

April 2013

## INCOME BEYOND BONDS

### Yields in Economic Context

Since the mid-1950s, one of the axioms of investment management has been that, in comparison to stocks, bonds are the superior income-generating asset. From the mid-1950s until quite recently, in fact, the yield on U.S. Treasury bonds consistently exceeded that of the S&P 500<sup>®</sup>. Exhibit 1 illustrates not only the spread between the two asset classes, but also the dramatic bear market in fixed income between 1953 and 1982, and the equally dramatic subsequent rally. The 10-year Treasury's yield rose from 2.83% in April 1953 to 15.32% in September 1981. As of December 2012, the 10-year yield stood at 1.72%.<sup>1</sup>

#### Contributors:

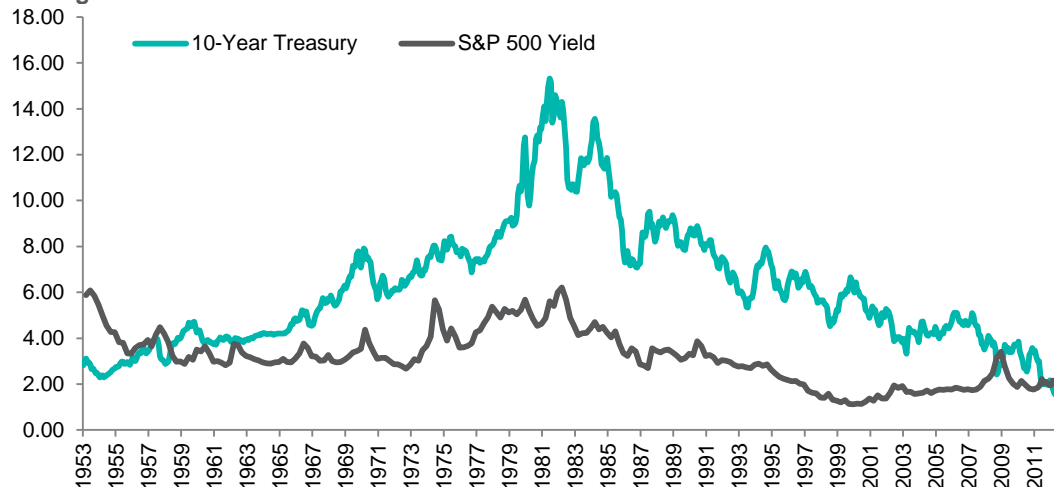
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**Exhibit 1: Yield to Maturity of 10-Year U.S. Treasury Securities and Yield of the S&P 500 from 1953 Through 2012**



Source: S&P Dow Jones Indices, Federal Reserve. Data from April 1953 through December 31, 2012. Graphs are for illustrative purposes.

Exhibit 1 has significance beyond just the yield numbers. The data not only tell us something about the shifting valuations of the stock and bond markets, but they also give us a frame through which we can view the investment environment in the U.S. Apart from a brief interlude in 2008, **bond yields have consistently exceeded stock yields for the last 53 years**. For more than half a century, in other words, three generations of investors have known that bonds “always” generate more current income than stocks. So it shouldn’t surprise us that the reversal of this relationship in May 2012 caused investors to infer that something important had changed.

Of course we can’t determine now whether this paradigm shift will be permanent or transitory, as it was in 2008. What is clear, though, is that the lowest bond yields in more than half a century have spurred tremendous interest in equity income generation.

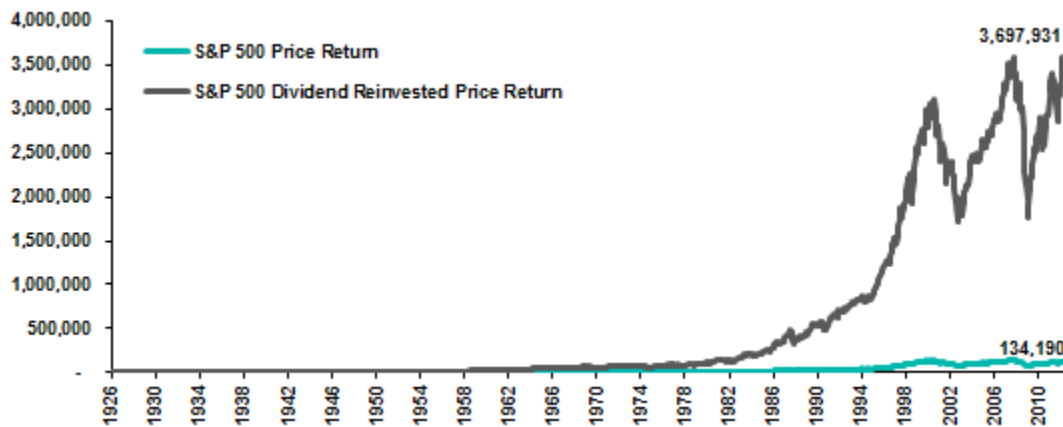
<sup>1</sup>The data in Exhibit 1 starts in 1953 since the Federal Reserve ended its control of government debt markets in mid-1951. (Controls had been instituted as a wartime measure in April 1942.) See Robert L. Hetzel and Ralph F. Leach, “The Treasury-Fed Accord: A New Narrative Account,” Federal Reserve Bank of Richmond Economic Quarterly Volume 87/1 Winter 2001.

### Stock Dividends in Historical Perspective

Income is typically not the first thing that comes to mind when thinking of stocks, but dividends have always been an important part of the equity market's total return. Between 1926 and 2012, in fact, the compound annual total return of the S&P 500 was 10.02%, versus a compound price return of 5.84%<sup>2</sup>. The return difference of 4.18% implies that dividends contributed 42% (4.18/10.02) of the total investment payback.

Sometimes a picture helps to tell the full story, which is a bit more complicated than the raw data seem to imply. The barely-visible lower line in Exhibit 2 illustrates in the performance of the S&P 500 price return index, which grew from a base of 1,000 in 1926, to 134,190 by the end of 2012, reflecting the S&P 500's compound annual price return of 5.84%. With dividends collected and reinvested, however, the 2012 end value of the same index swells to 3,697,931—that is, **a multiple of 27 times the price return**. There's a reason that Albert Einstein called compound interest the eighth wonder of the world.

Exhibit 2: Price and Total Return of the S&P 500 Since 1926

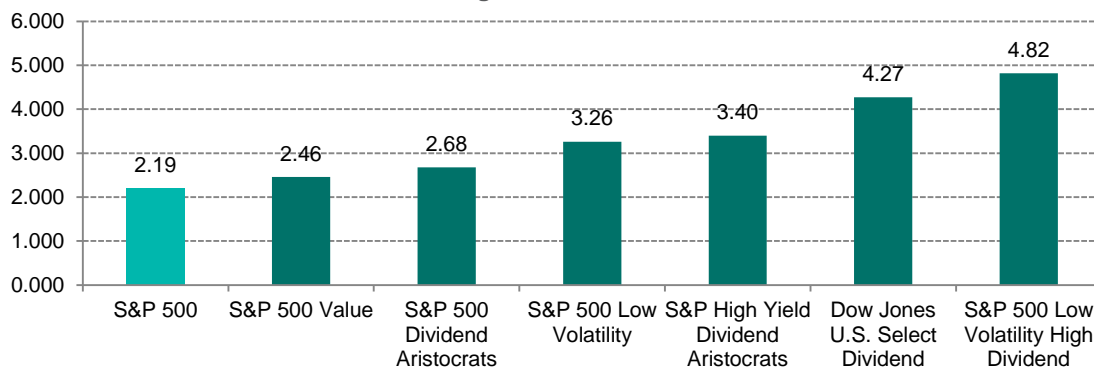


Source: S&P Dow Jones Indices. Data from January 1, 1926 through December 31, 2012. The index value is based to 1000 for comparison purposes. Graphs are for illustrative purposes. Past performance is no guarantee of future results. It is not possible to invest in an index.

### Indices With Above-Average Yields

So far our examples of equity yield have been drawn from the S&P 500, which is designed to reflect the performance of the largest stocks in the U.S. equity market and has no particular income bias. As low interest rates have driven investors to look for income in the equity market, these investors have naturally been drawn to equity indices with above-average yields. Each of the six indices in Exhibit 3 had a yield higher than that of the S&P 500 as of December 31, 2012<sup>3</sup>.

Exhibit 3: Selected Indices With Yields Higher Than That of the S&P 500



Source: S&P Dow Jones Indices. Data as of December 31, 2012. Graphs are provided for illustrative purposes.

<sup>2</sup> Price returns, of course, reflect only changes in stock market prices and ignore dividend payments. The total return includes price returns, the value of dividends received and, importantly, the impact of reinvesting the dividends in the market index.

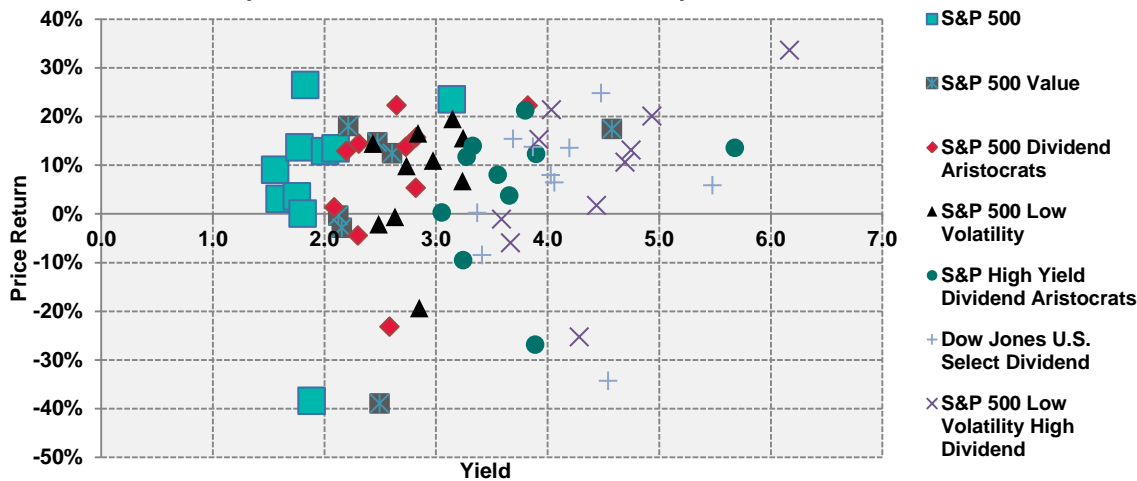
<sup>3</sup> See Appendix A for a summary of the portfolio characteristics and mechanics of each index.

Understandably, the natural inclination of the yield-seeking investor may be to focus on the index with the highest yield. However, the same caveat we often hear applied to past performance is equally applicable to yield: **high yield is no guarantee of performance.**

Exhibit 4 features data from the same set of above-average yield indices. The yield of each of our sample indices (as of December 31 of each of the last 10 years) is plotted on the horizontal axis; on the vertical axis, we show the indices' price returns over the subsequent 12 months. Examining the pattern of the graph tells us to what degree yield can "predict" future performance.

To put it succinctly: it can't. Exhibit 4 shows an inchoate blob. Both longitudinally (i.e., over time) and cross-sectionally (i.e., across indices), year-end yield shows relatively little predictive relationship to year-ahead performance.<sup>4</sup> **This means that the investor who chooses an index based solely on its level of indicated income risks losing in price movement any incremental return he earns from dividends.**

Exhibit 4: Relationship Between Year-End Yield and Subsequent Price Performance



Source: S&P Dow Jones Indices. Data from December 31, 2002 through December 31, 2012. Graphs are provided for illustrative purposes. This graph may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance. The availability of yield history for the S&P 500 Value limits the data points to seven for this index.

Exhibit 4 shows that while it's clearly a relevant criterion for the income-seeking investor, yield cannot serve as a complete guide to future index behavior. Moreover, it's important to understand that yield-seeking indices can at times behave quite differently from the market as a whole.<sup>5</sup>

### Market Regimes and Higher-Yield Indices

We can augment our understanding of these performance differences by asking how the environment in which these indices operated affected their performance. Viewing index performance through the lens of various market regimes is crucial in achieving a more complete understanding of "the nature of the market environment in which that performance was generated—and how that environment's influence might affect future results."<sup>6</sup>

One of the simplest ways to identify a market regime (at least when dealing with U.S. equity markets) is to look at the returns of the S&P 500. In Exhibit 5, we partitioned our data into "bad" months (when the S&P 500 returned -3.0% or worse), "good" months (when the S&P 500 returned +3.0% or better), and "middling" months (return between -3% and 3%).

<sup>4</sup> The relationship between index yield and subsequent performance is stronger in some years than others. The difficulty is that when the relationship is at its strongest, it's a negative relationship; the higher-yielding indices at year-end tended to be the worst performers in the subsequent year.

<sup>5</sup> Tracking error is a statistical measure of how closely one index tracks another. A modestly aggressive active portfolio, for example, might show tracking error of 3-4% with respect to the S&P 500. The tracking errors of our six higher-yield indices range from 4.77% (S&P 500 Value) to 11.28% (Dow Jones U.S. Select Dividend).

<sup>6</sup> See Craig J. Lazzara, "The Limits of History," S&P Dow Jones Indices, January 2013, [www.spindices.com/documents/research/research-the-limits-of-history.pdf](http://www.spindices.com/documents/research/research-the-limits-of-history.pdf).

**Exhibit 5: Average Performance in “Good,” “Bad” and “Middling” Markets**

2000 - 2012	Number of Months	S&P 500 (%)	S&P 500 Value (%)	S&P 500 Dividend Aristocrats (%)	S&P 500 Low Volatility Index (%)	S&P High Yield Dividend Aristocrats Index (%)	Dow Jones U.S. Select Dividend Index (%)	S&P 500 Low Volatility High Dividend Index (%)
<b>Bad</b>	31	-6.73	-6.27	-4.17	-2.68	-4.05	-4.59	-3.48
<b>Middling</b>	84	0.24	0.32	0.63	0.69	0.70	0.72	0.63
<b>Good</b>	41	5.53	5.54	4.73	3.42	4.64	4.92	4.80
<b>Spread</b>			0.46	2.56	4.05	2.69	2.15	3.25
			0.08	0.39	0.45	0.46	0.48	0.39
			0.01	-0.80	-2.11	-0.89	-0.61	-0.73

Source: S&P Dow Jones Indices. Data from December 31, 1999 through December 31, 2012. Tables are provided for illustrative purposes. This graph may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

Over the 12 years ended December 31, 2012<sup>7</sup>, each of the higher-yield indices outperformed the S&P 500 in “bad” months. The average monthly return for the S&P 500 in these months was -6.73%; average returns for the higher-yield indices ranged from -6.27% (S&P 500 Value) to -2.68% (S&P 500 Low Volatility). Given the nature of these indices, this outcome is unsurprising. After all, dividends possess inherent defensive characteristics because dividend income is by definition positive.<sup>8</sup> Price return, of course, can go either way.

In “good” months, the tables turned. The S&P 500 appreciated by an average of 5.53% in the 41 “good” months in our sample. Performance for the higher-yield indices ranged from 5.54% (S&P 500 Value) to 3.42% (S&P 500 Low Volatility). In the middling months, the higher-yield indices tended to outperform the S&P 500 modestly.<sup>9</sup>

These data have several implications:

**The return pattern of a higher-yield index is distinct from that of the market as a whole.** Even in periods when higher yield indices outperform, the outperformance does not accrue steadily.

Relative to the S&P 500, the **higher-yield indices are relatively defensive**; they tend to outperform in bad times and underperform in good.

Despite their similarities, the **higher-yield indices are not all cut from the same cloth.** Performance differences *among* the higher-yield indices can be greater than the differences between these indices and the market as a whole.

Invariably, markets go through “good” times and “bad” times, and various indices fall in and out of favor based on these different market environments. While there are many options available when it comes to income-generating equity indices, each exhibits a unique performance pattern. Investors are best served by understanding the underlying characteristics that differentiate each index.

<sup>7</sup> The availability of data for the “youngest” index in our sample of seven limits the period studied to 12 years.

<sup>8</sup> See Aye M. Soe, “Dividend Investing and a Look Inside the S&P Dow Jones Dividend Indices,” S&P Dow Jones Indices, March 2013, [www.spindices.com/documents/research/dividend-investing-2013.pdf?force\\_download=true](http://www.spindices.com/documents/research/dividend-investing-2013.pdf?force_download=true).

<sup>9</sup> These data and conclusions are not dependent on the 2000 – 2012 time frame. Backtested data for four of our higher-yield indices extend to 1992, and their performance characteristics in good, middle, and bad months are very similar to those of the more recent period. Of course, the distribution of months was quite different. See Appendix B for detailed information.

Appendix A: Portfolio Characteristics and Mechanics of Various Indices Discussed in This Paper							
	S&P 500	S&P 500 Value	S&P 500 Dividend Aristocrats	S&P 500 Low Volatility Index	S&P High Yield Dividend Aristocrats	Dow Jones U.S. Select Dividend Index	S&P 500 Low Volatility High Dividend Index
Mechanics Overview	500 leading companies, cap weighted	S&P 500 value measured using three factors: the ratios of book value, earnings, and sales to price; cap weighted	S&P 500 companies that have increased dividends every year for the last 25 consecutive years; equal weighted	100 least-volatile stocks in the S&P 500; weighted relative to the inverse of volatility factor	S&P Composite 1500 <sup>®</sup> companies that have increased dividends every year for the last 20 consecutive years; weighted relative to yield factor	Dividends paid in each of the last 5 years; positive 5-year DPS growth rate and dividend payout ratio <=60%; weighted relative to yield factor	Screens from S&P 500 for 75 securities with the highest dividend yields over the past 12 months and selects the 50 securities with the lowest realized volatility; weighted relative to yield factor
Current Yield	2.191%	2.458%	2.676%	3.263%	3.401%	4.270%	4.818%
Number of Constituents	500 (fixed)	360 (floating)	51 (floating)	100 (fixed)	81 (floating)	100 (fixed)	50 (fixed)
Average Market Cap							
Largest Sectors (in order of concentration)	Technology, Financials, Health Care	Financials, Energy, Industrials	Consumer Staples, Industrials, Consumer Discretionary	Utilities, Consumer Staples, Health Care	Consumer Staples, Financials, Industrials	Utilities, Industrial, Consumer Staples	Consumer Staples, Financials, Telecom Services

Source: S&P Dow Jones Indices. Data as of December 31, 2012. Tables are provided for illustrative purposes.

Appendix B: Average Performance in “Good,” “Bad” and “Middling” Markets							
1992 - 2012	Number of Months	S&P 500 (%)	S&P 500 Dividend Aristocrats (%)	S&P 500 Low Volatility Index (%)	S&P 500 Low Volatility High Dividend Index (%)	Dow Jones U.S. Select Dividend Index (%)	
<b>Bad</b>	40	-6.37	-4.21	-2.89	-3.44	-4.57	
<b>Middling</b>	137	0.33	0.49	0.54	0.58	0.71	
<b>Good</b>	75	5.31	4.39	3.38	4.18	4.50	
			2.16	3.48	2.94	1.80	
<b>Spread</b>			0.16	0.21	0.25	0.38	
			-0.93	-1.93	-1.14	-0.82	

Source: S&P Dow Jones Indices. Data from December 31, 1991 through December 31, 2012. Tables are provided for illustrative purposes. This graph may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

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The inception date of the S&P 500 Dividend Aristocrats (the "Index") was May 2, 2005, at the market close. All information presented prior to the index inception date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at [www.spindices.com](http://www.spindices.com).

The inception date of the S&P 500 Low Volatility High Dividend (the "Index") was September 17, 2012, at the market close. All information presented prior to the index inception date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at [www.spindices.com](http://www.spindices.com).

The inception date of the S&P High Yield Dividend Aristocrats Index (the "Index") was November 9, 2005, at the market close. All information presented prior to the index inception date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at [www.spindices.com](http://www.spindices.com).

The inception date of the Dow Jones US Select Dividend Index (the "Index") was November 3, 2003, at the market close. All information presented prior to the index inception date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at [www.spindices.com](http://www.spindices.com).

The inception date of the S&P 500 Low Volatility Indices (the "Index") was April 4, 2011, at the market close. All information presented prior to the index inception date is back-tested. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. Complete index methodology details are available at [www.spindices.com](http://www.spindices.com).

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Another limitation of back-tested hypothetical information is that generally the back-tested calculation is prepared with the benefit of hindsight. Back-tested data reflect the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities (or fixed income, or commodities) markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

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