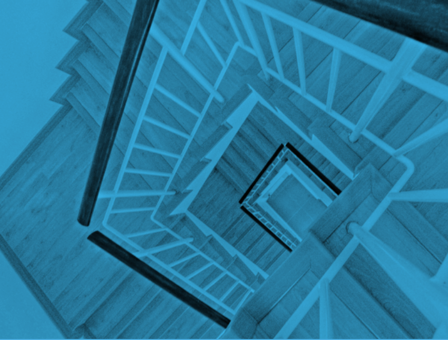

NEAM VANTAGE POINT

Perspectives

JANUARY 2017

OUR VIEW ON INSURANCE CAPITAL MANAGEMENT TOPICS

IN THIS ISSUE ▶

Life Insurance Industry's Net Investment Spreads: *Have We Reached the Bottom?*

Interest rates have risen sharply since November's election outcome, and the increase should alleviate pressures on the life insurance industry. In 2014, in the midst of a declining interest rate environment, we published a study[1] that reviewed the life industry's net investment spreads. Essentially, these spreads are the difference between "earned" rates from assets versus "paid/credited" rates to insurance contracts.

While the earned rates for life insurers are relatively straight forward, the paid or credited rates may warrant further discussion. Life insurers are subject to minimum interest rate guarantees, both explicitly and implicitly, for long-term insurance contracts. Minimum crediting rates offered within fixed annuities are an example of the "explicit" investment return requirement, while valuation interest rates specified for statutory reserving are "implicit" minimum investment returns that life insurers must earn to maintain profitability. We use the implicit investment returns in this net investment spread analysis.

This issue of *Perspectives* follows a similar approach and methodology[a] utilized earlier, but incorporates additional data points[2] and analytics. We will show net investment spread for the industry as a whole and additional reviews of results by business focus and company size. Here are the key takeaways:

1. Overall, the life industry-level spreads have continued to decline but seem to have stabilized; however, the number of life companies with positive net spreads is decreasing.

2. Large companies have relatively better net spreads than small insurers; companies in the smallest size category have shown the worst net spread results.

3. Annuity companies have more favorable net spread results than life and diversified companies.

4. With respect to bond portfolio characteristics, large life insurers seem to have a longer option-adjusted duration (OAD) profile, while annuity companies, regardless of company size, appear to have a shorter OAD profile.

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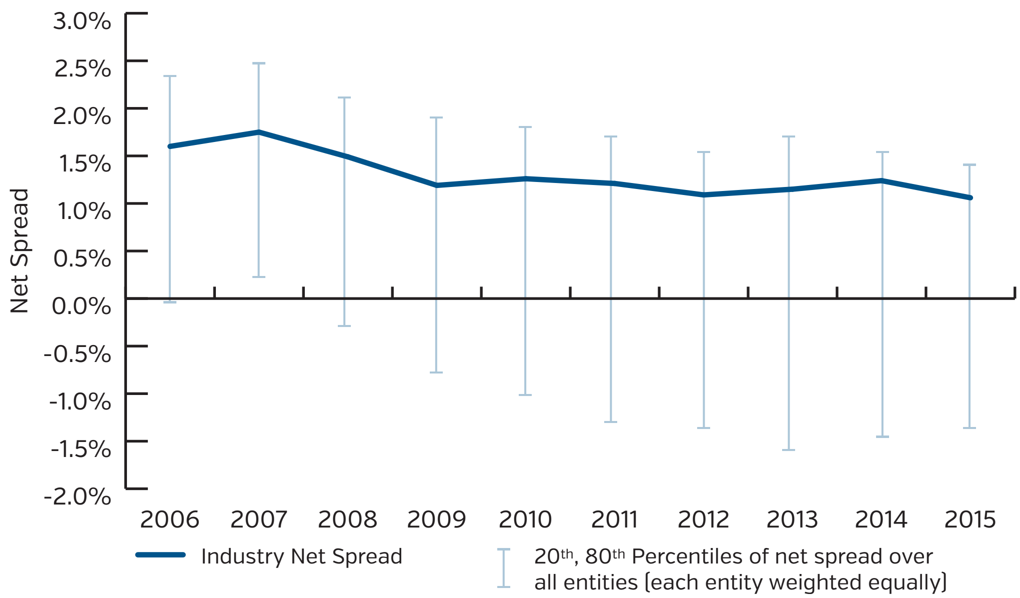
LIFE INDUSTRY NET INVESTMENT SPREAD TRENDS

Chart 1 shows historical trends of net investment spreads for the industry. The industry-level spread has stabilized slightly above 100 bps since it reached its highest level pre-crisis in 2007 (~175bps). This is consistent with the industry's target level to maintain a desired profitability between 100 to 150 bps, which takes into account commissions and expenses. The net portfolio yield reflects investment returns from both affiliated and unaffiliated investments.

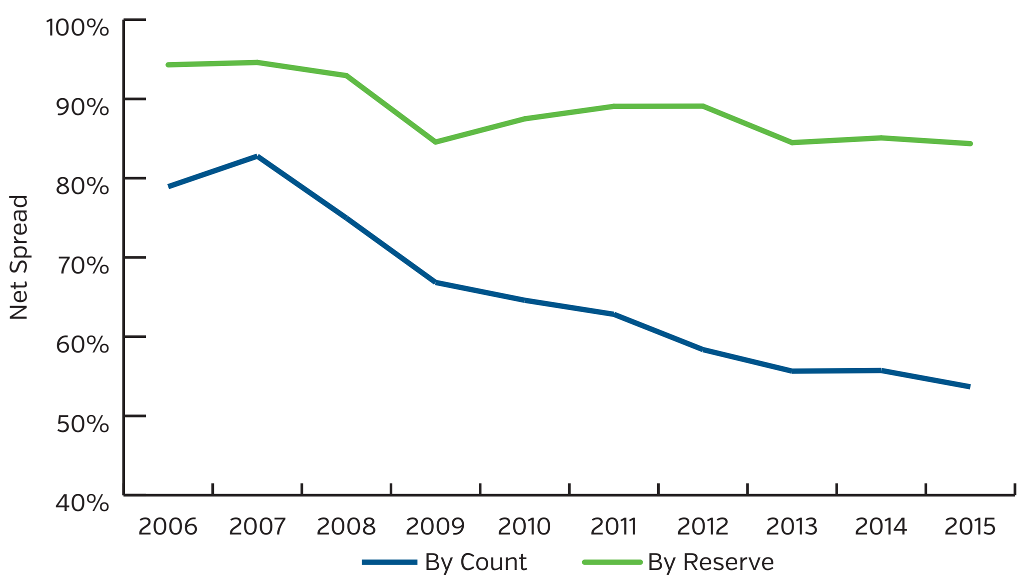
Additionally, the chart shows the 20th and 80th percentiles of net spreads by company count for each year. Although the industry weighted net spread has flattened, the majority of life insurers' net spreads are lower than the industry's weighted average. Larger companies seemingly have more favorable net spread results than smaller ones.

Chart 1. Industry Net Spread Over Guaranteed Interest Rate – *Declining but Stabilized*



Source: SNL Financial and NEAM

Chart 2. Percentage of Companies with Positive Net Spreads – *Continued Declines*

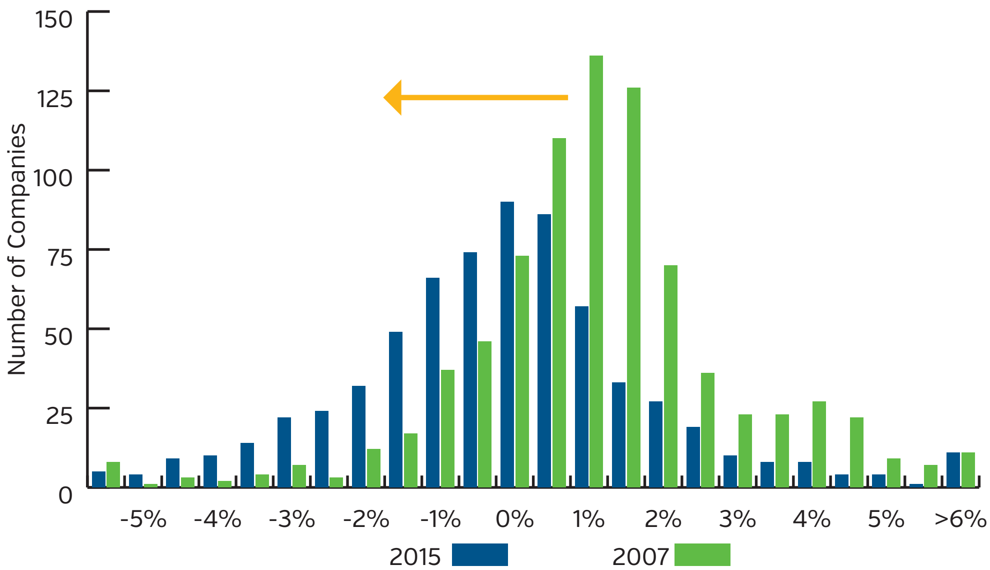


Source: SNL Financial and NEAM

Chart 2 shows the proportion of life insurers with a positive net spread. Although the net investment spread is "implicitly estimated," the results indicate alarming trends, especially prior and post-financial crisis. The proportion of the industry with a positive investment spread, expressed by reserves, declined from 94% in 2007 to 84% in 2015. Interestingly, when expressed by company count, the reduction of the proportion becomes more pronounced: down from 83% in 2007 to 54% in 2015. Small insurers represent the majority of companies with negative net spreads.

Chart 3 compares the distribution of net spread by *company count* in 2007 (the industry's highest level) and 2015. This comparison further illustrates that an increasing proportion of insurers have lower net spread levels. The distribution of net spread results clearly shifts to the left (lower level), from 2007 to 2015.

Chart 3. 2007 vs. 2015 Histogram of Net Spread by Insurers – *Negatively Shifted*

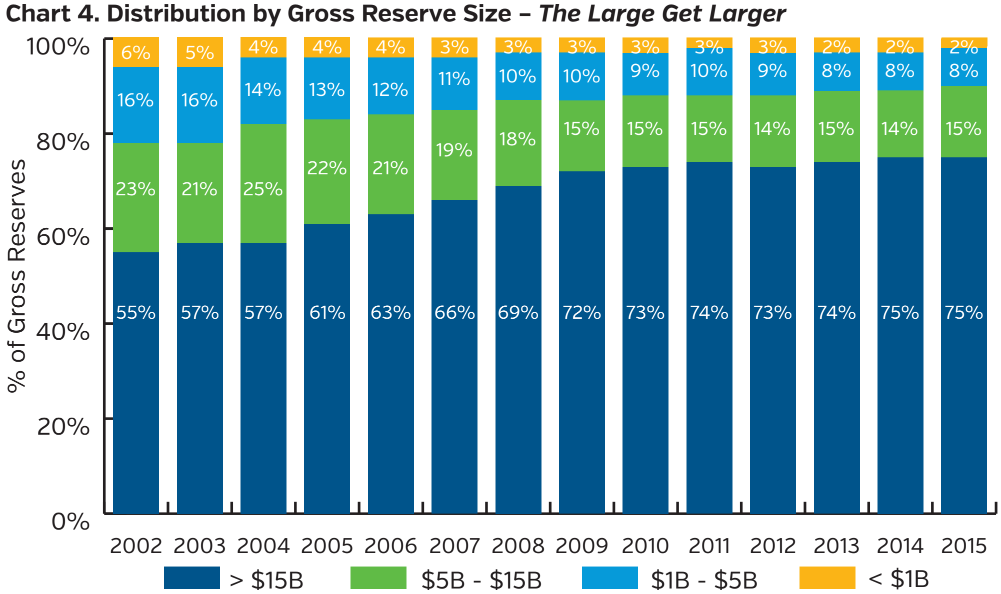


Source: SNL Financial and NEAM

NET INVESTMENT SPREAD BY COMPANY SIZE

In order to better understand the net investment spread variations by companies, NEAM examines net investment spread by company size, based on their respective statutory gross reserves.

Chart 4. Distribution by Gross Reserve Size – *The Large Get Larger*



Source: SNL Financial and NEAM

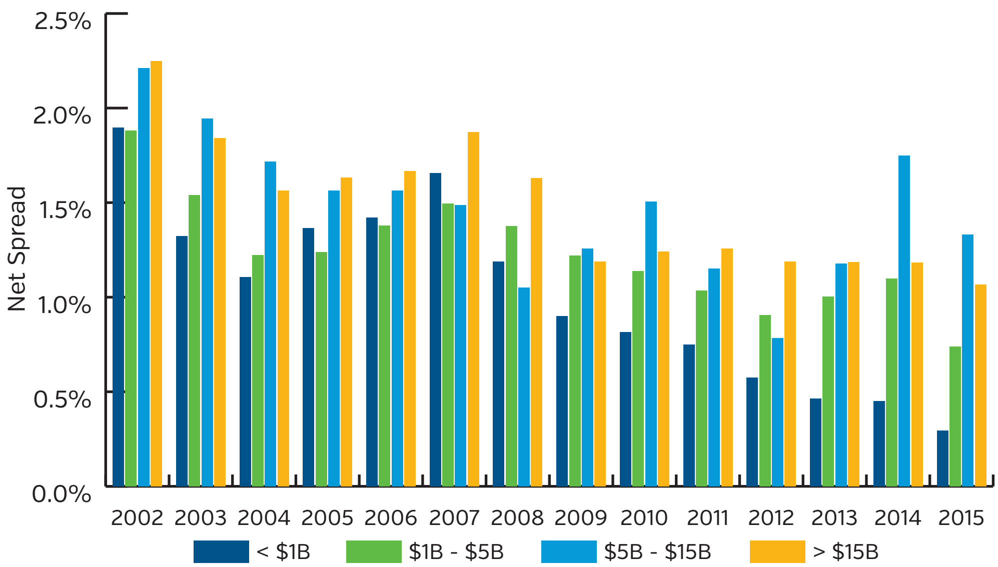
Chart 4 shows the reserve distribution by company size. Those with over $15 billion in gross reserves represent three quarters of reserves in the life industry. However, companies with less than $1 billion in gross reserves represent 456 companies out of the 667 insurers for the entire life industry (see Table 1). The life industry has continued to consolidate and large life insurers are becoming larger and more dominant.

Table 1. Company Count by Gross Reserve Size

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
< $1B	653	610	580	547	538	522	507	483	476	456
$1B - $5B	115	112	112	112	109	113	108	108	105	110
$5B - $15B	56	53	51	46	48	46	51	53	51	53
> $15B	35	38	40	43	45	48	45	46	48	48
Total	859	813	783	748	740	729	711	690	680	667

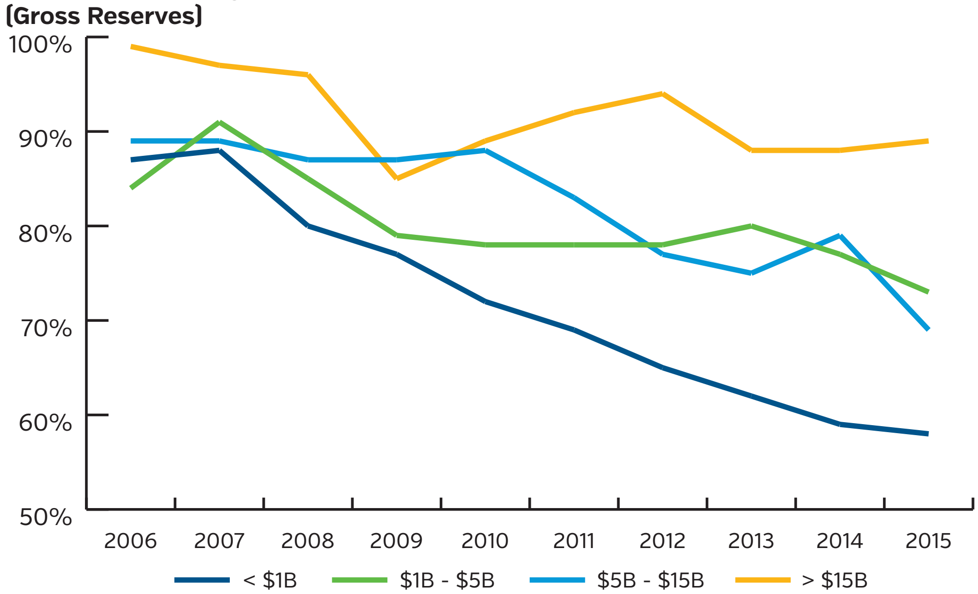
Sources: SNL Financial and NEAM

Chart 5A. Net Spread by Company Size (Gross Reserves) – *Smallest Companies Show Most Deterioration*



Source: SNL Financial and NEAM

Chart 5B. Percentage of Companies with Positive Net Spread by Company Size (Gross Reserves)



Source: SNL Financial and NEAM

Chart 5A shows that net spreads for the smaller companies (< $1 billion category) have continued to deteriorate. Although these small insurers only represent 2% of the industry's reserves, they account for over two-thirds by count (see Table 1). The spiking positive net spread results for $5 billion to $15 billion companies observed in 2014 and 2015 are attributed to a handful of companies of which affiliated income dominated their total reported net portfolio returns.[3] Chart 5B shows that less than 60% of the smaller companies (< $1 billion category) had positive net spread at 2015 year end.

NET INVESTMENT SPREAD BY BUSINESS FOCUS

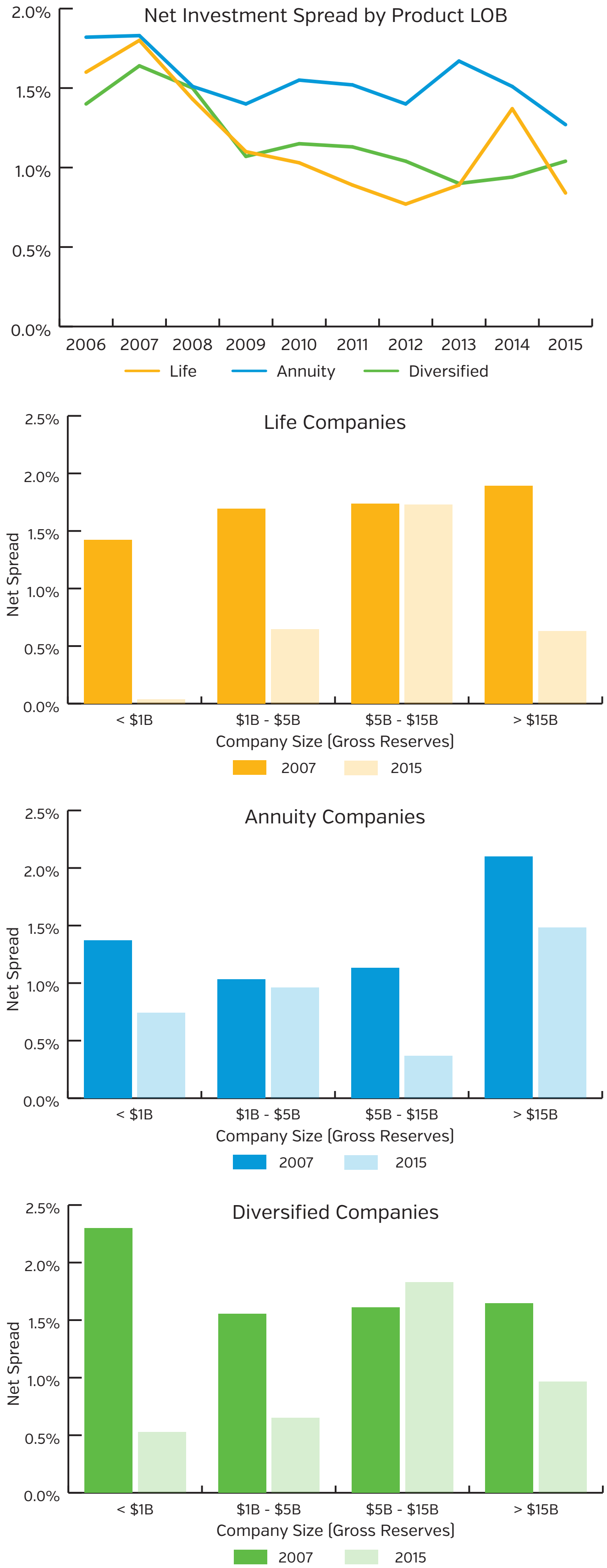
In addition to reviewing net investment spread by company size, NEAM further examines net spread results by the type of business insurers write. We classify life insurers as either life or annuity if at least two-thirds of their statutory reserves can be classified in that manner; otherwise, the insurer is deemed as diversified. At year-end 2015, 25%, 32%, and 43% of the industry's gross reserves, respectively, were represented by these classifications.

Chart 6 (on page 6) focuses on net spread results by business focus since 2007, when the industry had the highest net spread. Annuity companies exhibit the least reduction in net spreads compared with life and diversified companies. Those across business focus and size experienced net spread declines except for the $5 billion to $15 billion companies. Their favorable 2015 net spread results are mostly attributable to reported affiliated investment income. The reported affiliated investment income also contributed to the high net spreads for the life companies observed in 2014.

Chart 7 (on page 7) shows OADs of the life insurance industry's bond portfolio. Companies with over $15 billion in gross reserves consistently show longer OADs than the rest of life industry. Life companies, regardless of their sizes, appear to have longer OADs than annuity and diversified companies, and the largest life companies (> $15 billion) hold bonds with the longest OADs. This discrepancy in the observed OADs could be driven by the underlying product characteristics and varying investment strategy utilized by individual companies. Based on Chart 6 and Chart 7, we can infer that annuity companies' favorable net spread results are not driven by taking duration (rate) risk in their bond portfolio; they are driven by a combination of credit risk and/or liquidity risk in their bond portfolio.

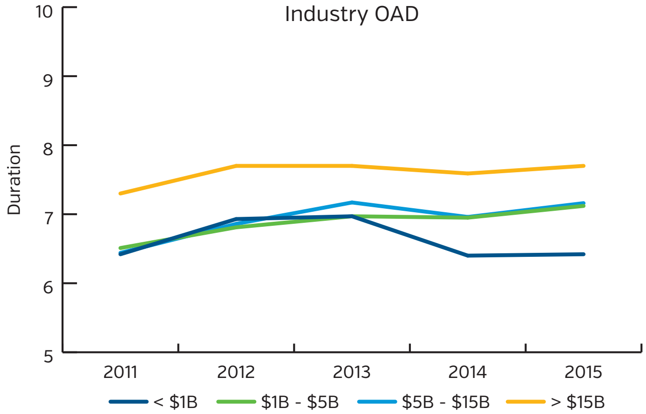
Continued on page 8.

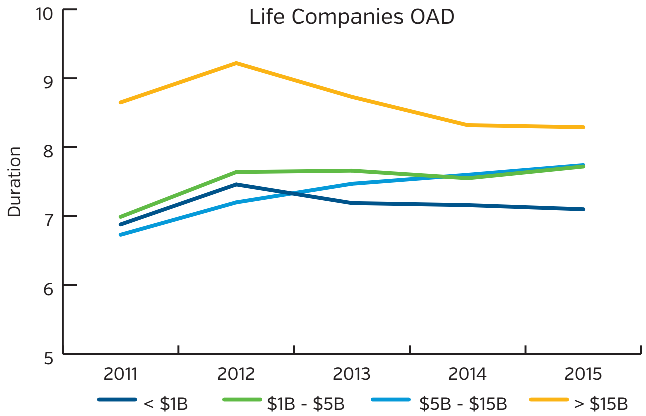
Chart 6. Net Investment Spread by Business Focus and Company Size –
Annuity Companies Outperform

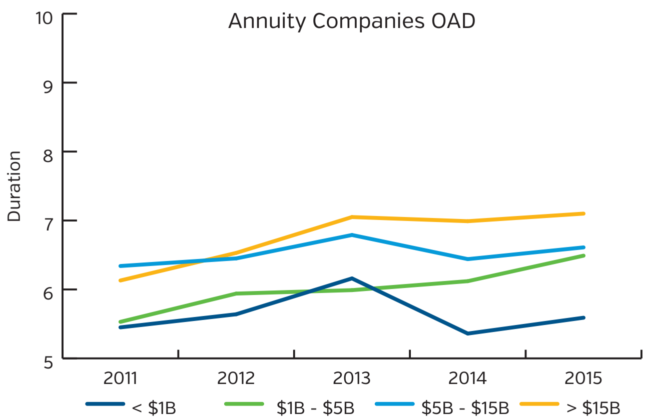


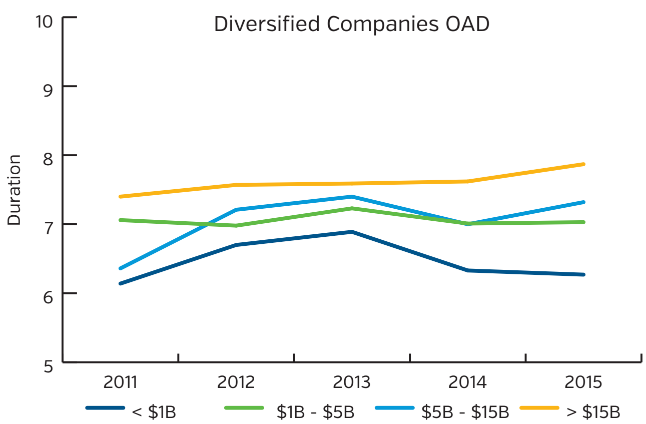
Source: SNL Financial and NEAM

Chart 7. Bond Portfolio OAD by Business Focus and Company Size – *Large and Life Companies Exhibit Longer OADs, While Annuity Companies Show Shorter OADs*









Source: SNL Financial and NEAM

CONCLUDING REMARKS

Rising interest rates, whether long-lasting or not, are on the horizon. Life insurance companies, whose profitability closely tie to the interest rate level, will hopefully show improved financial results.

Although it is challenging to "explicitly" identify and quantify the minimum crediting rate guarantee offered by the life industry, the "implicitly" required earned rate, inferred from statutory financial statements, can be estimated and provides telling trends and implications.

Declining life industry net investment spreads appear to have stabilized. However, the industry results are skewed toward large companies as the industry continues to consolidate. On a company-by-company basis, over 80% of life insurers had a positive net spread in 2007, but this percentage declined to a little over half in 2015. Companies in the smallest size (<$1 billion) category, which accounted for two thirds of the life industry by count, have had the worst net spread results.

We welcome your feedback and comments. Please contact us if you would like to know more about the implications that net investment spreads and potentially rising interest rates will have for your business and the life insurance industry.

ENDNOTES

[1] General Review – Life Industry Net Investment Spread: Declining but Stabilizing: February 2014.

[2] Reserves of companies included in the study represent more than 99.5% of industry reserves over the study period from 2006 to 2015.

[3] Both affiliated and unaffiliated investment returns are included in the net portfolio yield calculations as statutory investment income reflects both.

TERMS

[a] Net Investment Spread = Net Portfolio Yield – Guaranteed Interest Rate

$$\text{Net Portfolio Yield} = \frac{\left(\dfrac{\text{Net Investment Income}}{\text{Invested Assets}_t + \text{Invested Assets}_{t-1} - \text{Net Investment Income}}\right)}{2}$$

Guaranteed Interest Rate was approximated by the weighted-average valuation interest rate that was extracted from Statutory Financials, Exhibit 5: Aggregate Reserve for Life Contracts

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