

*FINANCIAL CONCEPTS INC provides sophisticated insurance and wealth management services to families, business owners, corporate executives, professionals, and other successful high income and high net worth individuals. Our team of professionals utilizes a customized process of defining, understanding, researching, evaluating, and informing our clients of innovative and uniquely integrated solutions tailored to their diverse financial goals. Our desire is to help make the otherwise complex, more understandable as it applies to your unique situation.*

## Dividend Interest Rates for 2015

Near the end of each calendar year, mutual insurance companies declare their dividend interest rates on participating whole life (WL) insurance policies for the following year. Below are the 2015 declared dividend interest rates (DIR) of the four largest issuers of participating WL policies, as taken from the carriers' own publicized dividend announcements:

- Guardian Life Insurance Co. of America 6.05% (down from 6.25% in 2014)
- Massachusetts Mutual Life Insurance Co. 7.10%
- New York Life Insurance Co. 6.20% (up from 6.00% in 2014)<sup>1</sup>
- Northwestern Mutual Life Insurance Co. 5.60%

This M Intelligence piece provides information on the elements that drive changes in DIRs—as supported by historical DIR results, insurance company asset allocations, and investment returns—for the four major mutual life insurance companies.

### Dividend Interest Rate

The declared dividend interest rate in a participating WL policy has a very different application than a UL crediting rate; therefore dividend interest rates are not comparable on an absolute basis. To illustrate this point, in most participating WL policies one part of the dividend is based on a formula using the declared dividend interest rate. The formula can be generically described as taking the excess of the declared dividend interest rate over the policy guaranteed rate multiplied by the “policy value.”

While this formula is straightforward, its application varies widely by insurer and policy. By example, some insurers may make additional deductions from the declared DIR to cover expenses or mortality, some policies will have multiple guaranteed interest rates to choose from (e.g., one for policy cash surrender value and one for policy reserves), and there is wide variation in what is used in “policy value” may be a reserve, a cash surrender value, the greater of the two, a year-end value or a mid-year value, etc.

For these reasons, limited reliable conclusions can be drawn from comparing the absolute DIRs of various policies. In fact, many insurers who issue participating WL policies have stopped publishing a DIR because the rate can mean different things to different people, and reliance upon the absolute rate can be misleading.

<sup>1</sup> New York Life changed the methodology it uses to calculate the dividend interest rate (DIR) in 2010 to more closely align with the DIR methodology used by other carriers. This change had the effect of raising the DIR by 32 basis points from the previous method. For purposes of this study, the DIR in years prior to 2010 have been adjusted to reflect this change in methodology.

## Dividend Interest Rates for 2015 (continued)

However, because changes in DIRs over time have tended to align with new money interest rate movements, the following analysis does provide helpful insight for policyholders.

### Fixed Income Asset Classes Lead Insurance Company Portfolios

Insurance companies invest assets primarily in investment grade bonds and mortgages. These fixed income asset classes are a strong match in supporting insurance liabilities. As seen in Table 1, nearly 85% of insurance industry invested assets were in bonds and mortgages at year-end 2014. Table 2 shows that 94% of industry bond holdings were class 1 and 2 (i.e., investment grade); 63% were class 1.

**Table 1. Asset Allocation of U.S. Life/Health Industry Invested Assets, 2014**

Bonds	74.1%
Mortgages	10.2%
Other	4.4%
Contract Loans	3.6%
Cash & ST	2.7%
Common Stocks	2.1%
Real Estate	0.6%
Preferred Stocks	0.3%

**Table 2. NAIC Classification of U.S. Life/Health Industry Bond Assets, 2014 (with Moody's and S&P equivalent ratings)**

Class 1 (Moody's 'A3' or better; S&P 'A-' or better)	63.4%
Class 2 (Moody's 'Baa'; S&P 'BBB')	30.8%
Class 3 (Moody's 'Ba'; S&P 'BB')	3.8%
Class 4 (Moody's 'B'; S&P 'B')	1.6%
Class 5 (Moody's 'Caa'; S&P 'CCC')	0.4%
Class 6 (Moody's below 'Caa'; S&P below 'CCC')	0.1%

### The Correlation between Dividend Interest Rates and Fixed Income Benchmark

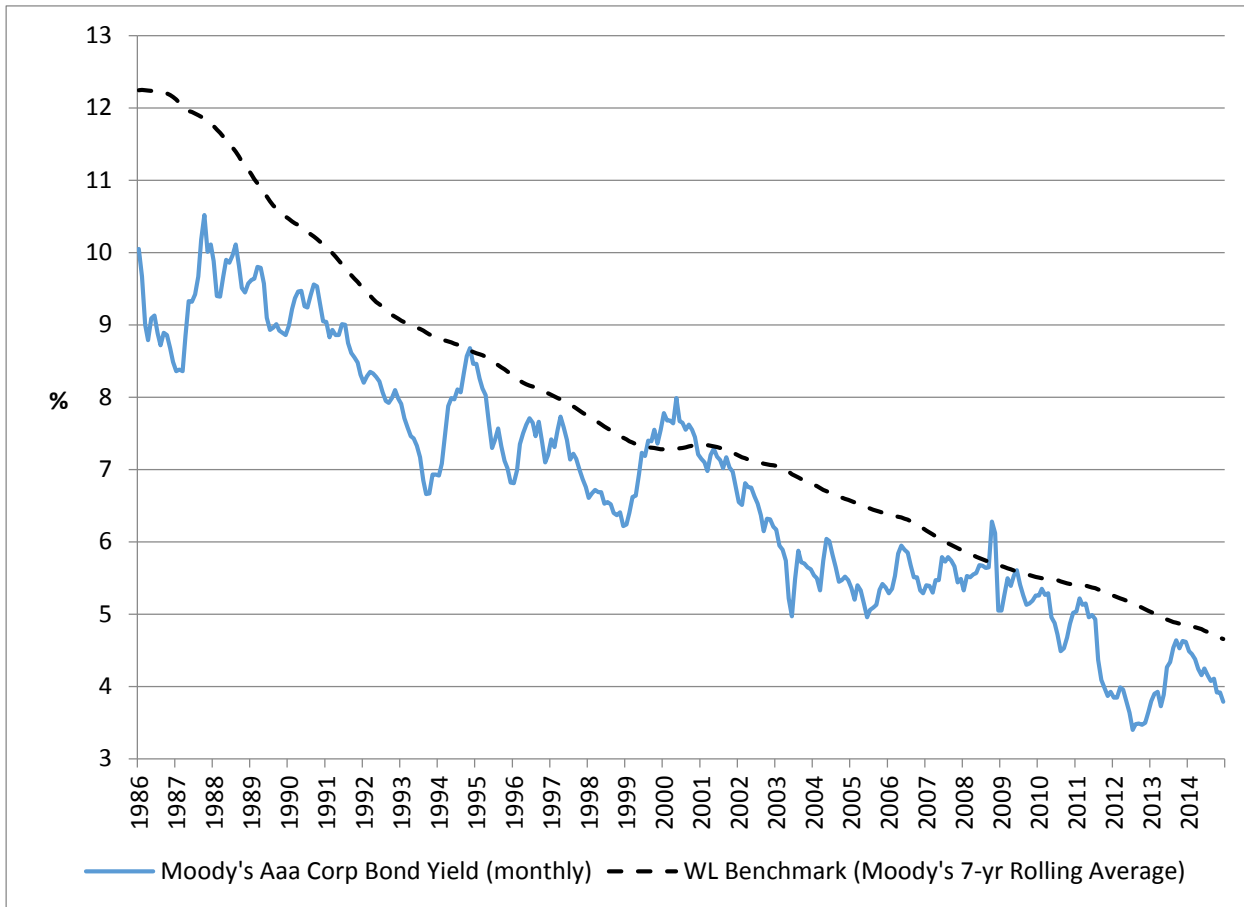
Due to insurance company invested asset concentration in bonds and mortgages, changes in DIRs generally correlate to long-term interest rate changes, especially benchmarks reflecting a seasoned portfolio of long-term interest rates.

The Moody's 'Aaa' Long-Term Corporate Bond Yield Average, which provides the new money rate for an investment grade fixed income instrument, serves as an effective proxy for a typical insurance company asset. The seven-year rolling average of Moody's 'Aaa' can provide an example of an insurance company portfolio yield as the rolling average contains both older and newer investments, simulating the older assets that mature and roll off the books and the purchase of new assets over time. When referring to Figure 1, which shows historical interest rates, demonstrates that new money interest rates have been declining; the seven-year rolling average (proxy for portfolio yield) has also been declining but lags new money rates. For example, if new money rates are below the portfolio yield and were to remain level, the portfolio yield would steadily decrease over time and would equal the new money rate in seven years (the lag factor).

## Dividend Interest Rates for 2015 (continued)

**Figure 1. Monthly and 7-Year Rolling Average of Moody's 'Aaa' Long-Term Corporate Bond Yield Average**

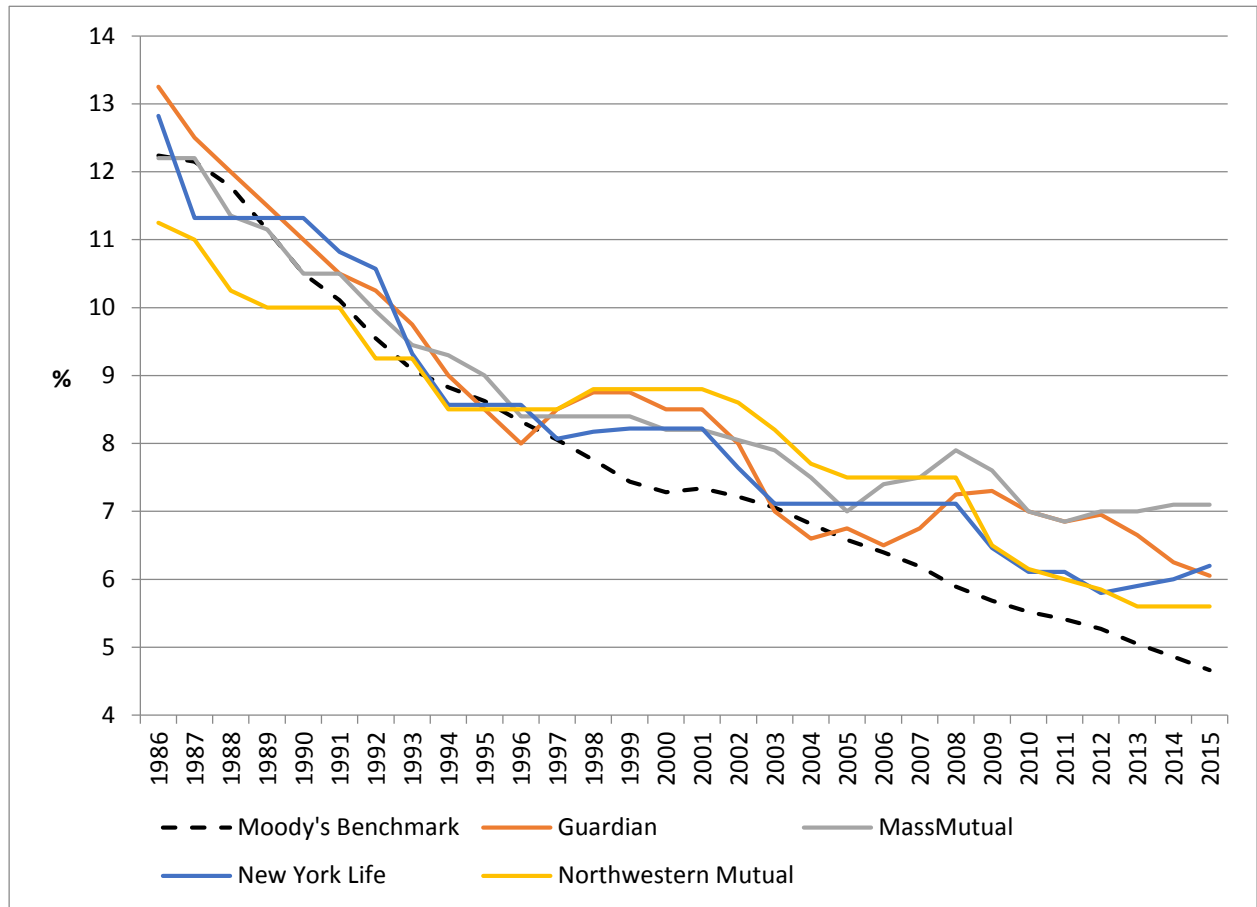
In Figure 1, the new money rate as of January 1, 2015 was approximately 85 basis points (bps) below the seven-year rolling average. Therefore, if new money rates remain at this level we should anticipate that DIRs will be at risk of an 85 bps drop over the next seven years due to the correlation between DIRs and the Moody's seven-year rolling average, as shown on the following page.



## Dividend Interest Rates for 2015 (continued)

**Figure 2. Moody's Benchmark & Insurance Company Annual Dividend Interest Rates (1986–2015)**

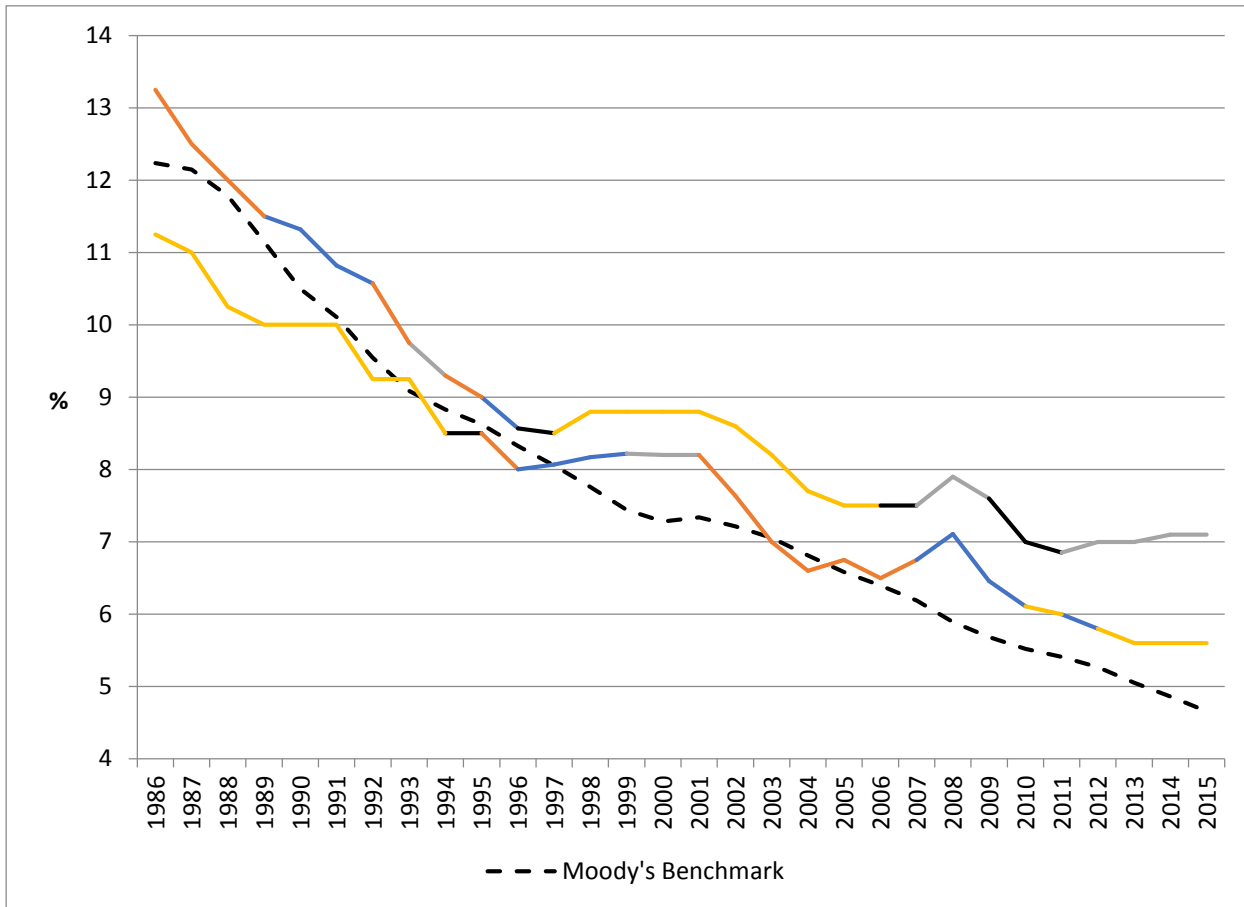
Historically, the annual change in the seven-year rolling average of the Moody's 'Aaa' Long-Term Corporate Bond Yield Average, referred to in this analysis as the Moody's Benchmark (Figure 2), correlates well with the annual change in DIRs. Since insurance companies declare their annual dividend rates near the end of the previous calendar year, the Moody's benchmark is as of the end of the previous year. For example, the value of the Benchmark shown for 2015 is as of December 31, 2014.



## Dividend Interest Rates for 2015 (continued)

**Figure 3. Highest and Lowest Insurance Company Annual DIRs Compared to Moody's Benchmark (1986–2015)**

Highlighting the highest and lowest DIRs each year illustrates the movement correlation between DIRs and the Moody's Benchmark. Figure 3 charts the highest and lowest DIRs each year with the color of the line changing to reflect the respective insurer to which the rate applied. (The color black signifies that multiple insurers shared the same highest or lowest rate.) Each of the four insurance companies had both the highest and the lowest DIR during at least one year between 1986 and 2015.

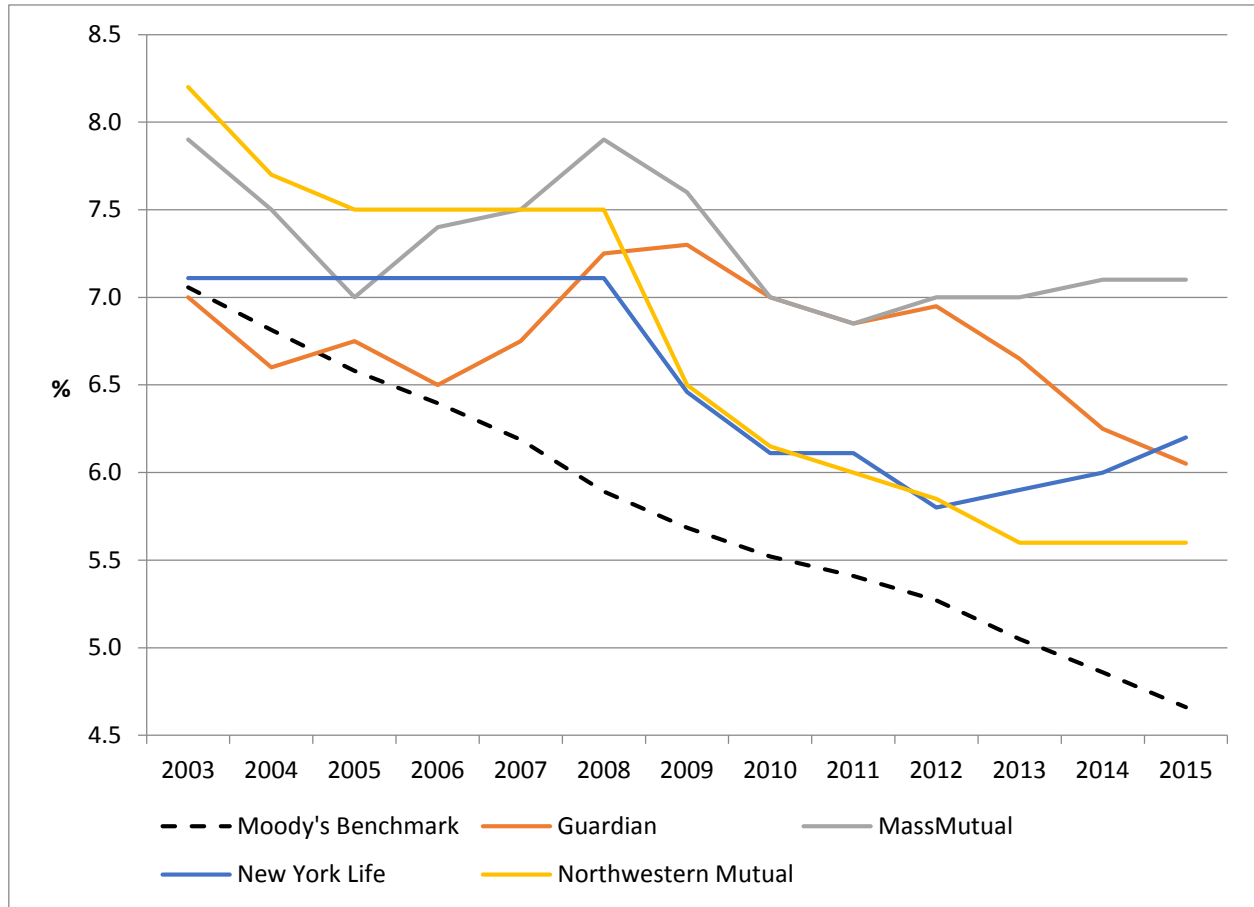


It is important to note that the correlation between DIRs and the Moody's Benchmark involves changes in those rates over time, not the rate itself. For example, the Moody's Benchmark rate as of December 31, 2014 was approximately 4.7%; however, the portfolio yields of the insurance companies are currently in the range of 4.7% to 5.5%. The difference can be attributed to insurance companies capturing yield from other alternative investment classes, such as equities, and potentially from taking some additional credit risk (i.e., lower rated bonds). As detailed later in this M Intelligence piece, these alternative asset classes may be driving the divergence between DIRs and the Moody's Benchmark.

## Dividend Interest Rates for 2015 (continued)

**Figure 4. Moody's Benchmark & Insurance Company Annual Dividend Interest Rates (2003–2015)**

Figure 4 shows that DIRs have become more divergent from the Moody's Benchmark in recent years (2003 - 2015). Also of note is that Northwestern Mutual's DIR has the largest drop (highest DIR in 2003 and lowest DIR in 2015) and Mass Mutual's DIR has grown to be the outlier in 2015.



To gain some perspective on today's DIRs we can look at historical average differences between various carrier DIRs and the Moody's Benchmark. Table 3 shows carrier DIRs and the average differences from the Moody's Benchmark over both 10-year (2005–2014) and 20-year (1995–2014) periods.

## Dividend Interest Rates for 2015 (continued)

**Table 3. Current Insurance Company DIRs and Average Differences from Moody's Benchmark**

	Rate		Difference from Benchmark			
	2014	2015	2014	2015	10-year average	20-year average
<b>Moody's Benchmark</b>	4.86	4.66				
<b>Guardian</b>	6.25	6.05	0.98	1.00	1.27	0.91
<b>Mass Mutual</b>	7.10	7.10	1.83	2.05	1.76	1.21
<b>New York Life</b>	6.00	6.20	0.73	1.15	0.90	0.68
<b>Northwestern Mutual</b>	5.60	5.60	0.33	0.55	0.89	0.96

The Moody's Benchmark dropped 20 bps from 2014 to 2015, reflecting lower new money interest rates. The DIR drop for Guardian matched the reduction in the Moody's benchmark but Mass Mutual and Northwestern Mutual maintained their DIRs and New York Life actually increased its DIR by 20 bps.

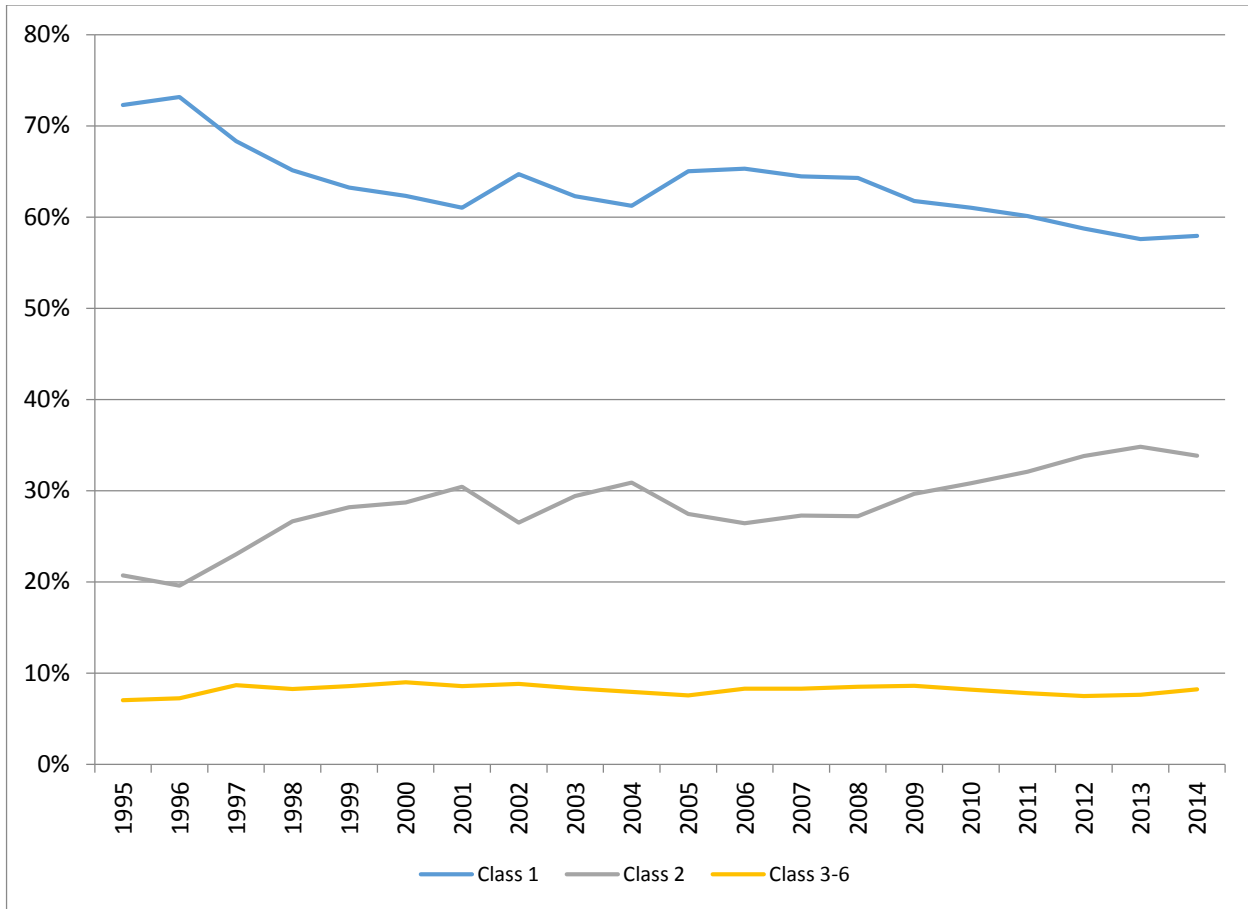
Table 3 is useful to compare current DIRs relative to the Moody's Benchmark (i.e. the spread) and how those 2015 spreads compare to historical averages for each carrier. The spread for Mass Mutual is 85 bps higher than the 20-year average spread and New York Life's spread is nearly 50 bps higher than the historical average. This would suggest that both companies DIRs may be more vulnerable to reductions if interest rates remain low. On the other hand, Guardian's spread is close to the historical average while Northwestern Mutual's spread is actually about 40 bps less than the average over the past 20 years.

When spreads increase, or DIRs are maintained/increased in a decreasing interest rate environment, it begs the question of what is driving the spread and the future sustainability of that spread/DIR. For DIRs that reflect both mortality and portfolio yield experience, it could be better mortality experience offsetting lower portfolio yield experience. Some mutual companies invest surplus in alternative investments, like subsidiaries or private equity, which have performed well recently, and are able to pass back that better investment experience through the participating DIR. However, alternative investments tend to be less liquid and generate more volatile returns, which may result in more risk to the dividend scale (DIR).

### Increased Allocation to Slightly Lower Rated Bonds

One possible reason for the divergence from the Moody’s ‘Aaa’ Benchmark is a shift in the asset allocation. While the bond allocation of the four mutual life insurance companies has been relatively stable (between 57% and 64% on average from 1995 to 2014) there has been a shift in the relative credit quality of these companies’ bond holdings (Figure 5).

**Figure 5. Average Bond Allocation by NAIC Credit Quality Classification for Four Major Mutual Life Insurance Companies**



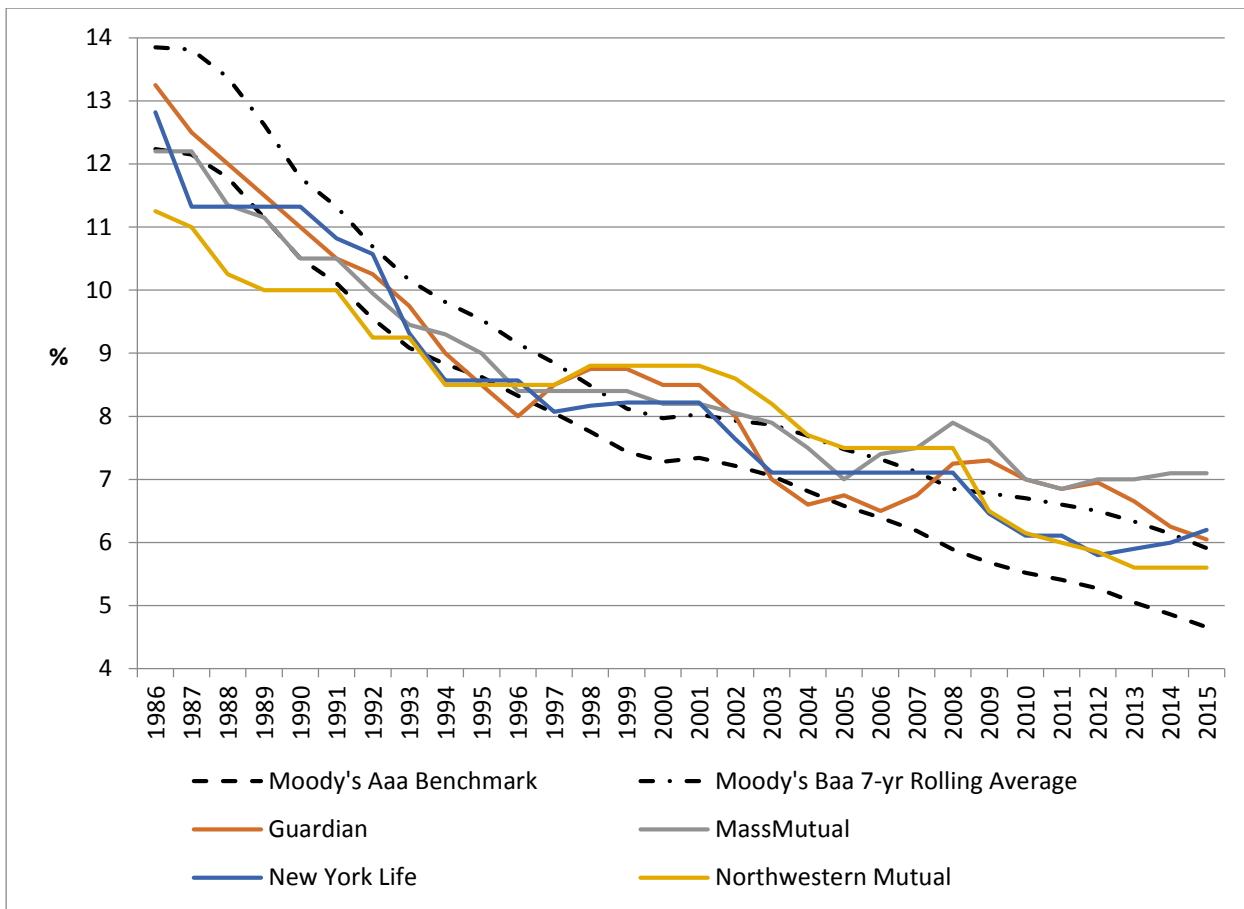


## Dividend Interest Rates for 2015 (continued)

The percentage of bond holdings allocated to the highest NAIC Class rating has declined to 58% in 2014 (from 72% in 1995). At the same time, the allocation to lower rated NAIC Class 2 bonds has increased to 34% in 2014 (from 21% in 1995). According to the NAIC, the Moody's 'Baa' rating is equivalent to its Class 2 bond rating. While a 'Baa' rating represents a relatively low-risk bond or investment, it is toward the bottom of the investment-grade category.

Figure 6 shows a comparison of DIRs to both the seven-year rolling average of the Moody's 'Aaa' and lower rated 'Baa' Long-Term Corporate Bond Yield Averages.

**Figure 6. Seven-Year Rolling Average of Moody's 'Aaa' and 'Baa' Long-Term Corporate Bond Yield Averages & Insurance Company DIRs (1986–2015)**



Since 2000, there has been a stronger correlation between DIRs and the 'Baa' Benchmark as compared to the 'Aaa' Benchmark. After reaching a low point of 68 basis points in 1999, the additional yield provided by 'Baa' versus 'Aaa' has increased to 125 basis points in 2015. The increase in allocation and yield for Class 2/'Baa' bonds could at least partially explain the increase in the divergence between dividend interest rates and the Moody's 'Aaa' Benchmark.

### Correlation Between DIRs and Annual Insurance Company Investment Returns

DIRs are also correlated to the investment returns generated by the insurance company. While investment returns are only publicly available for each company's entire invested asset portfolio (and not for the specific segregated general accounts by product type), over periods of time it can be observed that a company's DIR will tend to move in the same direction as its annual net investment yield (a measure of net investment income divided by annual average invested assets) and total return (net investment yield plus realized capital gains/losses<sup>2</sup>). Appendix A contains charts for each of the mutual life insurance companies showing their DIR along with their net yield, total return, and the Moody's 'Aaa' Benchmark as of the end of the prior year for the past 10 years.

The charts show the DIRs generally correlate with both the respective companies' net yield and total return. At the height of the financial crisis in 2009, life insurance companies recorded losses due to asset impairments, which are reflected in their net yield and total returns, driving down DIRs. Since the financial crisis, life insurance companies have been able to either greatly reduce realized capital losses or even achieve realized capital gains, which have positively supported DIRs.

### Summary

DIRs are complex and "black-box" in nature; they are not UL crediting rates. DIRs may be impacted by mortality and expense experience and can be calculated differently from company to company. Therefore, the absolute value of DIRs should not be compared.

Over long periods of time, the historical tendency for annual changes in DIRs had trended with the annual changes in fixed income benchmarks (such as the Moody's 'Aaa' or 'Baa' Long-Term Corporate Bond Yield Average). DIRs can diverge from fixed income benchmarks over the short term (since life insurers may shift their asset allocation when opportunities arise to enhance yield). However, life insurers are also sensitive to risk, which limits the magnitude of shifts in their asset allocations.

Therefore, it is likely for the foreseeable future that life insurers will remain heavily invested in bonds and mortgages, with a high percentage of those investments made in investment grade securities (NAIC Classes 1 and 2), resulting in DIR changes that will tend to continue to be correlated to changes in fixed income benchmarks.

<sup>2</sup> The charts in Appendix A include a measure labeled "Net Yield + Realized G/L." This measure equals net investment income, plus realized capital gains/losses, minus transfers to the Investment Maintenance Reserve (IMR), plus amortization of IMR. Unrealized gains, which are often included in "total return," are not included for the purposes of this M Intelligence piece.

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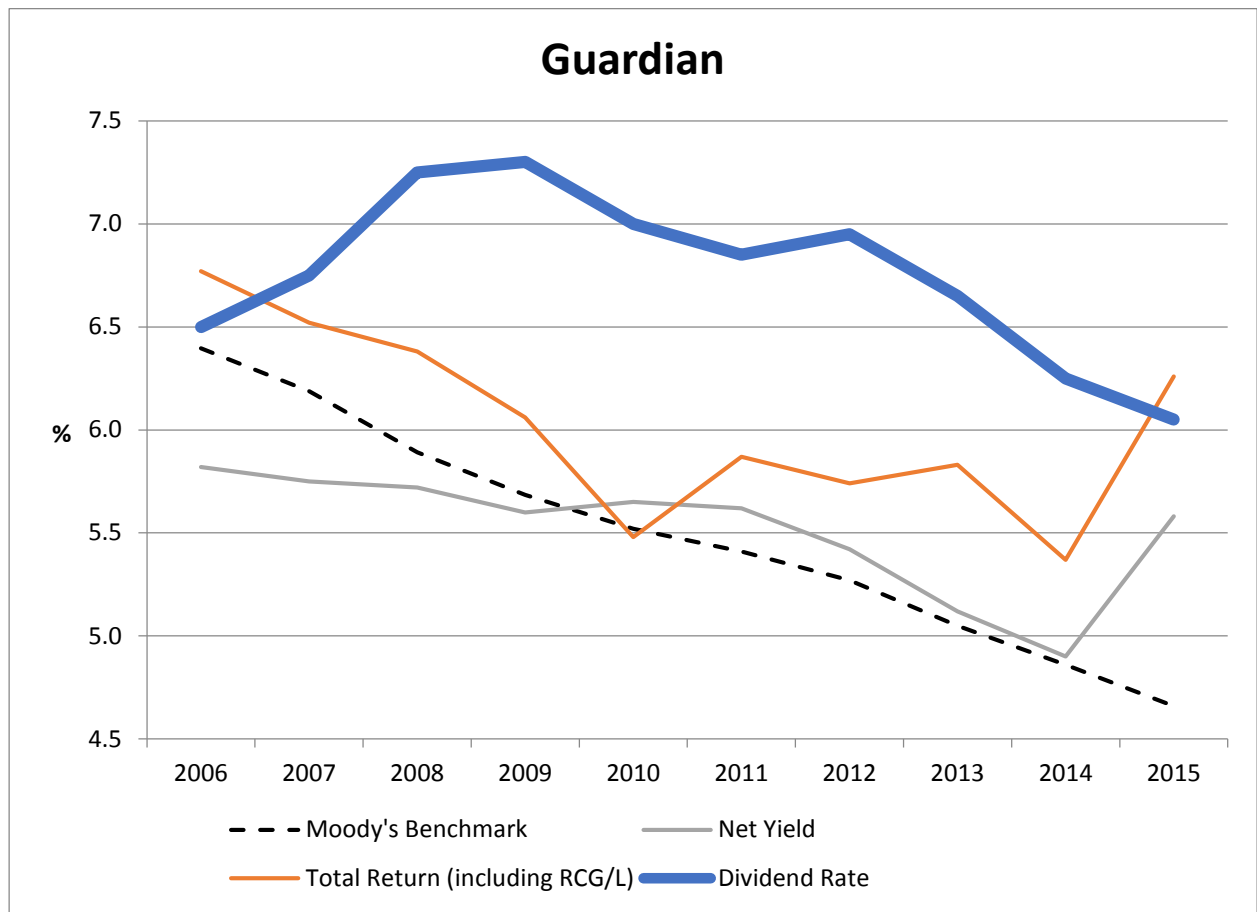
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### Guardian Insurance Company of America

The analysis leading to the movement of the company’s DIR is unclear when charted against the company’s net yield and total return. In fact, from 2006 through 2009, the DIR appears to move almost inversely with movements of net yield and total return. This pattern seemed to continue in 2015 as Guardian reported a marked increase in investment performance but reduced its DIR by 20 bps.

An important observation for Guardian, as well as the other companies in this report, is the dividend rates are higher than their reported investment rates of return. This should serve to emphasize that whole life dividend rates are not comparable to universal life crediting rates, which generally do correspond to carrier investment rates of return.

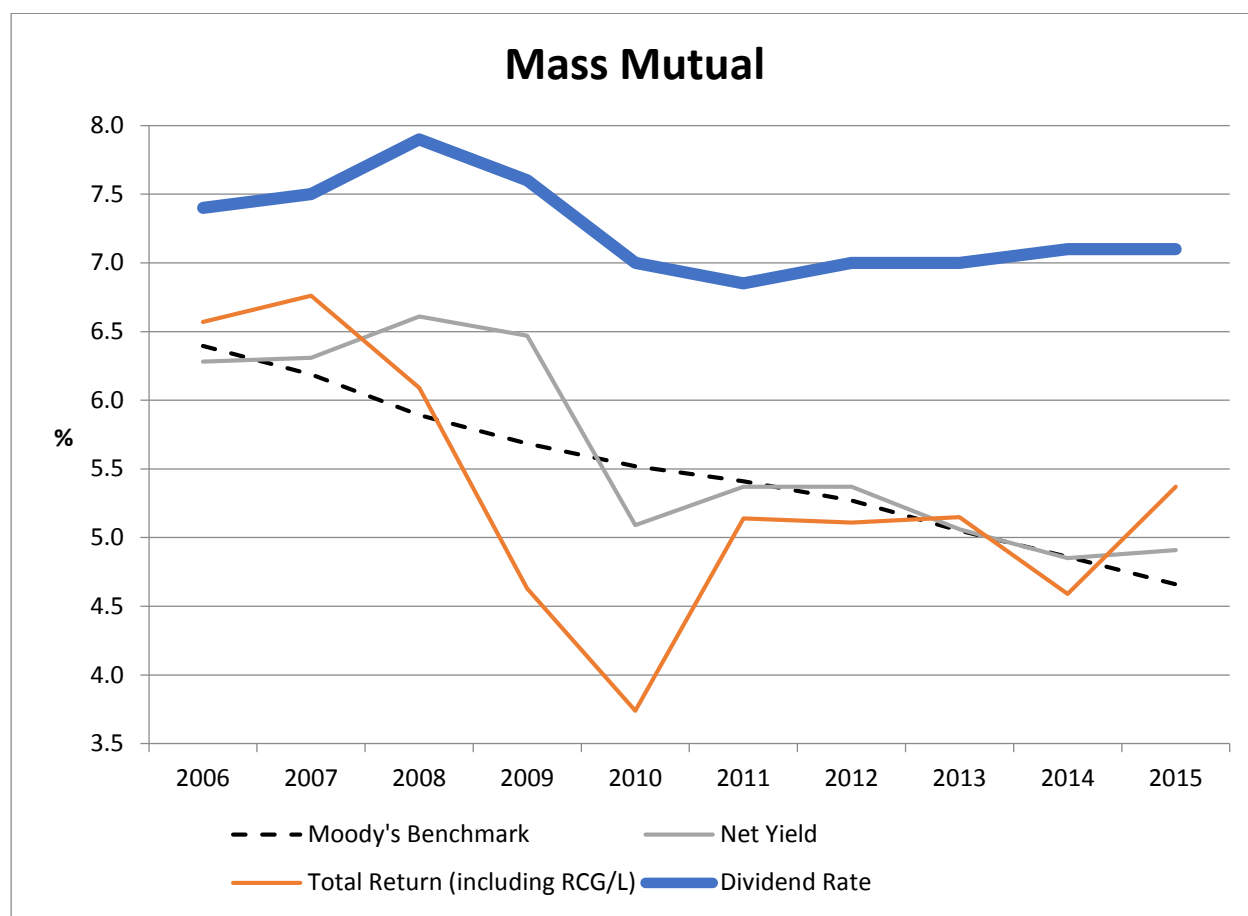


### Massachusetts Mutual Life Insurance Company

Historically, Mass Mutual’s DIR has correlated well with its net yield. However, the spread between the DIR and net yield has increased to 173 bps in 2015 (from 112 bps in 2004). Realized capital gains have generally been negative over the last eight years, making it unclear whether they are responsible for the widening spread in recent years.

Mass Mutual stated that its 2015 dividend payout “reflects...the distribution of other business earnings from the company’s asset management and non-participating businesses.”<sup>3</sup> According to Mass Mutual’s 2014 annual statutory financial filing with the state of Massachusetts, investment income from stock holdings in affiliated companies contributed approximately 1% to Mass Mutual’s investment income, which would equate to about 5 bps in yield. In the years 2009–2013, the ratio ranged from less than 1 bp to 5 bps.

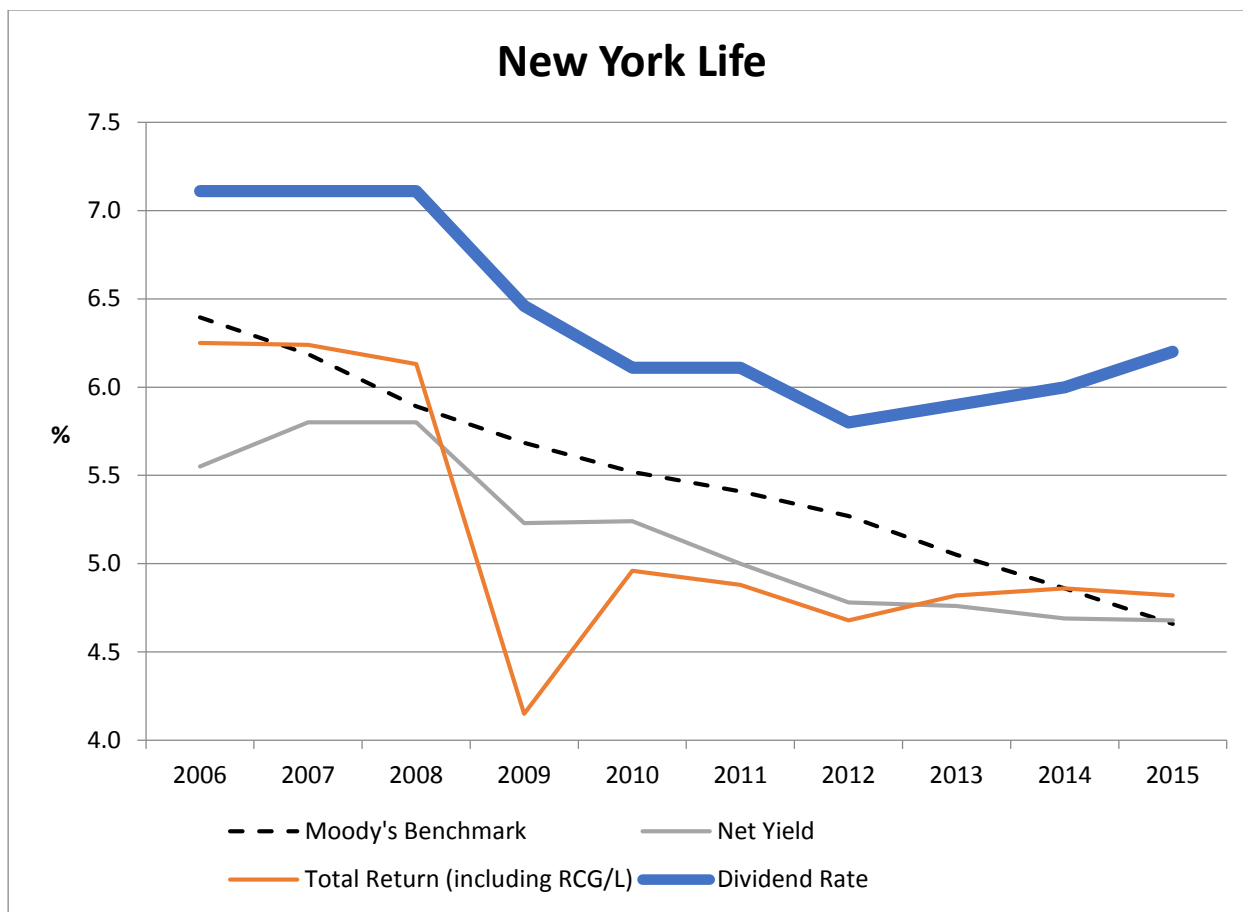
The value of a stock holding in an affiliate company named MassMutual Holding LLC has appreciated in value from \$1.2 billion in 2008 to more than \$5.5 billion in 2014 (Mass Mutual’s invested assets were reported at more than \$133 billion at year-end 2014.) However, since this would be classified as an unrealized capital gain, it is unclear how the growth in the value of this asset would translate to higher dividends for policyholders.



<sup>3</sup> Company press release from November 3, 2014. [https://www.massmutual.com/about-us/news-and-press-releases/press-releases/2014/11/massmutual-approves-historic-\\$1-billion-dividend-payout-for-policyowners](https://www.massmutual.com/about-us/news-and-press-releases/press-releases/2014/11/massmutual-approves-historic-$1-billion-dividend-payout-for-policyowners)

### New York Life Insurance Company

From 2008 to 2012, New York Life’s DIR decreased in a similar pattern to the company’s net yield and total return. In 2013, the net yield decreased from the prior year but the DIR was increased from 2012. Despite relatively flat investment returns since 2012, New York Life’s DIR has increased by 40 bps during that same time period.



# Appendix D: Mutual Life Insurance Company Annual DIRs, Net Yields, and Total Returns

## Northwestern Mutual Life Insurance Company

A significant spread existed between Northwestern Mutual's DIR and net yield in 2006–2008. Capital gains in the time period may have been supportive of the DIR as represented by the total returns. Between 2008 and 2013, the spread between the DIR and net yield has narrowed substantially. Since 2013, Northwestern Mutual's total return has been aided by capital gains and the company's DIR has held steady.

