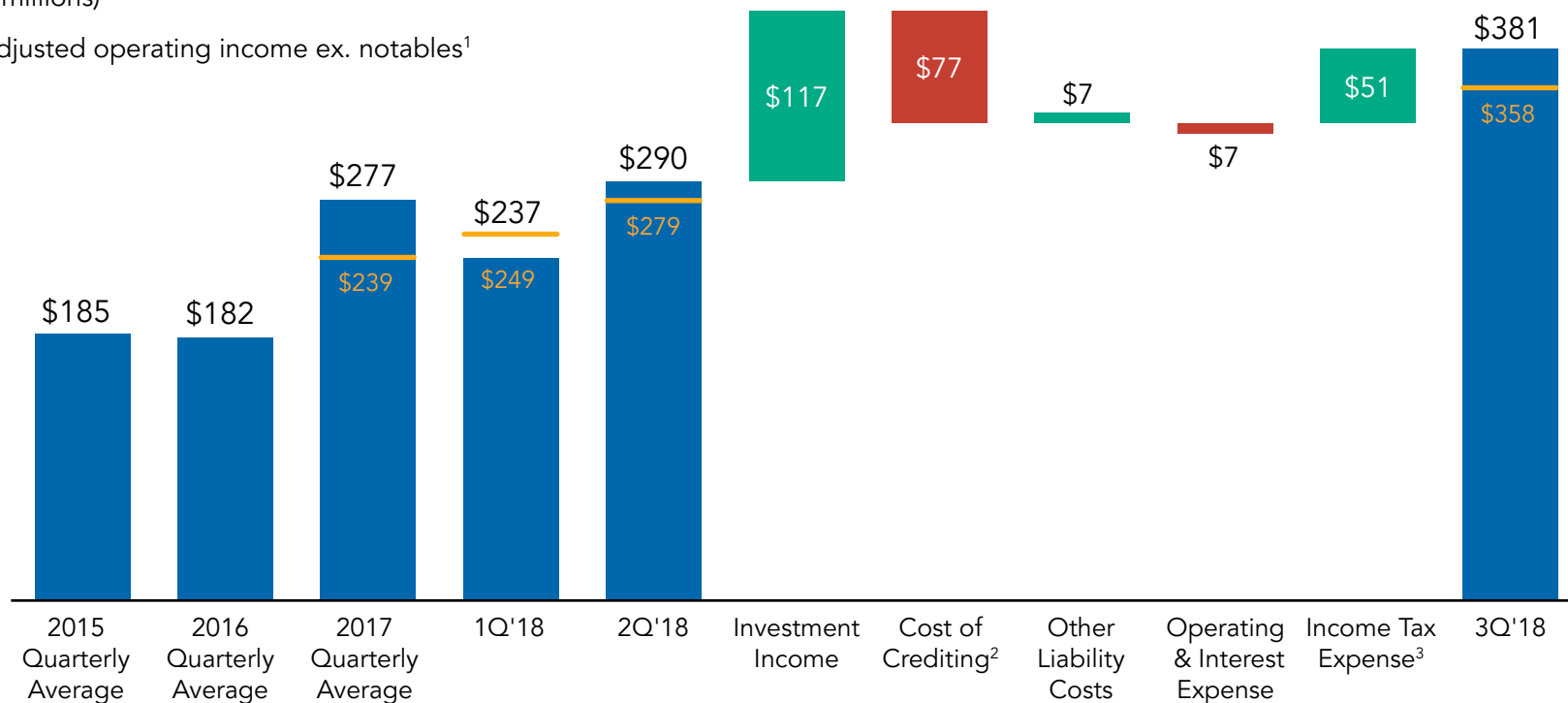
- Consolidated and Retirement Services adjusted operating ROEs of 17.5% and 23.6%, respectively
- Adjusted book value per share of \$45.94, up 23% year-over-year
- Available capital of ~\$4 billion, including ~\$2 billion of excess capital and ~\$2 billion of debt capacity

Adjusted Operating Income Rollforward

Sequential increase in AOI driven by invested asset growth, primarily resulting from full quarter impact of Voya transaction, as well as the reversal of previously accrued taxes

(\$ in millions)

— Adjusted operating income ex. notables¹

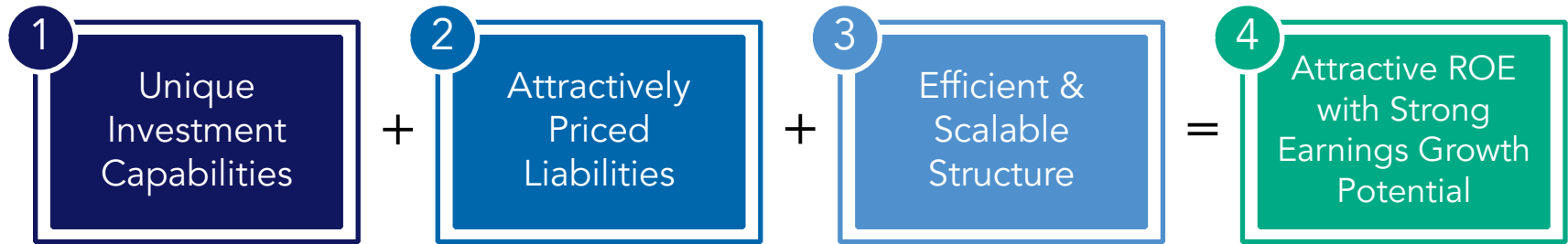


AOI Per Share	2015	2016	2017	1Q'18	2Q'18	Investment Income	Cost of Crediting ²	Other Liability Costs	Operating & Interest Expense	Income Tax Expense ³	3Q'18
	\$1.06	\$0.96	\$1.42	\$1.21	\$1.48	\$0.60	(\$0.39)	\$0.04	(\$0.04)	\$0.26	\$1.95

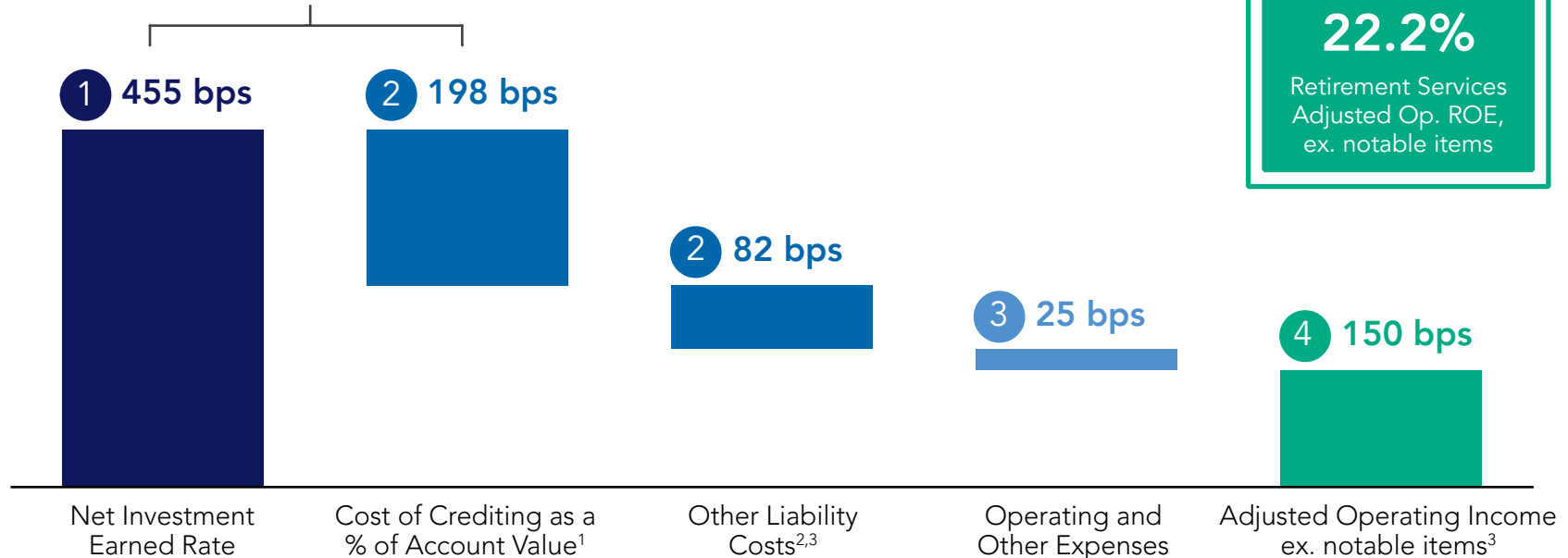
1 Reconciliations of adjusted operating income ex. notable items can be found on slide 20 of this presentation. 2 Cost of crediting based on average account value of deferred annuities. 3 For the quarter ended September 30, 2018, income tax expense includes a \$40 million favorable benefit resulting from the reversal of previously accrued taxes during the first six months of 2018. The reversal of previously accrued taxes was triggered by a revised full year estimated tax provision, which was driven by the implementation of additional reinsurance arrangements.

Straightforward & Scalable Net Investment Spread Model

Achieving mid-to-high teen adjusted operating ROE in Retirement Services



Investment Margin of 2.57%¹

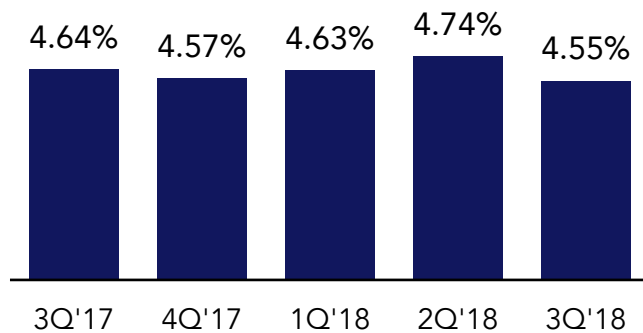


¹ Cost of crediting based on average account value of deferred annuities. Investment margin based on net investment earned rates less cost of crediting. ² For illustrative purposes, includes adjustment due to convention of calculating cost of crediting based on average account value of deferred annuities. Excluding these adjustments, other liability costs would be 117 bps (107 bps including notable items) of average invested assets. ³ Excludes notable items of \$38 million from favorable equity market performance impact on rider reserves and DAC amortization and \$13 million unfavorable unlocking as well as the tax impact from these items of \$2 million. Excluding these adjustments, Retirement Services other liability costs, operating and other expenses, and adjusted operating income would be 71 bps, 26 bps, and 160 bps of average invested assets, respectively.

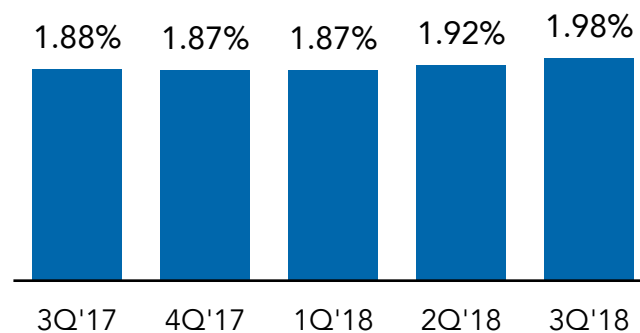
Net Investment Spread Metrics – Retirement Services

Sequential changes in spread metrics were partially driven by a full quarter impact of the Voya portfolio, which continues to be deployed at higher yields

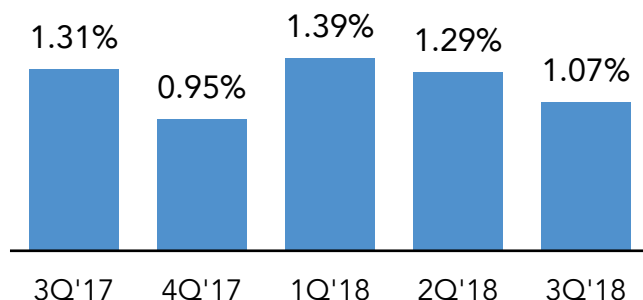
Net Investment Earned Rate¹



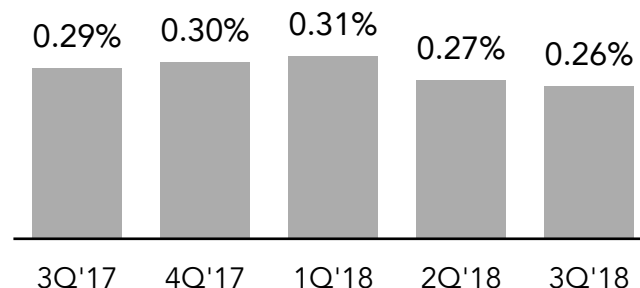
Cost of Crediting²



Other Liability Costs³



Operating Expenses⁴



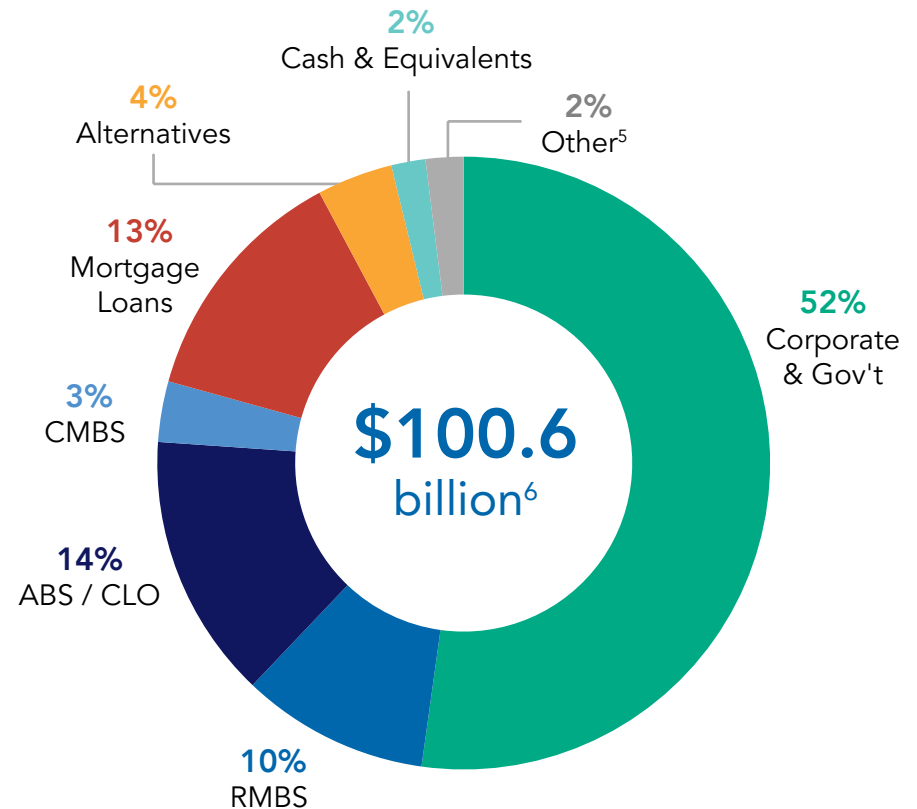
Note: Interim periods are annualized. 1 Net investment earned rate is calculated by dividing net investment earnings by average invested assets for the relevant period. 2 Cost of crediting is calculated by dividing the interest credited on fixed strategies and option costs on index annuity strategies by average account value of our deferred annuities. 3 For additional information regarding other liability costs, see slide 12. 4 Operating expenses are calculated by dividing operating expenses by average invested assets.

Investment Portfolio: Differentiated Capabilities Drive Returns

3Q'18 Commentary

- Maintaining investment discipline in tight spread environment
- Total invested assets increased 38% from prior year, excluding Germany
- Consolidated NIER of 4.52%¹
- Retirement Services NIER of 4.55%¹
 - Alternatives returned 10.65%, led by strength of MidCap and AmeriHome
- 18% of total invested assets in floating rate securities² which produce ~\$25-30 million of additional adjusted operating income per year for every 25 bps increase in interest rates³

Investment Portfolio Composition



High Quality Fixed Income Investments

94%

Rated NAIC 1 or 2
of AFS Fixed
Maturity Securities⁴

1 bp

of OTTI on Total
Average Invested
Assets¹

¹ For the three months ended September 30, 2018, annualized. ² In 1Q'18, we refined our definition of floating rate securities to only include short duration securities that are directly tied or linked to an index. ³ Sensitivity assumes parallel shift in spot LIBOR rate and forward yield curve. ⁴ As of September 30, 2018, including related parties. ⁵ Other includes short-term investments and equity securities. ⁶ Invested assets as of September 30, 2018.

Liability Profile: Long-Dated, Persistent & Attractively Priced

Large in-force business produces significant and steady base of earnings

3Q'18 Commentary

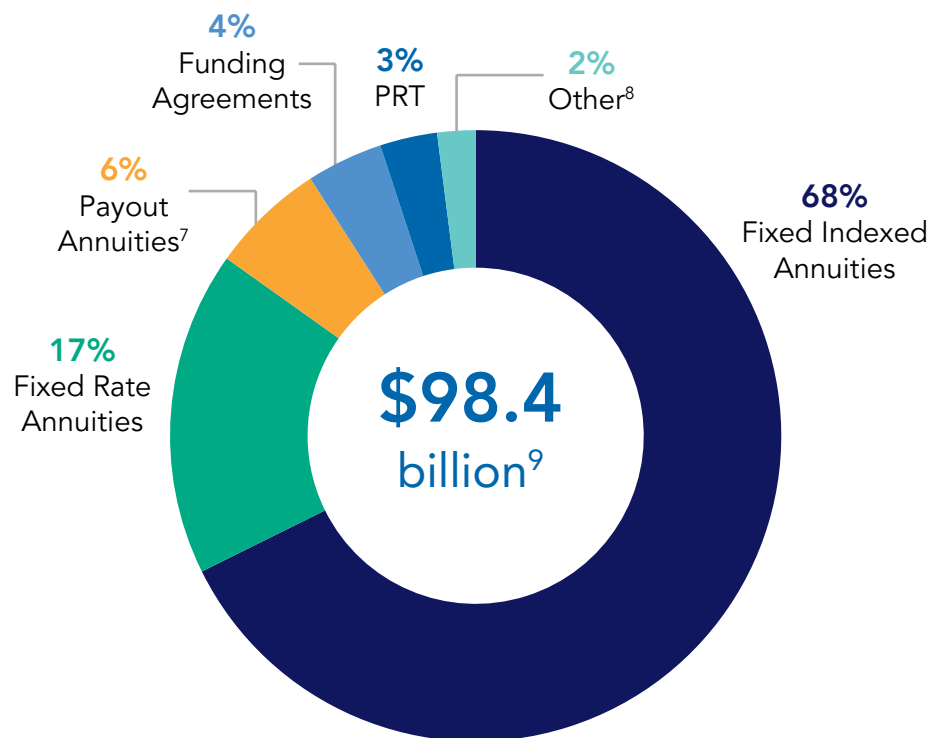
- Retirement Services reserve liabilities grew \$26.3 billion, or 37%, over the prior year
- Limited exposure to legacy liabilities
 - All pricing reflects low interest rate environment
- Expansion of institutional products diversifies risk and increases predictability of liability outflows
- 100% of funding agreements, PRT and payout annuities are non-surrenderable

Deferred Annuity Metrics¹

Surrender charge protected ²	81%
Average surrender charge ³	6.7%
Subject to MVA ^{2,4}	67%
Cost of crediting ⁵	1.98%
Distance to guaranteed minimum crediting rates	95 – 105 bps
Rider reserve as a percentage of account value with riders	8.4%

Diversified Liability Composition

9.7 year weighted average life⁶



¹ As of and for the three months ended September 30, 2018, as applicable. ² Based on fixed indexed annuities and fixed rate annuities only. Refers to percentage of account value that is in the surrender charge period. ³ Based on deferred annuities only, excluding the impact of MVAs. ⁴ Refers to the % of account value that is subject to a MVA. ⁵ For Retirement Services segment deferred annuities for the three months ended September 30, 2018, annualized. ⁶ Weighted average life of total reserve liabilities; weighted average life on deferred annuities of 9.1 years. ⁷ Includes Single Premium Immediate Annuities, Supplemental Contracts and Structured Settlements. ⁸ Other primarily consists of the AmerUs Closed Block liabilities and other life reserves. ⁹ Reserve liabilities as of September 30, 2018.

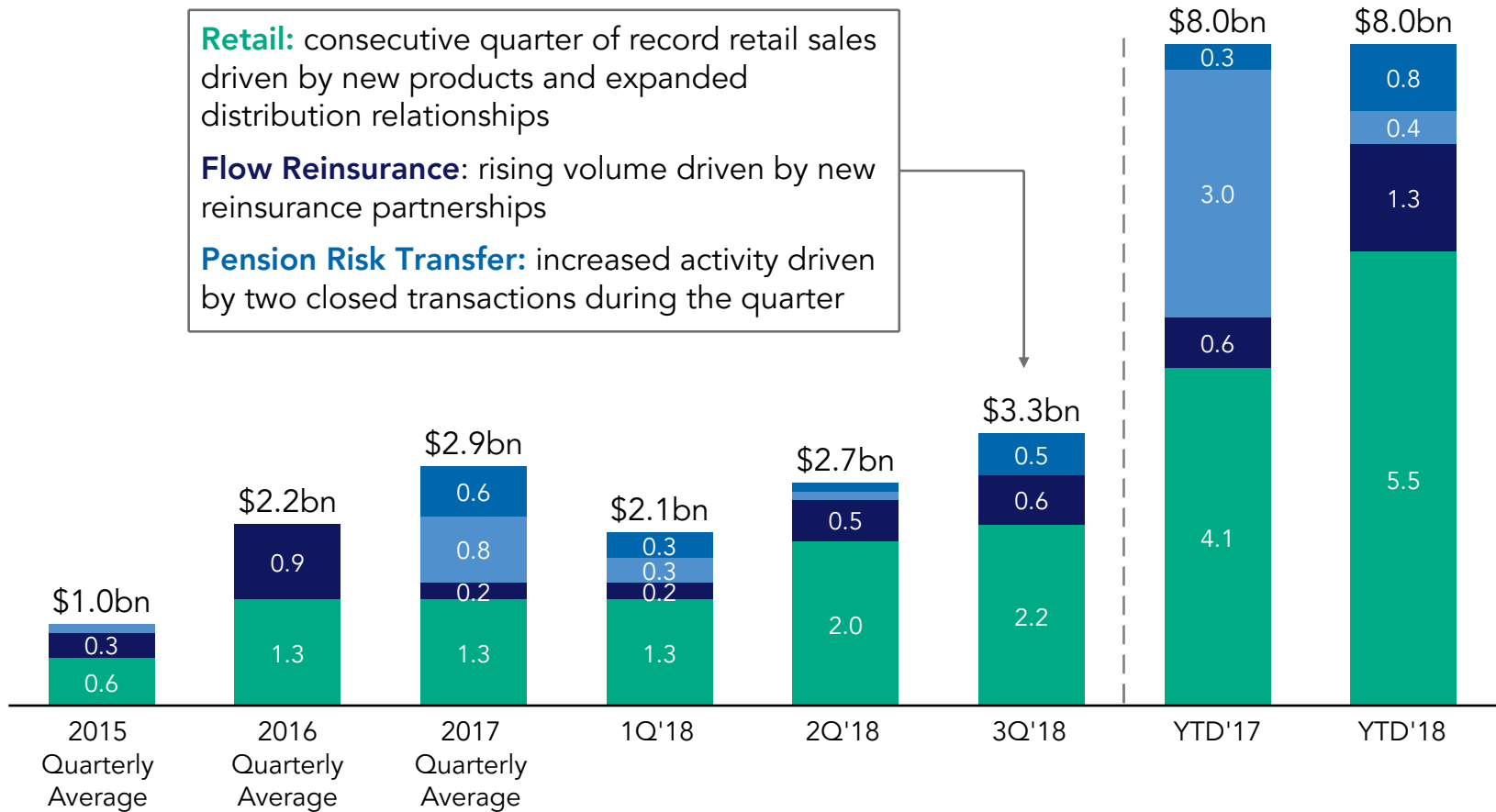
Multi-Channel Distribution Model Generates Attractive Growth

Flexibility to respond to changing market conditions across channels to opportunistically grow liabilities that generate Athene's desired levels of profitability

Retail: consecutive quarter of record retail sales driven by new products and expanded distribution relationships

Flow Reinsurance: rising volume driven by new reinsurance partnerships

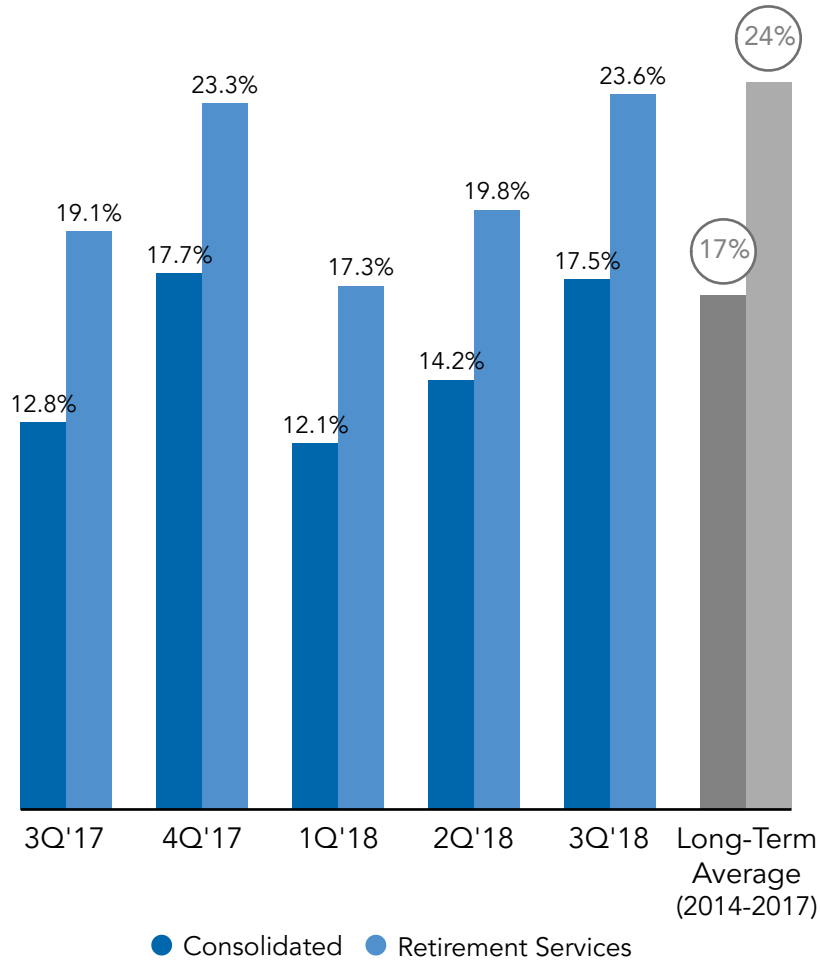
Pension Risk Transfer: increased activity driven by two closed transactions during the quarter



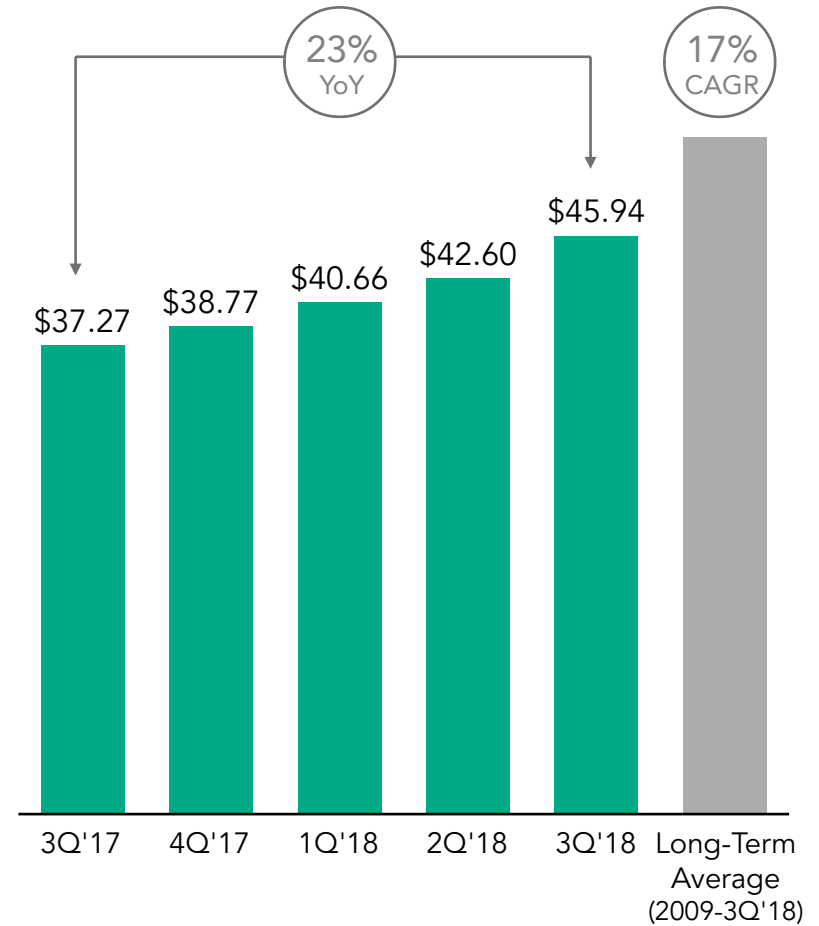
● Retail ● Flow Reinsurance ● Funding Agreements ● Pension Risk Transfer

Strong ROE Production Driving Book Value Growth

Adjusted Operating ROE



Adjusted Book Value Per Share

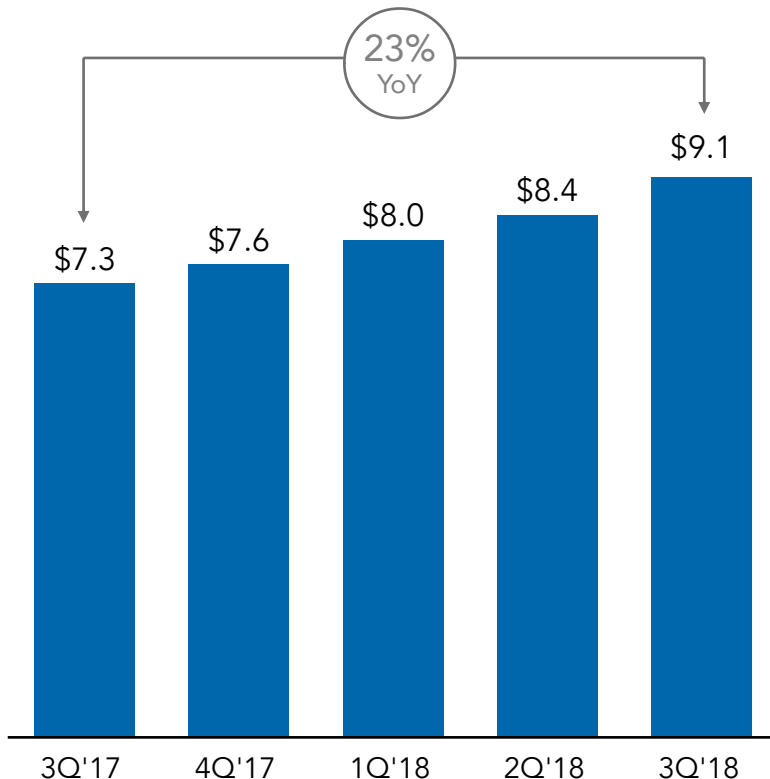


Well Positioned with Growing Capital Base

Low financial leverage helps maintain strong rating profile and enables us to deploy capital as opportunities arise

Adjusted Shareholders' Equity¹

(\$ in billions)



Levers for Incremental Growth

- Low financial leverage of 9.9%
- Approximately \$2 billion of excess capital to support incremental growth
- Opportunistic growth provides upside
- Potential for whole-company acquisitions, carve-out transactions or block reinsurance transactions

Strong Capital Position

513%
Estimated ALRe
RBC Ratio^{2,3}

446%
Estimated U.S.
RBC Ratio²

¹ See Non-GAAP Measures and Definitions and Non-GAAP Measure Reconciliations for more information on adjusted shareholders' equity. ² As of September 30, 2018. ³ ALRe RBC ratio, which is used in evaluating our capital position and the amount of capital needed to support our segment, is calculated by applying the NAIC RBC factors in effect as of September 30, 2018 to the Statutory Financial Statements of ALRe.

Components and Drivers of Other Liability Costs

	Typical % of OLC	Drivers	3Q'18	YTD'18
Level of Volatility ↑				
Rider Reserves	30 - 40%	Reserve pattern impacted by the level of current period operating profits and changes in future expectations of profits and rider benefits	\$235	\$425
DAC, DSI, VOBA Amortization	30 - 40%	Amortization pattern impacted by the level of current period operating profits and changes in future expectations of profits	-\$49	\$143
Institutional Costs	15 - 25%	Institutional costs should trend in line with changes in the size of the block and are expected to increase in line with the strategic growth initiatives for the institutional channel	\$58	\$155
Other	5 - 10%	Primarily payout annuities, policy maintenance costs, reinsurance expense allowances, excise taxes, and non-deferred acquisition costs, net of product charges Costs generally trend in line with changes in the size of the block	\$17	\$65
Other Liability Costs			\$261	\$788

Note: For further detail regarding the components of other liability costs, please see Athene's quarterly financial supplement for the period ending September 30, 2018.



Appendix

Consolidated Results of Operations

(In millions, except percentages and per share data)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Net income	\$ 640	\$ 274	\$ 1,172	\$ 984
Non-operating adjustments				
Investment gains (losses), net of offsets	(48)	25	(155)	140
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	380	46	550	155
Integration, restructuring and other non-operating expenses	(2)	(14)	(18)	(34)
Stock compensation expense	(3)	(7)	(8)	(30)
Income tax (expense) benefit – non-operating	(68)	(7)	(105)	(24)
Less: Total non-operating adjustments	259	43	264	207
Adjusted operating income	\$ 381	\$ 231	\$ 908	\$ 777
Adjusted operating income by segment				
Retirement Services	\$ 389	\$ 244	\$ 913	\$ 786
Corporate and Other	(8)	(13)	(5)	(9)
Adjusted operating income	\$ 381	\$ 231	\$ 908	\$ 777
Notable items	(23)	5	(22)	(86)
Adjusted operating income, excluding notable items	\$ 358	\$ 236	\$ 886	\$ 691
ROE	29.1%	13.0%	17.1%	16.9%
Adjusted ROE	31.4%	14.6%	21.8%	17.1%
Adjusted operating ROE	17.5%	12.8%	14.5%	15.0%
Earnings per share - diluted Class A ¹	\$ 3.23	\$ 1.39	\$ 5.92	\$ 5.00
Adjusted operating earnings per share ²	\$ 1.95	\$ 1.18	\$ 4.63	\$ 3.97
Weighted average shares outstanding - diluted Class A ¹	165	120	160	105
Weighted average shares outstanding - adjusted operating ²	196	196	196	196

1 Diluted earnings per share on Class A common shares, including diluted Class A weighted average shares outstanding, includes the dilutive impacts, if any, of Class B and Class M common shares and any other stock-based awards. Based on allocated net income of \$534 million (83%) and \$167 million (61%) diluted Class A common shares for the three months ended September 30, 2018 and 2017, respectively. Based on allocated net income of \$946 million (81%) and \$524 million (53%) diluted Class A common shares for the nine months ended September 30, 2018 and 2017, respectively. 2 Represents weighted average common shares outstanding assuming conversion or settlement of all outstanding items that are able to be converted to or settled in Class A common shares, including the impacts of Class B and Class M common shares outstanding and any other stock-based awards outstanding, 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.

Retirement Services Adjusted Operating Results

(In millions, except percentages)

	Three months ended September 30,				Nine months ended September 30,			
	2018	% ¹	2017	% ¹	2018	% ¹	2017	% ¹
Fixed income and other investment income	\$ 1,021	4.33 %	\$ 745	4.44 %	\$ 2,693	4.38 %	\$ 2,196	4.50 %
Alternatives investment income	87	10.65 %	66	9.79 %	264	11.30 %	216	10.86 %
Net investment earnings	1,108	4.55 %	811	4.64 %	2,957	4.63 %	2,412	4.75 %
Cost of crediting on deferred annuities	(395)	(1.98)%	(268)	(1.88)%	(988)	(1.93)%	(795)	(1.89)%
Other liability costs	(261)	(0.71)%	(228)	(0.96)%	(788)	(0.85)%	(632)	(0.93)%
Interest expense	(2)	(0.01)%	(1)	(0.01)%	(5)	(0.01)%	(3)	(0.01)%
Other operating expenses	(63)	(0.26)%	(51)	(0.29)%	(177)	(0.28)%	(157)	(0.31)%
Pre-tax adjusted operating income	387	1.59 %	263	1.51 %	999	1.56 %	825	1.62 %
Income tax (expense) benefit - operating	2	0.01 %	(19)	(0.11)%	(86)	(0.13)%	(39)	(0.08)%
Adjusted operating income	\$ 389	1.60 %	\$ 244	1.40 %	\$ 913	1.43 %	\$ 786	1.55 %
Notable items	(23)	(0.09)%	(12)	(0.07)%	(22)	(0.03)%	(103)	(0.20)%
Adjusted operating income, excluding notable items	\$ 366	1.50 %	\$ 232	1.33 %	\$ 891	0.14 %	\$ 683	0.13 %
Net Investment Earned Rate	4.55%		4.64%		4.63%		4.75%	
Cost of crediting	1.98%		1.88%		1.93%		1.89%	
Investment margin	2.57%		2.76%		2.70%		2.86%	
Adjusted operating ROE	23.6%		19.1%		19.6%		21.8%	
Adjusted operating ROE, excluding notable items	22.2%		18.2%					

¹ Net investment earned rate is calculated by taking net investment earnings divided by average invested assets for the relevant period. Cost of crediting is calculated by taking the interest credited on fixed strategies and option costs on index annuity strategies divided by average account value of our deferred annuities. Other liability costs, for illustrative purposes, include an adjustment due to conversion of calculating cost of crediting based on average account value of deferred annuities; absent such adjustment, the value would be 1.17% (1.07% including notable items). Other operating expenses and income tax (expense) benefit use average invested assets as the denominator in the calculation. Interim periods are annualized.

Notable Items

(In millions)

	Three months ended September 30,				Nine months ended September 30,			
	2018		2017		2018		2017	
	Dollars	Per Share	Dollars	Per Share	Dollars	Per Share	Dollars	Per Share
Adjusted Operating Income	\$ 381	\$ 1.95	\$ 231	\$ 1.18	\$ 908	\$ 4.63	\$ 777	\$ 3.97
Rider Reserve and DAC equity market performance	(38)	(0.19)	(20)	(0.10)	(37)	(0.19)	(88)	(0.45)
Out of period actuarial adjustments	—	—	(13)	(0.07)	—	—	(29)	(0.15)
Unlocking	13	0.06	20	0.10	13	0.07	20	0.10
Proceeds from bond previously written down	—	—	—	—	—	—	(14)	(0.07)
Germany adjusted operating loss, net of tax	—	—	17	0.08	—	—	17	0.09
Tax Effect of Notable Items	2	0.01	1	0.01	2	0.01	8	0.04
Notable Items	(23)	(0.12)	5	0.02	(22)	(0.11)	(86)	(0.44)
Adjusted Operating Income ex. Notable Items	\$ 358	\$ 1.83	\$ 236	\$ 1.20	\$ 886	\$ 4.52	\$ 691	\$ 3.53

Reserve Liability Roll-forward

(In millions)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
1 Retirement Services reserve liabilities – beginning	\$ 96,140	\$ 69,719	\$ 75,378	\$ 65,745
2 Deposits	3,412	2,910	8,336	8,276
3 Acquisition and block reinsurance	—	—	19,104	—
4 Liability outflows	(2,167)	(1,311)	(5,734)	(4,389)
5 Other reserve changes	1,037	782	1,338	2,468
Retirement Services reserve liabilities – ending	98,422	72,100	98,422	72,100
Germany reserve liabilities	—	5,921	—	5,921
Intersegment eliminations	—	(171)	—	(171)
Consolidated reserve liabilities – ending	<u>\$ 98,422</u>	<u>\$ 77,850</u>	<u>\$ 98,422</u>	<u>\$ 77,850</u>

- 1 Retirement Services reserve liabilities include deferred annuity, immediate annuity, funding agreements and life products.
- 2 Deposits include \$3.3 billion of new deposits on retail, flow reinsurance and institutional products, as well as renewal premiums, internal product exchanges and annuitizations.
- 3 Acquisitions and block reinsurance transactions includes the reserve liabilities acquired in our inorganic channel at inception.
- 4 Liability outflows includes full surrenders, partial withdrawals, death benefits, annuitization benefits and interest payments and maturities on funding agreement products.
- 5 Other reserve changes primarily include fixed and bonus interest credits, change in fair value of embedded derivatives, change in rider reserves, product charges and change in life reserves.

Non-GAAP Measures and Definitions

- Adjusted operating income 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 equals net income adjusted to eliminate the impact of the following (collectively, the "non-operating adjustments"): (a) investment gains (losses), (b) change in fair values of derivatives and embedded derivatives - FIA, net of offsets, (c) integration, restructuring, and other non-operating expenses, (d) stock compensation expense, (e) bargain purchase gain and (f) income tax (expense) benefit - non-operating.

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

- Adjusted ROE, adjusted operating ROE and adjusted net income are non-GAAP measures used to evaluate our financial performance excluding the impacts of AOCI and funds withheld and modco reinsurance unrealized gains and losses, in each case net of DAC, DSI, rider reserve and tax offsets. Adjusted ROE is calculated as adjusted net income, divided by average adjusted shareholders' equity. Adjusted shareholders' equity is calculated as the ending shareholders' equity excluding AOCI and funds withheld and modco reinsurance unrealized gains and losses. Adjusted operating ROE is calculated as the adjusted operating income, divided by average adjusted shareholders' equity. Adjusted net income is calculated as net income excluding funds withheld and modco reinsurance unrealized gains and losses, net of DAC, DSI, rider reserve and tax offsets. These adjustments fluctuate period to period in a manner inconsistent with our underlying profitability drivers as the majority of such fluctuation is related to the market volatility of the unrealized gains and losses associated with our AFS securities. Once we have reinvested 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 adjusted operating fundamentals or future performance. Accordingly, we believe using measures which exclude AOCI and funds withheld and modco reinsurance unrealized gains and losses are useful in analyzing trends in our operating results. To enhance the ability to analyze these measures across periods, interim periods are annualized. Adjusted ROE, adjusted operating ROE and adjusted net income should not be used as a substitute for ROE and net income. However, we believe the adjustments to equity are significant to gaining an understanding of our overall results of operations.

- Adjusted operating earnings per share, weighted average shares outstanding - adjusted operating and adjusted book value per 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 share is calculated as the adjusted operating income, over the weighted average shares outstanding - adjusted operating. Adjusted book value per share is calculated as the adjusted 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 they are excluded. Weighted average 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 share, weighted average shares outstanding - adjusted operating and adjusted book value per share should not be used as a substitute for basic earnings per share - Class A common shares, basic weighted average shares outstanding - Class A or book value per 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 financial condition excluding the impacts of AOCI and funds withheld and modco reinsurance unrealized gains and losses, net of DAC, DSI, rider reserve and tax offsets. Adjusted debt to capital ratio is calculated as total debt excluding consolidated VIEs divided by adjusted shareholders' equity. Adjusted debt to capital ratio should not be used as a substitute for the debt to capital ratio. However, we believe the adjustments to shareholders' equity are significant to gaining an understanding of our capitalization, debt utilization and debt capacity.

Non-GAAP Measures and Definitions

- Investment margin is a key measurement of the financial health of our Retirement Services core deferred annuities. Investment margin on our deferred annuities is generated from the excess of our net investment earned rate over the cost of crediting to our policyholders. Net investment earned rate is a key measure of investment returns and cost of crediting is a key measure of the policyholder benefits on our deferred annuities. We believe measures like net investment earned rate, cost of crediting and investment margin on deferred annuities are effective in analyzing the trends of our core business operations, profitability and pricing discipline. While we believe net investment earned rate, cost of crediting and investment margin on deferred annuities 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 and interest sensitive contract benefits presented under GAAP.
 - Net investment earned rate is a non-GAAP measure we use to evaluate the performance of our invested assets that does not correspond to GAAP net investment income. Net investment earned rate is computed as the income from our invested assets divided by the average invested assets for the relevant period. To enhance the ability to analyze these measures across periods, interim periods are annualized. The adjustments to arrive at our net investment earned rate add alternative investment gains and losses, gains and losses related to trading securities for CLOs, net VIE impacts (revenues, expenses and noncontrolling interest) and the change in reinsurance embedded derivatives. We include the income and assets supporting our assumed reinsurance 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 reinsurance embedded derivatives. 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 crediting 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. The interest credited on fixed strategies and option costs on indexed annuity strategies are divided by the average account value of our deferred annuities. Our average account values are averaged over the number of quarters in the relevant period to obtain our 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, rider reserves, institutional costs, the cost of liabilities on products other than deferred annuities, premiums, product charges and other revenues. Along with our cost of crediting, other liability costs give a view of the total costs of our liabilities. We believe a measure like other liability costs is effective 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.
- 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 effective 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 invested assets, which do not correspond to total investments, including investments in related parties, as disclosed in our consolidated financial statements and notes thereto. Invested assets represent the investments that directly back our policyholder liabilities as well as surplus assets. Invested assets is used in the computation of net investment earned rate, which allows us to analyze the profitability of our investment portfolio. Invested assets includes (a) total investments on the consolidated balance sheets with AFS securities at cost or amortized cost, excluding derivatives, (b) cash and cash equivalents and restricted cash, (c) investments in related parties, (d) accrued investment income, (e) the consolidated VIE assets, liabilities and noncontrolling interest, (f) net investment payables and receivables and (g) policy loans ceded (which offset the direct policy loans in total investments). Invested assets also excludes assets associated with funds withheld liabilities related to business exited through reinsurance agreements and derivative collateral (offsetting the related cash positions). We include the underlying investments supporting our assumed funds withheld and modco agreements in our invested assets calculation in order to match the assets with the income received. We believe the adjustments for reinsurance provide a view of the assets for which we have economic exposure. Our invested assets are averaged over the number of quarters in the relevant period to compute our net investment earned rate for such period.
- 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).

Non-GAAP Measure Reconciliations

Reconciliation of basic earnings per Class A common shares to adjusted operating earnings per share

<i>(in millions)</i>	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Basic earnings per share – Class A common shares	\$ 3.24	\$ 1.40	\$ 5.94	\$ 5.05
Non-operating adjustments				
Investment gains (losses), net of offsets	(0.27)	0.13	(0.80)	0.71
Change in fair values of derivatives and embedded derivatives – FIAs, net of offsets	1.93	0.23	2.81	0.79
Integration, restructuring and other non-operating expenses	(0.02)	(0.07)	(0.10)	(0.17)
Stock compensation expense	(0.01)	(0.04)	(0.04)	(0.15)
Income tax (expense) benefit – non-operating	(0.35)	(0.03)	(0.53)	(0.12)
Less: Total non-operating adjustments	1.28	0.22	1.34	1.06
Less: Effect of items convertible to or settled in Class A common shares	0.01	—	(0.03)	0.02
Adjusted operating earnings per share	\$ 1.95	\$ 1.18	\$ 4.63	\$ 3.97

Reconciliation of Net income to adjusted operating income excluding notable items

<i>(In millions)</i>	Three Months Ended,						
	March 31, 2017	June 30, 2017	September 30, 2017	December 31, 2017	March 31, 2018	June 30, 2018	September 30, 2018
Net income	\$ 384	\$ 326	\$ 274	\$ 464	\$ 268	\$ 264	\$ 640
Less: Total non-operating adjustments	118	46	43	132	31	(26)	259
Adjusted operating income	266	280	231	332	237	290	381
Notable items	(50)	(41)	5	(66)	12	(11)	(23)
Adjusted operating income excluding notable items	\$ 216	\$ 239	\$ 236	\$ 266	\$ 249	\$ 279	\$ 358
Retirement Services adjusted operating income	\$ 275	\$ 267	\$ 244	\$ 306	\$ 235	\$ 289	\$ 389
Proceeds from bond previously written down	(14)	—	—	—	—	—	—
Rider Reserve and DAC equity market performance	(40)	(28)	(20)	(44)	14	(13)	(38)
Out of period actuarial adjustments	—	(16)	(13)	(9)	—	—	—
Unlocking	—	—	20	—	—	—	13
Tax impact of notable items	4	3	1	4	(2)	2	2
Retirement Services notable items	(50)	(41)	(12)	(49)	12	(11)	(23)
Retirement Services adjusted operating income excluding notable items	225	226	232	257	247	278	366
Corporate and Other adjusted operating income	(9)	13	(13)	26	2	1	(8)
Germany adjusted operating loss, net of tax	—	—	17	(17)	—	—	—
Corporate and Other adjusted operating income excluding notable items	(9)	13	4	9	2	1	(8)
Adjusted operating income excluding notable items	\$ 216	\$ 239	\$ 236	\$ 266	\$ 249	\$ 279	\$ 358

Non-GAAP Measure Reconciliations

Reconciliation of basic weighted average Class A shares to weighted average shares outstanding - adjusted operating

<i>(In millions)</i>	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Basic weighted average shares outstanding – Class A	164.5	119.5	159.3	101.5
Conversion of Class B shares to Class A shares	25.5	69.9	30.6	87.7
Conversion of Class M shares to Class A shares	5.6	6.1	5.6	6.2
Effect of other stock compensation plans	0.5	0.5	0.5	0.4
Weighted average shares outstanding – adjusted operating	196.1	196.0	196.0	195.8

Reconciliation of shareholders' equity to adjusted shareholders' equity

<i>(In millions)</i>	September 30,	
	2018	2017
Total shareholders' equity	\$ 9,069	\$ 8,669
Less: AOCI	43	1,162
Less: Accumulated reinsurance unrealized gains and losses	(31)	164
Total adjusted shareholders' equity	\$ 9,057	\$ 7,343
Retirement Services	\$ 7,105	\$ 5,207
Corporate and Other	1,952	2,136
Total adjusted shareholders' equity	\$ 9,057	\$ 7,343

Reconciliation of total capitalization to total adjusted capitalization

<i>(In millions)</i>	September 30,	
	2018	2017
Total debt	\$ 991	\$ —
Total shareholders' equity	9,069	8,669
Total capitalization	10,060	8,669
Less: AOCI	43	1,162
Less: Accumulated reinsurance unrealized gains and losses	(31)	152
Total adjusted capitalization	\$ 10,048	\$ 7,355

Non-GAAP Measure Reconciliations

Reconciliation of GAAP net investment income to net investment earnings and earned rate

(In millions)	Three months ended September 30,				Nine months ended September 30,			
	2018		2017		2018		2017	
	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP net investment income	\$ 1,070	4.30 %	\$ 820	4.23 %	\$ 2,883	4.39 %	\$ 2,427	4.31 %
Reinsurance embedded derivative impacts	52	0.20 %	40	0.20 %	169	0.26 %	137	0.25 %
Net VIE earnings	39	0.16 %	27	0.14 %	55	0.08 %	59	0.10 %
Alternative income gain (loss)	(14)	(0.06)%	(4)	(0.02)%	(14)	(0.02)%	(11)	(0.02)%
Held for trading amortization	(21)	(0.08)%	(20)	(0.10)%	(65)	(0.10)%	(50)	(0.09)%
Total adjustments to arrive at net investment earnings/earned rate	56	0.22 %	43	0.22 %	145	0.22 %	135	0.24 %
Total net investment earnings	<u>\$ 1,126</u>	<u>4.52 %</u>	<u>\$ 863</u>	<u>4.45 %</u>	<u>\$ 3,028</u>	<u>4.61 %</u>	<u>\$ 2,562</u>	<u>4.45 %</u>
Retirement Services	\$ 1,108	4.55 %	\$ 811	4.64 %	\$ 2,957	4.63 %	\$ 2,412	4.75 %
Corporate and Other	18	3.51 %	52	2.72 %	71	3.86 %	150	2.71 %
Total net investment earnings	<u>\$ 1,126</u>	<u>4.52 %</u>	<u>\$ 863</u>	<u>4.45 %</u>	<u>\$ 3,028</u>	<u>4.61 %</u>	<u>\$ 2,562</u>	<u>4.55 %</u>
Retirement Services average invested assets	\$ 97,512		\$ 69,868		\$ 85,169		\$ 67,722	
Corporate and Other average invested assets	2,103		7,673		2,473		7,398	
Average invested assets	<u>\$ 99,615</u>		<u>\$ 77,541</u>		<u>\$ 87,642</u>		<u>\$ 75,120</u>	

Reconciliation GAAP interest sensitive contract benefits to Retirement Services' cost of crediting on deferred annuities

(In millions)	Three months ended September 30,				Nine months ended September 30,			
	2018		2017		2018		2017	
	Dollar	Rate	Dollar	Rate	Dollar	Rate	Dollar	Rate
GAAP interest sensitive contract benefits	\$ 741	3.72 %	\$ 621	4.35 %	\$ 1,092	2.13 %	\$ 1,866	4.43 %
Interest credited other than deferred annuities	(44)	(0.22)%	(41)	(0.29)%	(125)	(0.24)%	(109)	(0.26)%
FIA option costs	231	1.16 %	154	1.08 %	611	1.19 %	448	1.08 %
Product charges (strategy fees)	(25)	(0.13)%	(19)	(0.13)%	(70)	(0.14)%	(53)	(0.13)%
Reinsurance embedded derivative impacts	29	0.14 %	9	0.06 %	35	0.07 %	27	0.06 %
Change in fair values of embedded derivatives – FIAs	(545)	(2.74)%	(464)	(3.25)%	(580)	(1.13)%	(1,397)	(3.32)%
Negative VOBA amortization	5	0.03 %	8	0.06 %	22	0.04 %	30	0.07 %
Unit linked change in reserve	—	— %	—	— %	—	— %	(17)	(0.04)%
Other changes in interest sensitive contract liabilities	3	0.02 %	—	— %	3	0.01 %	—	— %
Total adjustments to arrive at cost of crediting on deferred annuities	(346)	(1.74)%	(353)	(2.47)%	(104)	(0.20)%	(1,071)	(2.54)%
Retirement Services cost of crediting on deferred annuities	<u>\$ 395</u>	<u>1.98 %</u>	<u>\$ 268</u>	<u>1.88 %</u>	<u>\$ 988</u>	<u>1.93 %</u>	<u>\$ 795</u>	<u>1.89 %</u>
Average account value on deferred annuities	<u>\$ 79,673</u>		<u>\$ 57,050</u>		<u>\$ 68,421</u>		<u>\$ 56,102</u>	

Non-GAAP Measure Reconciliations

Reconciliation of GAAP benefits and expenses to other liability costs

<i>(In millions)</i>	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
GAAP benefits and expenses	\$ 1,882	\$ 1,179	\$ 4,033	\$ 3,818
Premiums	(531)	(72)	(1,535)	(503)
Product charges	(119)	(86)	(321)	(252)
Other revenues	(10)	(8)	(22)	(24)
Cost of crediting	(135)	(105)	(342)	(321)
Change in fair value of embedded derivatives - FIA, net of offsets	(764)	(496)	(919)	(1,501)
DAC, DSI and VOBA amortization related to investment gains and losses	26	(16)	72	(51)
Rider reserves related to investment gains and losses	1	(4)	8	(9)
Policy and other operating expenses, excluding policy acquisition expenses	(98)	(101)	(291)	(305)
VIE operating expenses	—	—	(1)	—
AmerUs closed block fair value liability	8	(4)	98	(49)
Other	1	(14)	8	(78)
Total adjustments to arrive at other liability costs	(1,621)	(906)	(3,245)	(3,093)
Other liability costs	\$ 261	\$ 273	\$ 788	\$ 725
Retirement Services	261	228	788	632
Corporate and Other	—	45	—	93
Consolidated other liability costs	\$ 261	\$ 273	\$ 788	\$ 725

Reconciliation GAAP policy and other expenses to operating expenses

<i>(In millions)</i>	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Policy and other operating expenses	\$ 158	\$ 158	\$ 453	\$ 479
Interest expense	(15)	(2)	(44)	(10)
Policy acquisition expenses, net of deferrals	(60)	(58)	(162)	(174)
Integration, restructuring and other non-operating expenses	(2)	(14)	(18)	(34)
Stock compensation expenses	(3)	(7)	(8)	(30)
Total adjustments to arrive at operating expenses	(80)	(81)	(232)	(248)
Operating expenses	\$ 78	\$ 77	\$ 221	\$ 231
Retirement Services	\$ 63	\$ 51	\$ 177	\$ 157
Corporate and Other	15	26	44	74
Consolidated operating expenses	\$ 78	\$ 77	\$ 221	\$ 231

Non-GAAP Measure Reconciliations

Reconciliation of total investments, including related parties to total invested assets

<i>(In millions)</i>	September 30,	
	2018	2017
Total investments, including related parties	\$ 101,384	\$ 81,183
Derivative assets	(2,515)	(1,982)
Cash and cash equivalents (including restricted cash)	3,941	3,707
Accrued investment income	686	626
Payables for collateral on derivatives	(2,315)	(1,896)
Reinsurance funds withheld and modified coinsurance	(123)	(537)
VIE and VOE assets, liabilities and noncontrolling interest	835	918
AFS unrealized (gain) loss	(186)	(2,594)
Ceded policy loans	(299)	(325)
Net investment receivables (payables)	(788)	(296)
Total adjustments to arrive at invested assets	(764)	(2,379)
Total invested assets	\$ 100,620	\$ 78,804

Reconciliation of total liabilities to total reserve liabilities

<i>(In millions)</i>	September 30,	
	2018	2017
Total liabilities	\$ 109,135	\$ 87,392
Long-term debt	(991)	—
Derivative liabilities	(124)	(92)
Payables for collateral on derivatives	(2,315)	(1,896)
Funds withheld liability	(389)	(394)
Other liabilities	(1,380)	(1,024)
Liabilities of consolidated VIEs	(2)	(47)
Reinsurance ceded receivables	(5,201)	(5,768)
Policy loans ceded	(299)	(325)
Other	(12)	4
Total adjustments to arrive at reserve liabilities	(10,713)	(9,542)
Total reserve liabilities	\$ 98,422	\$ 77,850

