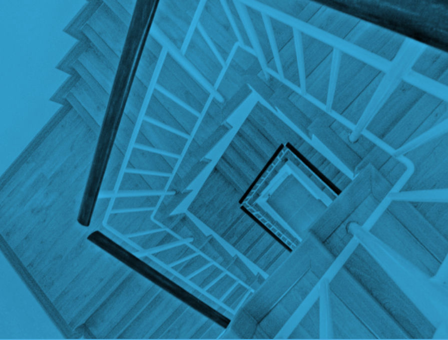

NEAM VANTAGE POINT

Perspectives

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OUR VIEW ON INSURANCE CAPITAL MANAGEMENT TOPICS

IN THIS ISSUE ▸

2016 U.S. Life Investment Highlights: Yield Decline Continues

In this issue of *Perspectives*, we review statutory operating and investment results for the U.S. life insurance industry over the last decade. Portfolio details focus on fixed income sector trends and market statistics (durations, yields and NRSRO ratings), which are maintained by NEAM in a proprietary database and are not publicly available.

In spite of a 6% decline in overall premiums and deposits, the reported net income for the life industry dropped only marginally in 2016, due to favorable lower reinsurance allowances and negative transfers to separate accounts. Consequently, the industry reported a slightly lower double-digit return on equity while increasing its capital and surplus.

U.S. life industry's book yields continued to decline from 2007's high of 5.87% to 4.47% in 2016 and durations extended by two years over this period. The continued duration extensions might spawn asset liability duration matching difficulties for some companies.

FINANCIAL STATEMENT SUMMARY RESULTS

Table 1 provides a 10-year history of select statutory metrics for the U.S. life insurance industry. All lines of business experienced premium and deposit declines from the prior year, except for the accident and health (A&H) segment which showed marginal growth. Among the declining segments, the life business exhibited the most revenue reduction, an astonishing 24% decrease.

The benefits and surrenders together were at similar levels to 2015. The higher reserve changes and expenses were offset by the negative transfer of $38 billion into separate accounts. The pre-tax operating income of $67.1 billion, up nearly 23% from the prior year, was positively affected by lower reinsurance allowances incurred in 2016. However, the overall industry's total reported net income of $39.4 billion was marginally lower than the $40.3 billion the prior year, due to unfavorable realized losses. As a result, the return on equity reduced slightly to a lower double digit of 10.5% in 2016.

Both general account assets and separate account assets rose by low single-digit percentages in 2016. Over the past decade (2007 to 2016), total assets for the industry were up approximately 32%.

For more information on this topic, contact the authors:

Mark Yu
Enterprise Risk & Capital Management Professional
mark.yu@neamgroup.com

Tobias Gummersbach
Enterprise Risk & Capital Management Professional
tobias.gummersbach@neamgroup.com

neamgroup.com

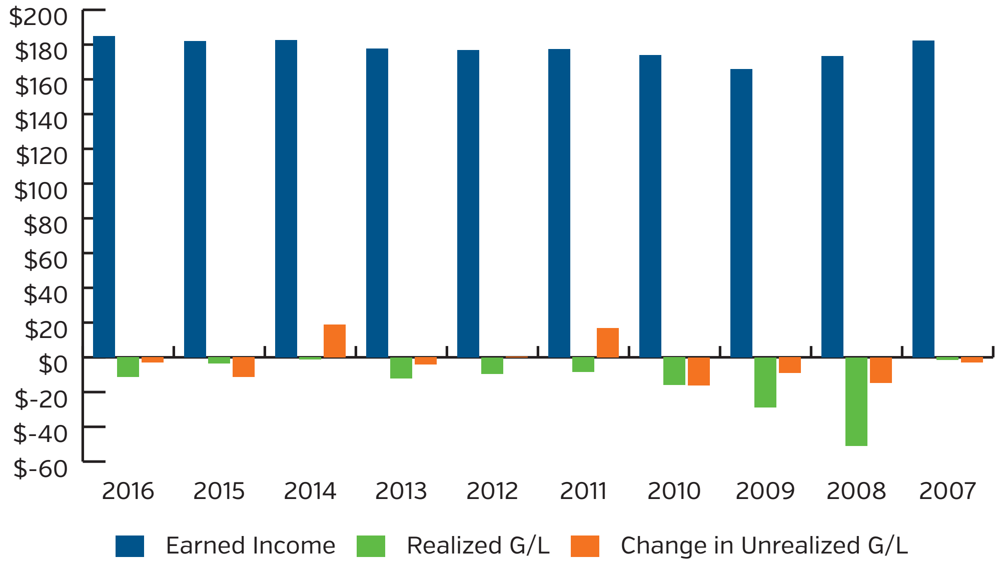
Table 1. U.S. Life Industry Highlights ($Billions Except Return on Equity)

Metric ($B)	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Operating Results										
Premiums, Consideration and Deposits	$599.9	$638.2	$647.3	$562.6	$625.6	$604.5	$562.0	$493.0	$608.2	$597.0
Net Investment Income	173.0	170.8	171.7	167.1	166.5	167.3	164.1	156.6	162.2	168.0
Separate Accounts Revenue	34.7	35.2	34.3	31.4	29.5	26.1	23.4	20.4	21.2	22.9
Benefits	271.4	263.9	251.8	250.6	241.8	238.9	231.5	229.9	225.9	216.8
Surrenders	265.1	273.0	281.5	248.7	245.7	237.3	216.8	228.7	291.5	305.1
Increase in Reserves and Deposits	133.1	80.5	108.7	86.2	83.8	141.2	96.2	99.2	144.2	35.3
Commissions & Expenses	126.9	115.6	111.0	111.5	109.8	107.8	103.5	100.5	102.9	100.7
Net Transfers to Separate Accounts	(38.0)	36.9	(16.5)	(0.8)	61.6	32.4	29.3	11.1	22.7	66.1
Policyholder Dividends	18.2	18.3	16.4	15.7	15.2	15.1	15.0	15.0	17.7	17.5
Pre-tax Operating Income	67.1	54.4	49.0	62.9	59.6	28.0	53.1	61.0	(1.4)	44.6
Net Income	39.4	40.3	37.6	42.3	40.3	14.4	28.0	21.5	(52.3)	31.6
Return on Average Equity %	10.5	11.2	11.0	12.9	12.6	4.7	9.4	7.9	(20.4)	12.1
Balance Sheet										
Total Cash and Investments	3,891.9	3,703.9	3,631.6	3,482.3	3,403.3	3,360.5	3,196.2	3,071.9	3,018.3	2,950.3
Separate Account Assets	2,492.8	2,413.1	2,423.5	2,328.9	2,053.2	1,835.6	1,840.2	1,623.8	1,369.0	1,899.5
Affiliated Investments (incl above)	167.7	156.8	155.2	144.3	128.6	118.0	108.5	107.1	96.1	99.7
Total Liabilities without Separate Accounts	3,739.1	3,547.0	3,484.2	3,345.9	3,263.5	3,225.9	3,050.6	2,939.7	2,926.4	2,819.2
Liab. from Separate Account Statements	2,492.8	2,413.1	2,423.5	2,328.9	2,053.2	1,835.6	1,840.2	1,623.8	1,369.0	1,899.5
Capital and Surplus	380.7	367.2	354.0	332.0	326.6	310.4	306.4	290.7	251.8	266.9
Net Capital Contributions	(23.5)	(15.8)	(33.1)	(33.1)	(25.9)	(28.2)	(18.3)	35.3	87.1	(13.2)

Source: SNL Financial and NEAM

Chart 1 shows the composition of statutory investment results of the U.S. life industry by their key components: earned investment income, realized gains/losses and change in unrealized gains/losses. Earned investment income has increased steadily year over year since the financial crisis. The higher realized losses were offset by the lower changes in unrealized losses, and in aggregate they are similar to the prior year.

Chart 1. Statutory Investment Results Before Taxes and Expenses ($ Billions)



Source: SNL Financial, Bloomberg, NEAM

Table 2 shows earned investment income by broad asset classes. Total net earned investment income (net of expenses) increased by $2.2 billion, compared to 2015. Bonds, mortgage loans and short terms exhibited a combined $3.5 billion increase in investment income, while derivatives and Schedule BA sectors experienced the most decline. The higher investment income from short terms might be explained by maturing bonds. The investment income from derivatives, which are typically associated with annuity business, continued to show volatile results. Schedule BA's investment income declined for the first time since the 2009 financial crisis, and this sector's allocation as a percent of overall invested assets was at the similar level of 2015. Over the last 10 years, the total net earned investment income grew only 3% from $167.8 billion to $173 billion, while the overall invested assets rose 32%. Average gross book yields have continued to decline since the financial crisis.

Table 2. Earned Investment Income by Broad Asset Class ($ Billions) and Fixed Income Gross Book Yield

Asset Class	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Bonds	$130.1	$127.7	$129.2	$128.7	$131.9	$134.1	$132.7	$128.8	$127.0	$128.6
Mortgage Loans	20.6	19.9	19.6	19.4	19.6	18.8	18.8	19.3	20.1	20.1
Cash/Short Terms	0.9	0.5	0.5	0.5	0.4	0.3	0.3	0.7	2.7	4.2
Equities	5.5	5.5	4.2	3.6	3.9	3.9	3.9	3.6	6.1	8.3
Real Estate	3.5	3.5	3.2	3.2	3.1	3.0	2.9	3.1	3.3	3.3
Contract Loans	7.6	7.5	7.8	7.7	7.7	7.8	7.8	7.9	7.6	7.3
Derivatives	3.7	3.9	6.0	4.8	1.6	1.5	0.7	(2.8)	(2.0)	0.5
Other (Sch. BA)	13.0	13.4	12.1	9.9	8.8	7.8	6.3	5.1	8.4	9.6
Total Gross Earned	**184.8**	**181.9**	**182.5**	**177.7**	**176.9**	**177.3**	**173.6**	**165.8**	**173.1**	**182.0**
Investment Expenses	11.8	11.2	10.8	10.6	10.3	10.1	9.7	9.4	11.1	14.1
Total Net Earned	**$173.0**	**$170.8**	**$171.7**	**$167.1**	**$166.5**	**$167.2**	**$164.0**	**$156.5**	**$162.0**	**$167.8**
Average Bond Gross Book Yield	**4.65%**	**4.71%**	**4.89%**	**5.00%**	**5.20%**	**5.42%**	**5.64%**	**5.81%**	**5.90%**	**6.00%**

Source: SNL Financial and NEAM

Table 3 shows that statutory allocations across broad asset classes remained mostly unchanged. Mortgage loans have shown steadily increasing allocations as the life insurance industry has continued to favor this sector since the 2009 financial crisis. Equity and derivative allocations rose slightly in 2016. Allocations to schedule BA assets have decreased from their highest level seen in 2014. These schedule BA assets remain highly concentrated among large companies.

Table 3. Life Broad Sector Asset Allocation

Holdings	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Bonds	73.5%	73.8%	73.9%	74.7%	74.7%	75.3%	75.8%	74.5%	71.1%	73.2%
Mortgage Loans	11.2%	10.9%	10.3%	10.1%	9.9%	9.6%	9.6%	10.3%	10.9%	10.7%
Cash/Short Terms	2.6%	2.8%	2.8%	2.7%	3.1%	2.9%	3.0%	4.0%	4.8%	2.6%
Equities	2.5%	2.3%	2.4%	2.3%	2.3%	2.3%	2.4%	2.4%	3.8%	4.8%
Real Estate	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.7%	0.7%
Contract Loans	3.3%	3.4%	3.6%	3.7%	3.7%	3.7%	3.9%	3.9%	4.0%	3.8%
Derivatives	1.6%	1.5%	1.6%	1.1%	1.2%	1.3%	N/A	N/A	N/A	N/A
Other (Sch.BA)	4.7%	4.7%	4.9%	4.7%	4.4%	4.2%	4.0%	4.3%	4.8%	4.2%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: SNL Financial and NEAM

PORTFOLIO DETAILS

Table 4 displays the fixed income sector allocations. The life industry's fixed income allocations show minimal changes in 2016. The corporate sector remained nearly half of the fixed income portfolio and has continued its steady upward trend over the last 10 years.

Within the structured securities sector, ABS and agency CMBS sectors have continued to rise while the other sectors have seen declines. Over the last decade, the allocations to structured securities have gone from 30% to 20%. However, with the upcoming NAIC RBC C1 proposal, structured securities, which tend to have high credit quality and short duration, might be viewed more favorably under the new capital regime.[1]

The allocation to municipal bonds, particularly taxable municipal bonds, rose from 1% prior to the financial crisis to 4.5% in 2016. This increased allocation began in 2009-2010. The passage of the "American Recovery and Reinvestment Act" led to the creation of "Build America Bonds," which allowed municipalities and municipal authorities to raise debt, with the federal government providing a direct subsidy for 35% (or more) of the interest cost.

The private placement is the second dominant sector within the life industry's fixed income portfolio and its allocation remained consistent for the last five years. As noted in prior publications, unlike the statutory Schedule D Part 1A reporting, our privates' category excludes any 144A securities that are publicly traded.

The foreign category showed a significant decline in 2016. Two-thirds of insurers owning foreign bonds reported reduced carrying values in 2016. Reductions across the industry could be explained by the volatile USD exchange rate observed in 2016.

Table 4. Fixed Income Sector Allocation

Sector	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Gov't/Agcy	7.5%	7.5%	7.4%	7.3%	7.8%	7.9%	8.2%	8.0%	6.8%	6.6%
Corp	48.2%	48.2%	47.6%	47.8%	47.0%	45.7%	45.1%	44.0%	42.8%	38.5%
ABS	4.7%	4.7%	4.5%	4.0%	3.4%	3.2%	3.2%	3.3%	3.5%	2.6%
RMBS - Agcy	6.3%	6.5%	7.1%	7.3%	8.2%	8.8%	9.2%	9.9%	10.0%	10.5%
RMBS - Non Agcy	2.9%	3.1%	3.4%	3.5%	3.8%	4.3%	4.7%	5.7%	7.4%	7.9%
CMBS - Agcy	1.4%	1.2%	1.2%	1.1%	1.0%	0.8%	0.7%	0.6%	0.6%	0.6%
CMBS - Non Agcy	4.2%	4.4%	4.8%	5.0%	5.1%	5.6%	6.4%	7.6%	8.4%	8.1%
Munis - Taxable	4.5%	4.5%	4.3%	4.2%	4.0%	3.7%	3.6%	2.1%	1.0%	0.9%
Munis - Tax Exempt	1.1%	1.1%	1.1%	1.0%	0.9%	0.9%	0.8%	0.8%	0.8%	0.7%
Privates	14.2%	14.2%	14.4%	14.3%	14.5%	13.7%	13.4%	13.4%	14.5%	14.2%
Foreign	0.9%	1.4%	1.5%	1.7%	2.3%	3.2%	2.6%	2.3%	1.8%	0.4%
Other	4.2%	3.1%	2.8%	2.6%	2.2%	2.1%	2.2%	2.3%	2.4%	8.9%
Grand Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: SNL Financial and NEAM

Table 5 displays option-adjusted duration (OAD) by fixed income sector. The OAD statistics are based upon CUSIP level holdings extracted from Schedule D statutory filings and exclude any bonds held at the holding company level, derivatives and private placement securities. The industry's aggregate OAD extended by 0.3 years in 2016. BofA ML Broad Treasury and Agency Master, U.S. Corporate Master and MBS Master Indices exhibited duration lengthening over last year.

Since the financial crisis, the life industry has extended its OAD by more than two years from 5.53 in 2008 to 7.77 in 2016. Over the same time period, two major broad indices, BofA ML Broad Treasury and Agency Master and U.S. Corporate Master, both showed duration extensions of roughly one year. The industry's additional OAD lengthening could be driven by liability duration lengthening (if ALM matching is followed), or yield enhancing by assuming additional duration risk.

Table 5. Fixed Income Sector Option Adjusted Duration (Years)

Sector	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Gov't/Agcy	11.79	10.94	10.78	11.20	10.84	10.45	10.00	9.87	9.38	8.21
Corp	7.78	7.50	7.52	7.41	7.46	7.11	6.91	6.62	6.08	6.46
ABS	3.15	4.14	2.16	3.14	3.16	2.71	2.50	2.24	2.72	2.48
RMBS - Agcy	6.82	5.26	5.20	6.31	2.53	1.73	3.85	3.58	2.03	4.31
RMBS - Non Agcy	3.85	2.71	3.24	2.69	4.34	4.39	6.31	6.11	2.68	4.01
CMBS - Agcy	6.23	6.84	7.03	6.92	6.74	4.74	5.24	5.04	3.07	6.47
CMBS - Non Agcy	5.40	4.81	3.97	3.62	3.29	3.22	3.49	3.78	3.86	4.64
Munis - Taxable	9.41	9.54	9.86	10.00	10.68	10.71	10.61	10.19	9.42	9.69
Munis - Tax Exempt	10.07	9.56	9.08	9.43	8.36	8.38	8.37	8.51	8.79	7.49
Foreign	14.00	14.18	14.23	14.39	14.70	11.96	9.39	7.99	7.69	7.31
Industry OAD	**7.77**	**7.47**	**7.32**	**7.42**	**7.28**	**6.88**	**6.79**	**6.37**	**5.53**	**5.81**

Source: SNL Financial and NEAM

Table 6 displays book yields by fixed income sector. The overall industry's book yields declined by 140bps over the last decade. Book yields across all sectors, except for ABS, Non-Agency RMBS and Foreign sectors, declined in 2016. The ABS market continues to introduce new asset types, many of which offer incremental book yield. Cumulative ~200bps reductions in the book yields of Agency and Non-agency CMBS since the crisis reflect the runoff of seasoned pre-crisis exposures at higher book yields. Private placement securities were excluded from the overall book yield calculations.

Table 6. Fixed Income Sector Book Yield (%) – Excludes Non-Rated (Primarily Private Placement Securities)

Sector	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Gov't/Agcy	3.47	3.55	3.65	3.72	3.61	3.85	4.07	4.38	5.09	5.70
Corp	4.72	4.90	5.02	5.13	5.34	5.64	5.87	6.15	6.23	6.08
ABS	3.77	3.68	3.50	3.54	3.40	3.54	3.75	4.33	4.76	5.57
RMBS - Agcy	3.78	4.01	4.14	4.27	4.46	4.88	5.05	5.29	5.69	5.72
RMBS - Non Agcy	6.23	5.81	5.84	6.05	6.00	5.91	5.69	5.70	5.42	5.74
CMBS - Agcy	3.61	3.85	3.96	4.01	4.26	4.78	5.14	5.44	5.55	5.51
CMBS - Non Agcy	4.09	4.46	4.67	4.95	5.30	5.53	5.61	5.73	6.07	5.55
Munis - Taxable	5.08	5.19	5.32	5.42	5.50	5.69	5.75	5.87	5.89	5.94
Munis - Tax Exempt	3.99	4.15	4.24	4.17	4.22	4.40	4.39	4.80	4.81	4.73
Foreign	2.70	2.58	2.70	2.76	2.75	2.94	3.23	3.55	3.93	5.55
Grand Total	**4.47**	**4.60**	**4.70**	**4.82**	**4.95**	**5.20**	**5.39**	**5.64**	**5.85**	**5.87**

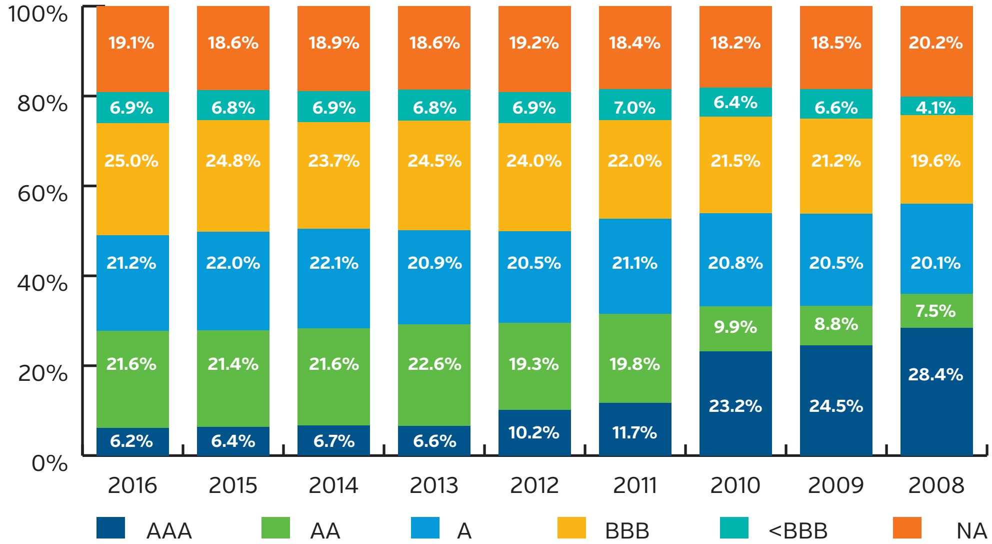
Source: SNL Financial and NEAM

Chart 2 displays trends in fixed income credit quality. Similar to the sector allocation shown in Table 2, the credit quality distribution exhibited little movement in 2016. The allocation to AAA, AA and A securities (NAIC 1 category) remained at 50% of the overall portfolio, trending slightly downward for the last five years. The BBB category continued to trend upward steadily and now represents 25% of the overall fixed income portfolio. The high yield (<BBB) allocation increased from 4.1% in 2008 to 7% in 2011 and has remained largely unchanged for the last six years.

The NA category consists of mostly "true"[2] private placement securities, which accounted for 14% of total fixed income holdings in 2016 (see Table 4). Based on 2016 year-end statutory filings, the industry invested about 52% of private placement securities in the BBB (NAIC 2) rating category. This is much higher than the 25% BBB allocation seen in public fixed income securities (see Chart 2).

As highlighted in *General ReView*'s Issue 63, the 2008 allocation to AAA securities reduction was due to downgrades in corporate and structured securities, whereas the reduction in 2011 mostly reflected Standards & Poor's downgrade of U.S. government securities. The changeover between the proportion of AAA and AA seen in 2013 was due to migration of AAA to lower-rated securities.

Chart 2. Fixed Income Credit Quality



Source: SNL Financial and NEAM

Table 7 displays the book yields for public fixed income securities by credit rating category. Total bond book yields continued to decline across most rating categories, with an aggregated decline of 13 bps. The life insurance industry's book yield reached the highest of 5.87% in 2007 and has declined by about 140 bps since then. The higher rating categories, AAA and AA, experienced the most reduction of 184 bps, while the high yield (<BBB) category experienced the least reduction of 122 bps over this period.

Table 7. Fixed Income Book Yields by Credit Rating Category

Rating	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
AAA/AA	3.74	3.86	3.95	3.98	4.03	4.33	4.59	4.91	5.34	5.58
A	4.43	4.60	4.68	4.89	5.04	5.31	5.53	5.75	5.92	5.87
BBB	4.83	4.99	5.13	5.27	5.49	5.79	6.01	6.26	6.27	6.16
<BBB	6.17	6.14	6.21	6.46	6.62	6.78	6.79	6.96	7.62	7.39
Total (exclude NonRated)	**4.47**	**4.60**	**4.70**	**4.82**	**4.95**	**5.20**	**5.39**	**5.64**	**5.85**	**5.87**

Source: SNL Financial and NEAM

Table 8 displays the option-adjusted durations (OAD) for public fixed income securities by credit rating categories. As shown earlier in Table 5, the industry's aggregate OAD lengthened by 0.3 years in 2016 and reached the longest (7.77) in the past decade. OAD movements continued to vary by rating categories. In 2016, both the AAA/AA and high yield (<BBB) rating categories extended duration by more than half a year. The A rating category, which represented 21% of the life industry's fixed income holdings, has maintained its OAD at 8.5 years in recent years. Non-rated securities (primarily privates), which accounted for 14% (see Table 4) of total fixed income holdings in 2016, were not included in the aggregate OAD calculations.

Table 8. Fixed Income Duration by Credit Rating Category (Years)

Rating	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
AAA/AA	8.39	7.82	7.29	8.07	7.25	6.63	6.62	5.91	4.91	5.22
A	8.53	8.49	8.48	8.01	8.11	7.55	7.21	6.95	6.50	6.81
BBB	7.34	7.03	7.09	7.02	7.07	6.80	6.71	6.42	5.78	6.38
<BBB	4.68	4.11	4.31	4.03	4.53	5.19	5.68	5.61	4.20	5.20
Total (exclude NonRated)	**7.77**	**7.47**	**7.32**	**7.42**	**7.28**	**6.88**	**6.79**	**6.37**	**5.53**	**5.81**

Source: SNL Financial and NEAM

KEY TAKEAWAYS

Highlights of this *Perspective*'s review include:

- The U.S. life insurance industry had lower premiums and deposits in 2016 and the overall industry net income ended slightly lower than the prior year's results.
- The industry's broad sector asset allocations remained largely unchanged. Structured securities' allocations continued a downward trend over the last decade. However, with the upcoming NAIC RBC C1 proposal, structured securities might be viewed more favorably under the new capital regime.
- The investment income from Schedule BA assets declined for the first time since the 2009 financial crisis. These non-traditional assets remain highly concentrated among large companies.
- The BBB allocation for public fixed income securities reached a new high of 25% in 2016, although this is still much lower than the 52% BBB (NAIC 2) allocation reported for private placement securities.
- Book yields continued to decline from 2007's high of 5.87% to 4.47% in 2016. The higher rating categories experienced the most reduction of 184 bps in this period.
- Since the Financial Crisis, the life industry extended its duration by more than two years, while the major bond indices' OADs extended by roughly one year. The additional duration extensions might spawn asset liability matching challenges for some companies.

We welcome your feedback and comments. Please contact us if you would like to receive a customized comparative assessment of your company versus peer companies.

ENDNOTES

[1] Refer to NEAM's April 2017 *Perspectives* – Proposed NAIC RBC C1 Factors for Life Insurers: Impact on Portfolio Optimization

[2] "True" private placement category excludes any 144A securities that are publicly traded.

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