

The Beauty of Simplicity: The S&P 500 Low Volatility High Dividend Index

OCTOBER 2013

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1: INTRODUCTION

Dividend investment strategies have inspired both widespread academic research and far-reaching adoption among market participants. Responding to the demand for benchmarks in this investment arena, S&P Dow Jones Indices offers a series of dividend strategy indices, all designed to meet specific needs.

Launched in 2003, the Dow Jones U.S. Select Dividend Index captures U.S. companies that pay high dividends with sustainable dividend growth and payout ratios. The S&P High Yield Dividend Aristocrats and S&P 500[®] Dividend Aristocrats, which were launched two years later, were designed to measure the performance of companies within the S&P Composite 1500[®] and S&P 500 that have consistently increased dividends over the past 20 and 25 years respectively. The Dow Jones Dividend 100 index was launched in 2011, aiming to measure the performance of the highest-yielding U.S. companies with a consistent dividend payment history supported by strong financial strength.

In October 2012, S&P Dow Jones Indices launched the S&P 500 Low Volatility High Dividend Index, a unique rules-based dividend strategy index designed to deliver high dividend yield and low return volatility in a single index. The index uses a simple two-step screening process to incorporate not only high dividend yield, but also the well-known low-volatility strategy. Indices that employ the low-volatility strategy have tended to outperform their benchmark on a risk-adjusted basis historically.

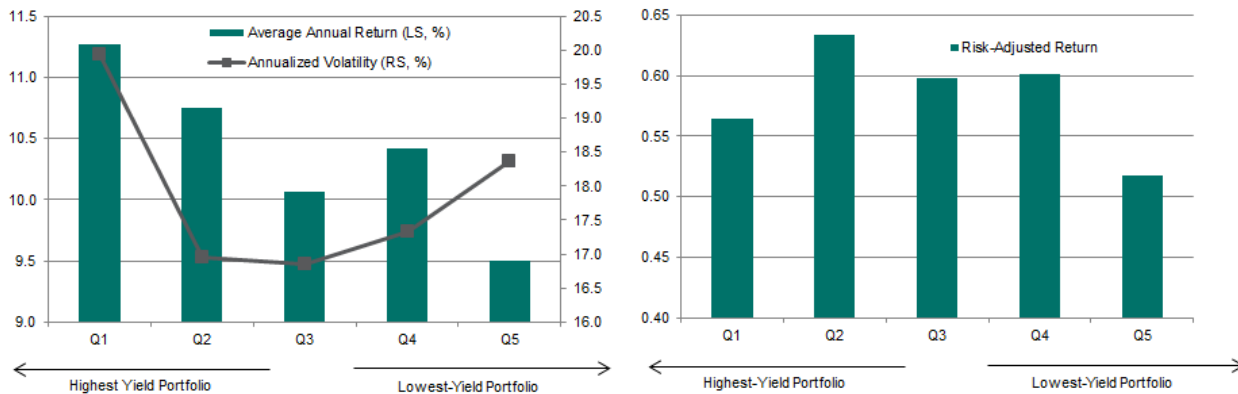
In this paper, we first study the benefit of combining low volatility and high dividend strategies in a single index. We then take a closer look at the characteristics of the S&P 500 Low Volatility High Dividend Index, including sector composition, dividend yield and historical return. Finally, we compare the S&P 500 Low Volatility High Dividend Index to other S&P Dow Jones dividend strategy indices focused on the U.S.

2: LOW VOLATILITY MEETS HIGH DIVIDEND YIELD IN THE S&P 500 LOW VOLATILITY HIGH DIVIDEND INDEX

2.1. Performance of High-Dividend-Yielding Stocks With Different Volatilities

To study the return characteristics of high-dividend-yield equities in the U.S., we divided the companies that paid dividends in the S&P Composite 1500 into quintile portfolios sorted by dividend yield, and measured their historical return and volatility. All of the quintile portfolios were rebalanced annually in December based on historical dividend yield and portfolio stocks were equally weighted. Based on monthly total return between December 1994 and December 2013, the highest-yielding quintile portfolio (Q1) delivered the best annualized return, but with a much higher volatility than the lower-yielding quintile portfolios (Q2, Q3, Q4 and Q5). As a result, the highest-yielding quintile portfolio did not offer better returns after adjusting for risk (see Exhibit 1).

Exhibit 1: Historical Average Annual Return, Annual Volatility and Risk-Adjusted Return of the Quintile Portfolios From the S&P Composite 1500 Dividend-Paying Companies (Sorted by Dividend Yield)

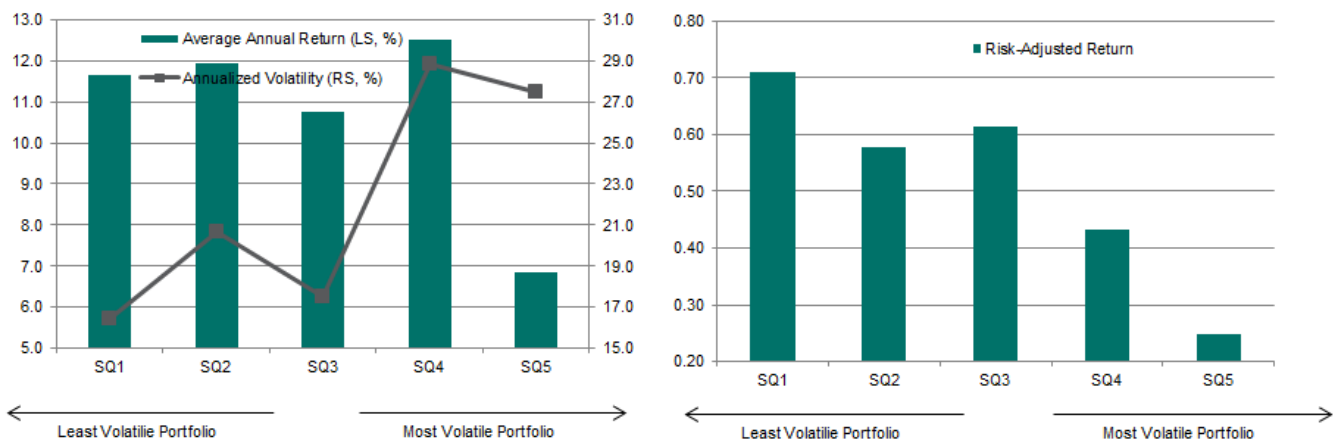


Source: S&P Dow Jones Indices LLC. Data based on hypothetical quintile portfolio returns between December 1994 and December 31, 2013. Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results.

The high volatility of the highest-yielding quintile portfolio (Q1) may be the result of including high-yield stocks with a recent sharp price drop. Since dividend yield increases when price decreases, any negative company or industry news announcement that causes a sharp price fall will drive up the stock’s dividend yield. These stocks tend to be more sensitive to news announcements and have more volatile price movements, adding volatility to the highest-yielding quintile portfolio (Q1). Since a sharp price drop will also drive up a stock’s historical volatility, excluding high-volatility stocks from the high-yield portfolio helps to avoid these stocks with price shocks.

To study the performance of high-dividend-yielding stocks with different volatilities, we divided the highest-yielding quintile portfolio into five volatility-sorted quintile sub-portfolios and measured their returns. All volatility sub-portfolios were rebalanced annually in December based on historical 252-day return volatility and all portfolio stocks were equally weighted. The result showed that portfolios with historical high volatility (SQ4 and SQ5) had more volatile returns in the year after the portfolios were formed. The higher-volatility high-yield portfolios (SQ4 and SQ5) underperformed the lower-volatility high-yield portfolios (SQ1, SQ2 and SQ3) historically on a risk-adjusted basis (see Exhibit 2). This result is consistent with the well-documented low-volatility anomaly, whereby high-volatility stocks tend to underperform low-volatility stocks on a risk-adjusted basis. This result also implies that simply excluding high-volatility stocks from a high-dividend-yield portfolio may improve portfolio return on a risk-adjusted basis.

Exhibit 2. Historical Average Annual Return, Annual Volatility and Risk-Adjusted Return of the High-Yield Quintile Sub-Portfolios From the S&P Composite 1500 Dividend-Paying Companies (Sorted by Volatility)



Source: S&P Dow Jones Indices LLC. Data based on hypothetical quintile sub-portfolio returns between December 1994 and December 31, 2013. Charts and graphs are provided for illustrative purposes. Past performance is no guarantee of future results.

2.2. Adapting the Low-Volatility Strategy to a High-Dividend-Yielding Portfolio

Unlike other S&P Dow Jones Dividend Indices that use consistent dividend history criteria or multiple fundamental measures to select index members, the S&P 500 Low Volatility High Dividend Index applies just two simple screens—for volatility and dividend yield—in the stock selection process. The index is formed by first selecting the 75 companies in the S&P 500 with the highest historical dividend yield. Then, the 50 highest-yielding stocks with the lowest historical volatility are added to the index.

To demonstrate the value added by combining the low-volatility and high-dividend-yield screens historically, we created three hypothetical high-dividend portfolios and measured their historical returns for the period from January 1990 to July 2013:

1. High-yield portfolio: 75 stocks from the S&P 500 with the highest dividend yield.
2. Low-volatility high-yield portfolio: 50 lowest-volatility stocks selected from the high-yield portfolio.
3. High-volatility high-yield portfolio: 25 highest-volatility stocks selected from the high-yield portfolio.

All portfolios were semiannually rebalanced in January and July, and all portfolio members were equally weighted. Returns of the portfolios are provided in Exhibit 3.

Exhibit 3: Risk/Return Summary of the Hypothetical High-Dividend Portfolios				
Period	75-Stock High Yield Portfolio (%)	50-Stock Low Volatility High Yield Portfolio (%)	25-Stock High Volatility High Yield Portfolio (%)	S&P 500
Annualized Return				
3-yr	19.8	19.2	20.5	17.7
5-yr	15.5	14.5	16.3	8.3
10-yr	12.1	12.3	10.8	7.6
20-yr	12.1	12.0	11.4	9.0
Since Jan. 90	12.4	12.2	12.2	9.5
Annualized Volatility				
3-yr	11.3	9.5	17.7	13.3
5-yr	21.7	16.5	36.4	18.5
10-yr	17.0	13.2	28.0	14.6
20-yr	16.1	13.5	24.6	15.2
Since Jan. 90	15.8	13.1	24.1	14.9
Risk-Adjusted Return				
3-yr	1.75	2.02	1.16	1.33
5-yr	0.72	0.88	0.45	0.45
10-yr	0.71	0.94	0.39	0.52
20-yr	0.75	0.89	0.47	0.59
Since Jan. 90	0.78	0.93	0.51	0.64
12-month Max Drawdown				
Since Jan. 90	-48.8	-39.3	-68.8	-46.4

Source: S&P Dow Jones Indices LLC. Data based on hypothetical portfolio returns between January 1990 and July 31, 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

Historically, the 75-stock high-yield portfolio has outperformed the S&P 500 significantly but with higher return volatility and a greater 12-month maximum drawdown. With its low-volatility screen, the 50-stock low-volatility high-yield portfolio has achieved almost the same annualized return as the 75-stock high-yield portfolio but with 17% less volatility and a smaller 12-month maximum drawdown. In contrast, the 25-stock high-volatility high-yield

portfolio has been 84% more volatile and has had a much greater 12-month maximum drawdown than the 50-stock low-volatility high-yield portfolio, but the higher risk has not been compensated with higher absolute returns. Of the three hypothetical portfolios, the 50-stock low-volatility high-yield portfolio has delivered the highest risk-adjusted return and had the most significant maximum drawdown reduction compared to the S&P 500. This result demonstrates the benefit of combining the low-volatility and high-dividend-yield screens in selecting index members.

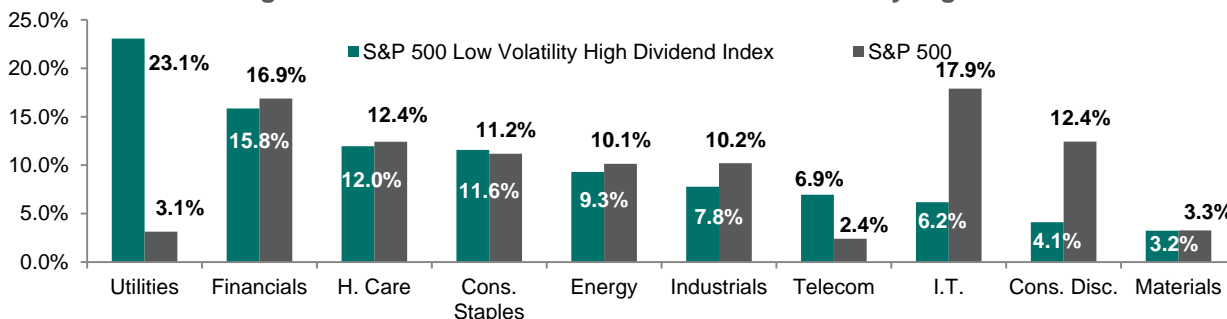
The simple low-volatility screen not only acted as a quality measure to avoid including high-yield stocks with sharp price drops, but also captured the low-volatility factor, which has delivered persistent risk-adjusted outperformance historically.

3: PORTFOLIO AND RETURN CHARACTERISTICS OF THE S&P 500 LOW VOLATILITY HIGH DIVIDEND INDEX

3.1. Sector Exposure

The S&P 500 Low Volatility High Dividend index is diversified among 10 sectors and has higher concentration in the utilities and financials sectors since companies from these sectors have historically paid higher dividends. Compared to the S&P 500, the S&P 500 Low Volatility High Dividend Index is most biased towards the utilities and telecommunication services sectors, and most under-weights information technology and consumer discretionary (see Exhibit 4). The sector bias is mainly caused by the concentration gradient of high-dividend-yielding stocks in different sectors and the index's dividend-yield weighting method.

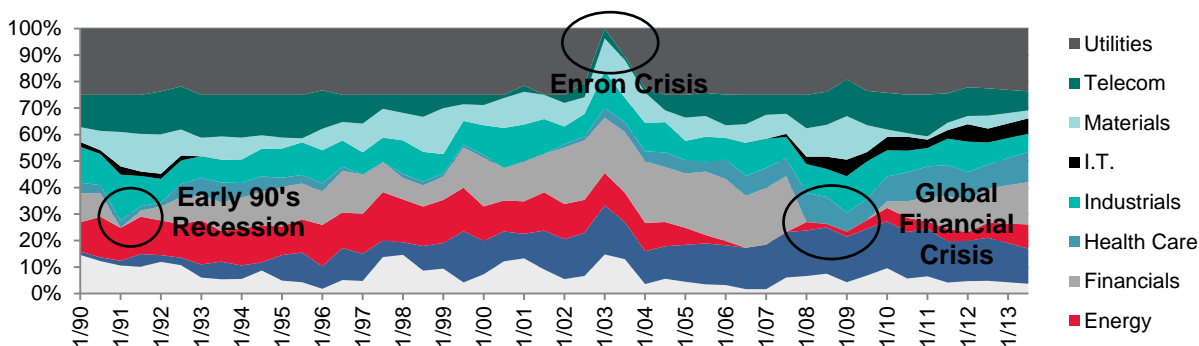
Exhibit 4: Sector Weights of the S&P 500 and the S&P 500 Low Volatility High Dividend Index



Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes.

The sector allocation of the S&P 500 Low Volatility High Dividend Index has changed more dynamically than that of a typical high-dividend-yield portfolio, due to its low-volatility screen. The weighting of the financial sector was reduced to zero during the early '90s recession and the global financial crisis in 2008-09, when financial stocks experienced high volatility and severe price drops. Utilities stocks were also completely excluded from the index during the Enron crisis in early 2003, when most utilities stocks were unusually volatile (see Exhibit 5).

Exhibit 5: Historical Sector Weight of the S&P 500 Low Volatility High Dividend Index

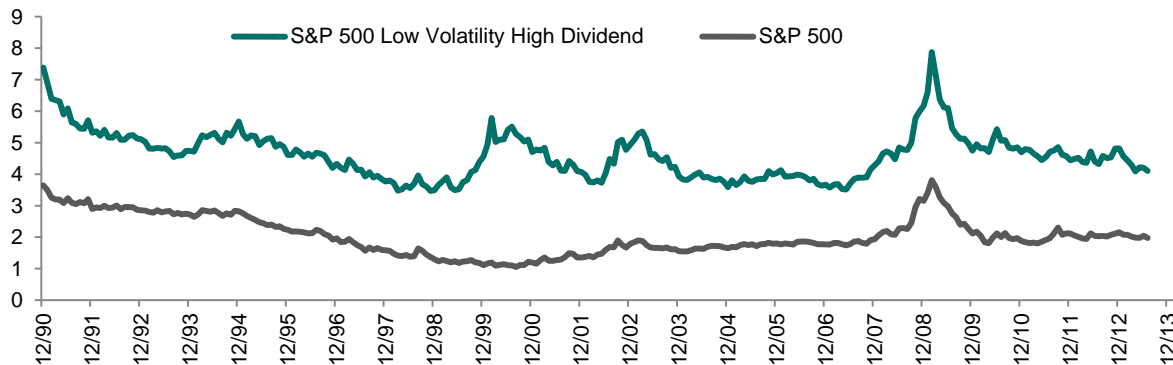


Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes.

3.2. Dividend Yield

The S&P 500 Low Volatility High Dividend Index has offered high dividend yield historically. From December 1990 to July 2013, the index had a long-term median dividend yield of 4.6% and always stayed above 3.5%--much higher than the S&P 500, which had a long-term median dividend yield of 1.9% and a maximum yield of 3.8% during the same period. Historically, the dividend yield gap between the two indices has ranged from 1.8% to as high as 4.6%, with a median value of 2.4% (see Exhibit 6).

Exhibit 6: Historical Dividend Yield of the S&P 500 and S&P 500 Low Volatility High Dividend Index



Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes.

3.3. Historical Performance

Over the past 20 years, the S&P 500 Low Volatility High Dividend Index has outperformed the S&P 500 by 3.1% annually, with a 10% volatility reduction and smaller maximum drawdown. It has also had a significantly higher risk-adjusted return than the S&P 500 over the last 3-, 5-, 10- and 20-year horizons. Even excluding the compounding effect of dividend income and comparing just the price returns, the S&P 500 Low Volatility High Dividend Index has delivered slightly better absolute and risk-adjusted returns than the S&P 500, with lower volatility and smaller maximum drawdown (see Exhibit 7).

Exhibit 7: Return/Risk Summary of the S&P 500 and S&P 500 Low Volatility High Dividend Index

Period	Price Return		Total Return	
	S&P 500 Low Volatility High Dividend (%)	S&P 500 (%)	S&P 500 Low Volatility High Dividend (%)	S&P 500 (%)
	Annualized Return		Annualized Return	
3-yr	13.0	15.2	18.4	17.7
5-yr	9.1	5.9	14.8	8.3
10-yr	7.5	5.5	12.6	7.6
20-yr	7.0	6.8	12.1	9.0
Annualized Volatility		Annualized Volatility		
3-yr	9.4	13.4	9.4	13.3
5-yr	16.9	18.5	17.0	18.5
10-yr	13.5	14.7	13.5	14.6
20-yr	13.6	15.2	13.6	15.2

Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

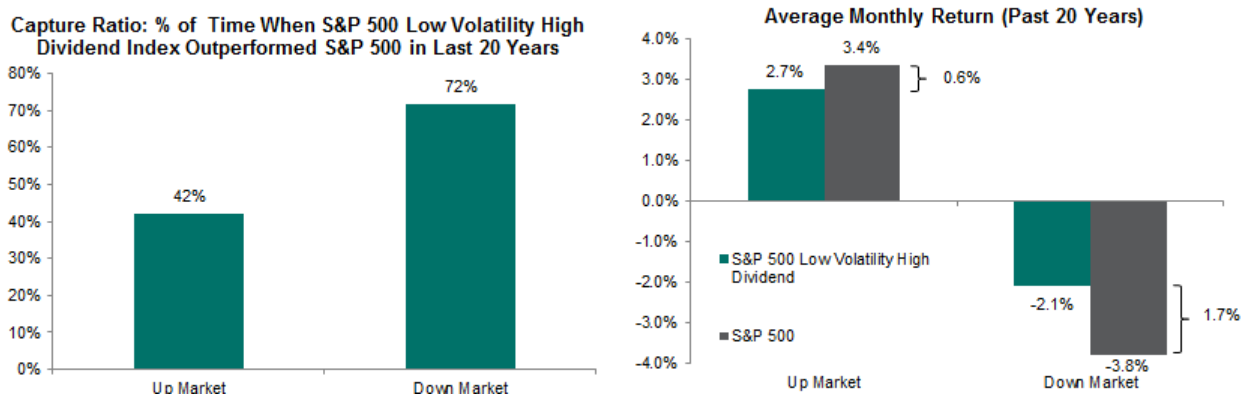
Exhibit 7: Return/Risk Summary of the S&P 500 and S&P 500 Low Volatility High Dividend Index (cont.)

Period	Price Return		Total Return	
	S&P 500 Low Volatility High Dividend (%)	S&P 500 (%)	S&P 500 Low Volatility High Dividend (%)	S&P 500 (%)
	Risk-Adjusted Return		Risk-Adjusted Return	
3-yr	1.37	1.14	1.95	1.33
5-yr	0.54	0.32	0.87	0.45
10-yr	0.56	0.37	0.93	0.52
20-yr	0.52	0.45	0.88	0.59
12-month Max Drawdown		12-month Max Drawdown		
20-yr	-41.4	-47.5	-38.8	-46.4

Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

As the S&P 500 Low Volatility High Dividend Index had less volatile performance than the S&P 500, it is expected to underperform in bull markets and provide a level of downside protection during bear markets. Based on monthly total returns over the last 20 years, the S&P 500 Low Volatility High Dividend Index has outperformed the S&P 500 72% of the time during down markets, but has only underperformed 58% of the time during up markets. As the magnitude of underperformance during up markets (0.6%) has been much less than the magnitude of outperformance during down markets (1.7%), the S&P 500 Low Volatility High Dividend has outperformed the S&P 500 over the long-term (see Exhibit 8).

Exhibit 8: Capture Ratios and Average Monthly Return of the S&P 500 and S&P 500 Low Volatility High Dividend Index Over the Last 20 Years



Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

4: COMPARISON WITH OTHER S&P DOW JONES DIVIDEND INDICES

Finally, we compare the S&P 500 Low Volatility High Dividend Index to other S&P Dow Jones dividend strategy indices focused on the U.S. For readers who are also interested in how the S&P 500 Low Volatility High Dividend Index is different from the S&P 500 Low Volatility Index, please see the Appendix.

4.1. Index Objective and Stock Selection Mechanism

Besides screening for high-dividend-yield stocks, quality measures can help dividend strategy investors to avoid dividend yield traps¹. Historical dividend policy, dividend growth, dividend payout ratio and other fundamental ratios to measure companies' earnings and financial strengths are commonly employed in dividend strategies.

For example, the S&P 500 Dividend Aristocrats and S&P High Yield Dividend Aristocrats indices emphasize consistent dividend history rather than high dividend yield in their stock selection criteria. The indices only include companies that follow a dividend policy of increasing dividends consistently for 25 or 20 years respectively. Dividend yield is not part of their stock selection criteria.

The Dow Jones U.S. Dividend 100 and Dow Jones U.S. Select Dividend indices are designed to provide both dividend sustainability and high dividend yield. Companies must have produced 10 or 5 years of dividend history respectively to be eligible for inclusion. Other company fundamental measures also factor into the member selection process.

Unlike the S&P Dividend Aristocrats indices, the S&P 500 Low Volatility High Dividend Index emphasizes high dividend yield and disregards consistent dividend history as a requirement for inclusion. Unlike the Dow Jones Dividend indices, which leverage consistent dividend history and multiple fundamental ratios, the S&P 500 Low Volatility High Dividend Index uses a simple two-step screening process to select members, accounting for volatility and dividend yield. As explained in section 2, the low-volatility screen not only acts as a quality measure to ensure that stocks with sharp price drops are excluded from the index, but also captures the low-volatility anomaly.

Since price volatility changes more frequently than fundamental measures of a company, the S&P 500 Low Volatility High Dividend Index is rebalanced semiannually, while other S&P Dow Jones Dividend indices are rebalanced annually. To maximize the dividend yield of the index, members of the S&P 500 Low Volatility High Dividend Index are weighted by their dividend yield (see Exhibit 9).

¹ Dividend yield traps refer to companies that promise high dividends or used to pay high dividends but do not have strong cash flow to support the dividend payments. These companies have historical high dividend yield but it is not sustainable.

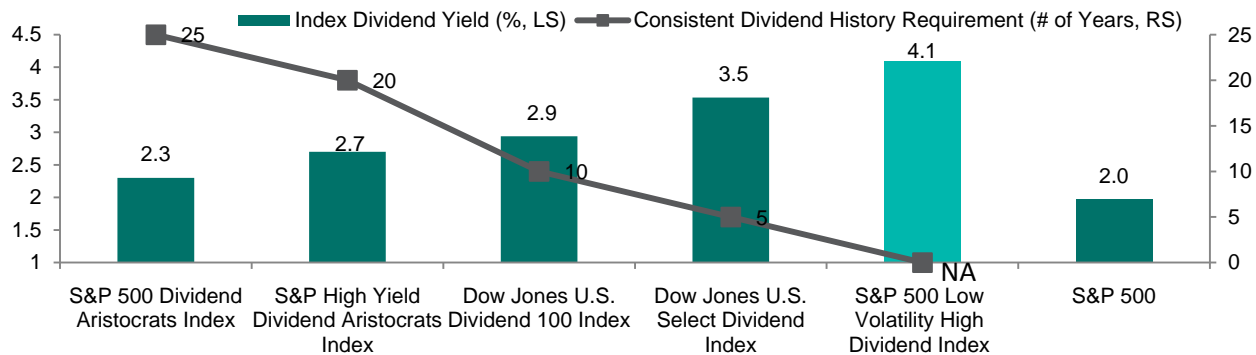
Exhibit 9: Index Construction of S&P Dow Jones Dividend Indices in the U.S.					
Index	S&P 500 Dividend Aristocrats Index	S&P High Yield Dividend Aristocrats Index	Dow Jones U.S. Dividend 100 Index	Dow Jones U.S. Select Dividend Index	S&P 500 Low Volatility High Dividend Index
Parent index	S&P 500	S&P 1500	DJ U.S. Board Market Index	Dow Jones U.S. Index	S&P 500
No. of index members	Floating	Floating	100	100	50
Size criteria	Float Adj Mcap above USD 3bn	Float Adj Mcap above USD 2bn	Float Adj Mcap above USD 500mn	N/A	N/A
Liquidity criteria	3m ADTV above USD 5mn	3m ADTV above USD 5mn	3m ADTV above USD 2mn	3m ADTV above 200,000 shares	N/A
Eligible Criteria	Minimum 25 consecutive years of increasing DPS history	Minimum 20 consecutive years of increasing DPS history	Minimum 10 consecutive years of dividend payments	Minimum 5 consecutive years of dividend payments. Non-negative 5-year DPS growth. 5-year dividend payout ratio not greater 60%,	75 highest dividend yielding stocks with minimum trading days above 252
Additional member selection factors	N/A	N/A	Highest cash flow to total debt, return on equity, dividend yield and 5-year dividend growth rate	Highest dividend yield	Lowest historical return volatility
Weight method	Equal	Dividend Yield	Market Cap	Dividend Yield	Dividend Yield
Sector Diversification Criteria	Each GICS sector weight is restricted to 30%	N/A	Each ICB industry weight is restricted to 25%	N/A	Number of stock from each GICS sector is limited to 10 and each GICS sector weight is restricted to 25%
Rebalance frequency	Annual	Annual	Annual	Annual	Semiannual

Source: S&P Dow Jones Indices LLC.

4.2. Dividend Yield

Due to differences in their stock selection criteria and member weighting methods, the S&P Dow Jones Dividend Indices offer different ranges of dividend yields. The more stringent the dividend history requirement and quality filters, the fewer high-yield stocks that are eligible for selection. The S&P 500 Dividend Aristocrats, which most strongly emphasizes consistent dividend history, had a dividend yield of 2.3%—the lowest among all the S&P Dow Jones Dividend indices. In contrast, the S&P 500 Low Volatility High Dividend Index, which lacks a dividend history requirement, offered the highest dividend yield compared to other S&P Dow Jones Dividend indices. The index offered a dividend yield of 4.1% as of month-end July 2013—more than double that of the S&P 500 (see Exhibit 10).

Exhibit 10: Dividend History Requirement and Dividend Yield of the S&P Dow Jones Dividend Indices in the U.S.



Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes.

4.3. Historical Performance

The S&P 500 Low Volatility High Dividend Index offered the highest dividend yield among all the S&P Dow Jones Dividend Indices, and also captured the benefit of a low-volatility strategy. But how exactly did this simple low-volatility high-dividend methodology with no dividend history criteria or fundamental quality screens result in higher returns and lower risk compared to other dividend indices?

Based on monthly price returns for the period from December 1999 to July 2013, the S&P 500 Low Volatility High Dividend Index delivered historical returns, volatility and maximum drawdown that were comparable to those of other S&P Dow Jones Dividend indices before inclusion of dividend income (see Exhibit 11).

Exhibit 11: Return/Risk Summary of S&P Dow Jones Dividend Indices in the U.S. (Before Inclusion of Dividend Reinvestment Income)						
Price Return (Dec 1999 - Jul 2013)						
Period	S&P 500 Dividend Aristocrats	S&P High Yield Dividend Aristocrats index	Dow Jones U.S. Dividend 100 Index	Dow Jones U.S. Select Dividend Index	S&P 500 Low Volatility High Dividend Index	S&P 500
Annualized Return						
3-yr	17.1	13.1	15.9	14.0	13.0	15.2
5-yr	11.0	8.3	8.3	6.0	9.1	5.9
10-yr	7.9	5.1	8.2	3.9	7.5	5.5
Since YE99	6.6	5.9	7.1	4.9	6.2	1.0
Annualized Volatility						
3-yr	10.8	11.2	10.5	10.0	9.4	13.4
5-yr	16.8	17.7	17.2	17.9	16.9	18.5
10-yr	13.4	14.7	13.5	15.0	13.5	14.7
Since YE99	14.1	15.0	14.3	16.1	14.5	15.8
Risk-Adjusted Return						
3-yr	1.59	1.17	1.52	1.40	1.37	1.14
5-yr	0.65	0.47	0.48	0.33	0.54	0.32
10-yr	0.59	0.35	0.61	0.26	0.56	0.37
Since YE99	0.47	0.39	0.50	0.30	0.43	0.07
12-month Max Drawdown						
Since YE99	-39.4	-43.2	-42.5	-49.6	-41.4	-47.5

Source: S&P Dow Jones Indices LLC. Data from December 1999 to July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

However, when dividend income reinvestment return was included, the S&P 500 Low Volatility High Dividend Index delivered the best historical absolute return of all the S&P Dow Jones Dividend indices, as shown in Exhibit 12. Based on monthly total returns for the period from December 1999 to July 2013, the S&P 500 Low Volatility High Dividend Index had the highest absolute and risk-adjusted returns among all the S&P Dow Jones Dividend indices. Its historical volatility was less than that of two of the other S&P Dow Jones Dividend indices and its historical maximum drawdown (12-month) was less than that of three of the other S&P Dow Jones Dividend indices (see Exhibit 13).

Exhibit 12: Annualized Price Return and Dividend Income of the S&P Dow Jones Dividend Indices in the U.S.



Source: S&P Dow Jones Indices LLC. Data from December 1999 to July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

Exhibit 13: Return/Risk Summary of the S&P Dow Jones Dividend Indices in the U.S. (After Inclusion of Dividend Reinvestment Income)

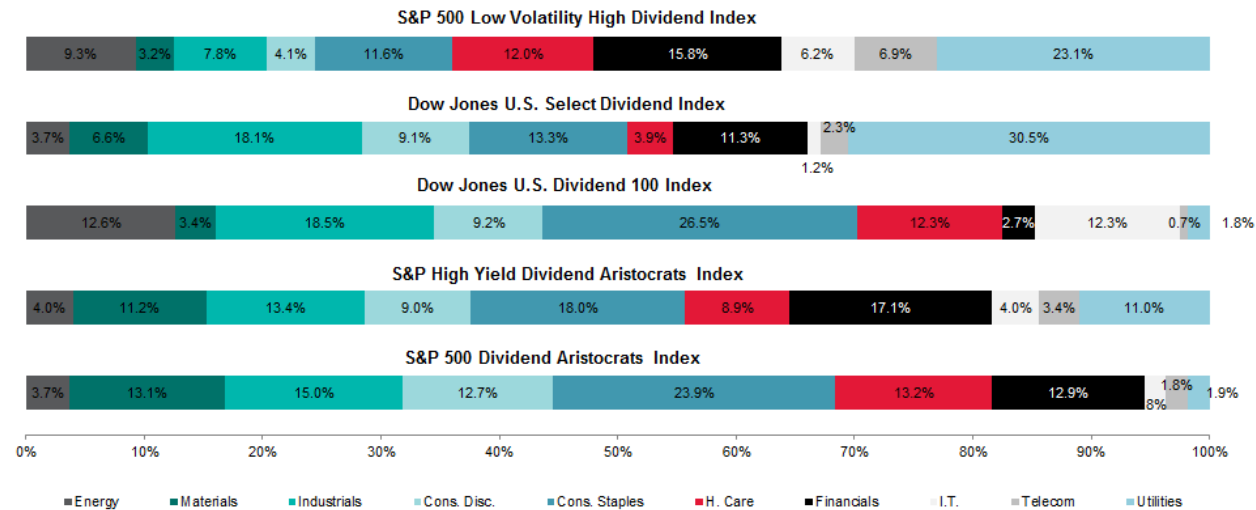
Total Return (Dec 1999 - Jul 2013)						
Period	S&P 500 Dividend Aristocrats	S&P High Yield Dividend Aristocrats index	Dow Jones U.S. Dividend 100 Index	Dow Jones U.S. Select Dividend Index	S&P 500 Low Volatility High Dividend Index	S&P 500
Annualized Return						
3-yr	20.5%	17.2%	19.6%	18.7%	18.4%	17.7%
5-yr	14.4%	12.6%	12.1%	10.6%	14.8%	8.3%
10-yr	10.9%	9.1%	11.9%	8.2%	12.6%	7.6%
Since YE99	9.5%	9.9%	10.9%	9.3%	11.2%	2.9%
Annualized Volatility						
3-yr	10.7%	11.1%	10.4%	9.9%	9.4%	13.3%
5-yr	16.8%	17.6%	17.2%	17.9%	17.0%	18.5%
10-yr	13.4%	14.6%	13.5%	15.0%	13.5%	14.6%
Since YE99	14.1%	14.9%	14.3%	16.2%	14.6%	15.8%
Risk-Adjusted Return						
3-yr	1.90	1.55	1.90	1.88	1.95	1.33
5-yr	0.86	0.72	0.71	0.59	0.87	0.45
10-yr	0.81	0.63	0.89	0.55	0.93	0.52
Since YE99	0.68	0.67	0.76	0.57	0.77	0.19
12-month Max Drawdown						
Since YE99	-37.7%	-40.6%	-40.5%	-47.4%	-38.8%	-46.4%

Source: S&P Dow Jones Indices LLC and/or its affiliates. Data from December 1999 to July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

4.4. Sector Exposure

To understand how the S&P 500 Low Volatility High Dividend Index differs from other S&P Dow Jones Dividend indices in terms of sector allocation, we compared the sector weights of all S&P Dow Jones Dividend indices as of July 2013, as shown in Exhibit 14. Compared to other dividend indices, the S&P 500 Low Volatility High Dividend Index had relatively higher exposure to the telecommunication services and utilities sectors and less exposure to the consumer staples and industrials sectors. As the S&P 500 Low Volatility High Dividend Index is most strongly focused on high dividend yield, its sector exposure is more dependent on the concentration gradient of high-dividend-yield stocks across sectors compared to the S&P Dividend Aristocrats indices, which disregard dividend yield in their stock selection criteria.

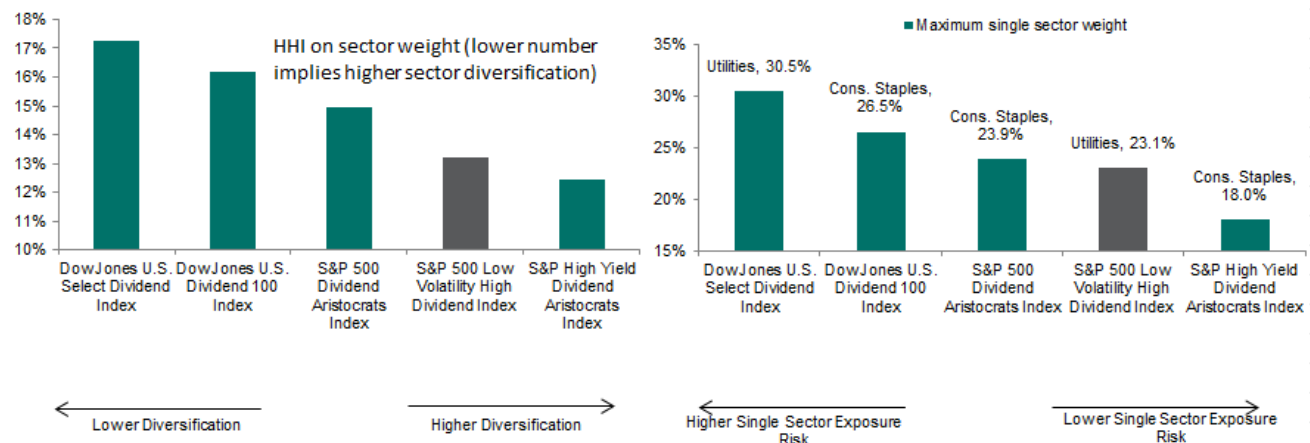
Exhibit 14: Sector Composition of the S&P Dow Jones Dividend Indices in the U.S.



Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes.

Among all the S&P Dow Jones Dividend indices, the S&P 500 Low Volatility High Dividend Index had the second-lowest sector concentration risk based on sector composition as of July 2013. The S&P 500 Low Volatility High Dividend Index had a lower maximum sector weight and lower Herfindahl index (which implies greater sector diversification, see note below Exhibit 15) than the Dow Jones U.S. Select Dividend Index, Dow Jones U.S. Dividend 100 Index and S&P 500 Dividend Aristocrats Index.

Exhibit 15: Sector Concentration of the S&P Dow Jones Dividend Indices



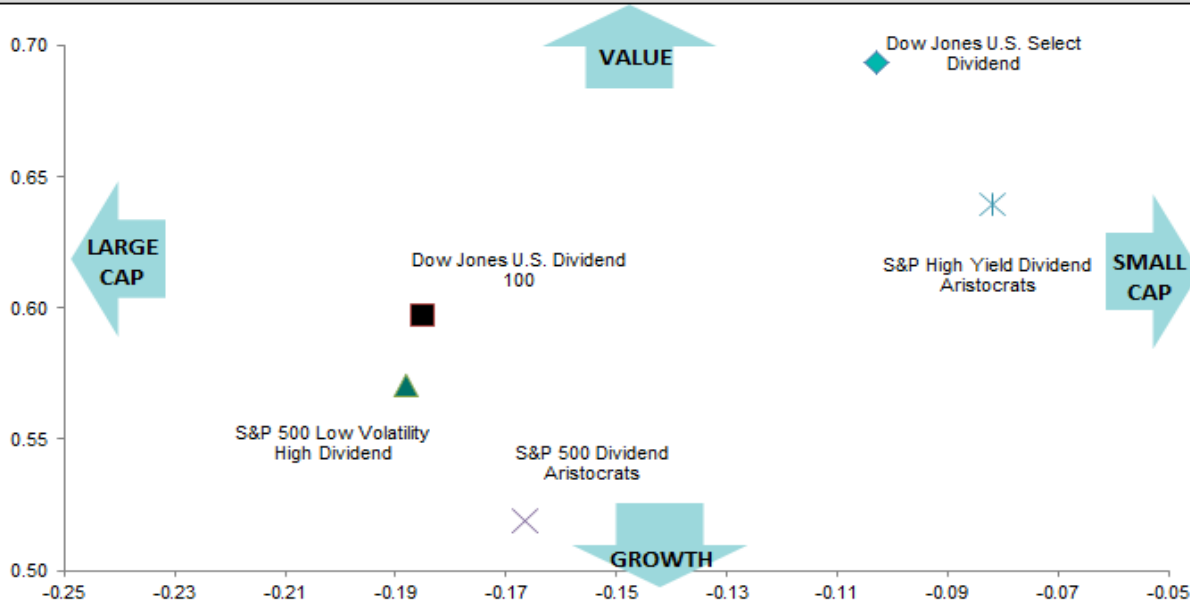
Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes. Note: Herfindahl index (HHI) is calculated as sum of square of ten sectors' weighting. A higher number implies lower diversification (higher concentration) and vice versa.

4.5. Factor Exposure

Based on results from the Fama-French Three Factor model, the S&P 500 Low Volatility High Dividend Index had significant market, large-cap and value exposures for the period between December 1999 and June 2013. It had the highest large-cap exposure and lowest market beta compared to other S&P Dow Jones Dividend Indices. As the low-volatility screen ruled out deep value stocks produced by sharp price drops, the S&P 500 Low Volatility High Dividend Index had a lower value bias than the Dow Jones U.S. Select Dividend, S&P High Yield Dividend Aristocrats and the Dow Jones U.S. Dividend 100 indices (see Exhibit 16).

Exhibit 16: Factor Exposure of the S&P Dow Jones Dividend Indices

Factors	S&P 500 Dividend Aristocrats Index	S&P High Yield Dividend Aristocrats Index	Dow Jones U.S. Dividend 100 Index	Dow Jones U.S. Select Dividend Index	S&P 500 Low Volatility High Dividend Index
Market	0.76	0.73	0.74	0.79	0.73
<i>t-stat</i>	25.85	19.92	23.84	20.40	20.15
Size	-0.17	-0.08	-0.18	-0.10	-0.19
<i>t-stat</i>	-4.14	-1.63	-4.33	-1.94	-3.76
Value	0.52	0.64	0.60	0.69	0.57
<i>t-stat</i>	12.88	12.71	13.95	13.01	11.39
R-Sq	0.84	0.78	0.83	0.78	0.77



Source: S&P Dow Jones Indices LLC. Data from December 1999 to June 2013. Charts and graphs are provided for illustrative purposes.

5: CONCLUSION

"Investors should remember that their scorecard is not computed using Olympic-diving methods: Degree-of-difficulty doesn't count. If you are right about a business whose value is largely dependent on a single key factor that is both easy to understand and enduring, the payoff is the same as if you had correctly analyzed an investment alternative characterized by many constantly shifting and complex variables." (*Letter to shareholders, 1994, Warren Buffet*)

While each of our dividend indices has different characteristics and attributes, with a simple two-step constituent screening method accounting for price volatility and dividend yield, the S&P 500 Low Volatility High Dividend Index captures the benefit of high-dividend and low-volatility strategies. Combined, these strategies have achieved higher dividend yield and better risk-adjusted returns than other S&P Dow Jones Dividend indices that use dividend history criteria and multiple fundamental quality screens. In this way, the S&P 500 Low Volatility High Dividend Index has set an example of simple and effective index innovation.

APPENDIX

Comparison With the S&P 500 Low Volatility Index

The S&P 500 Low Volatility High Dividend Index is a U.S. market dividend strategy index that uses a low volatility screen as a quality measure. On the other hand, the S&P 500 Low Volatility Index serves as a benchmark of low volatility strategies in the U.S. market. While both indices incorporate low volatility strategies, their ultimate goals are different. The S&P 500 Low Volatility High Dividend Index's stock selection and member weighting criteria are designed to maximize the dividend yield of the index, while those of the S&P 500 Low Volatility Index are designed to minimize the volatility of the index. See Exhibit 17 for a list of differences in their index construction mechanisms.

Exhibit 17: Index Construction Mechanism of the S&P 500 Low Volatility High Dividend Index and the S&P 500 Low Volatility Index		
Index	S&P 500 Low Volatility Index	S&P 500 Low Volatility High Dividend Index
Parent index	S&P 500	S&P 500
No. of index members	100	50
Eligible Criteria	Minimum trading days above 252	75 highest dividend yielding stocks with minimum trading days above 252
Member selection factors	100 stocks with lowest historical return volatility	50 stocks with lowest historical return volatility
Weight method	Inverse of volatility figure	Dividend Yield
Sector Diversification Criteria	N/A	Number of stock from each GICS sector is limited to 10 and each GICS sector weight is restricted to 25%
Rebalance frequency	Quarterly	Semi-Annual

Source: S&P Dow Jones Indices LLC.

Both the S&P 500 Low Volatility High Dividend Index and the S&P 500 Low Volatility Index are well-diversified among 10 sectors. Compared to the S&P 500, the S&P 500 Low Volatility High Dividend Index is more biased towards the utilities and telecommunication services sectors, which tend to have a higher concentration in high dividend payers. Compared to the S&P 500, the S&P 500 Low Volatility Index is more biased towards the utilities and consumer staples sectors as companies from these two sectors tend to have lower return volatilities than other sectors.

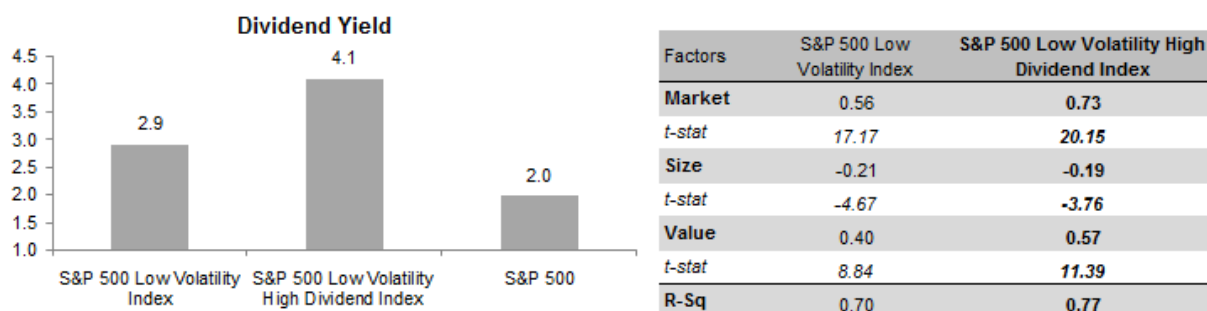
Exhibit 18: Sector Composition of the S&P 500 Low Volatility High Dividend Index Compared to the S&P 500 Low Volatility Index					
Sector	S&P 500	S&P 500 Low Volatility Index		S&P 500 Low Volatility High Dividend Index	
	Sector Wt	Sector Wt	Wt Bias Compared to S&P 500	Sector Wt	Wt Bias Compared to S&P 500
Energy	10.1	2.9	-7.3	9.3	-0.8
Materials	3.3	2.7	-0.6	3.2	0.0
Industrials	10.2	8.8	-1.4	7.8	-2.4
Cons. Disc.	12.4	1.9	-10.5	4.1	-8.3
Cons. Staples	11.2	20.2	9.0	11.6	0.4
H. Care	12.4	10.1	-2.3	12.0	-0.5
Financials	16.9	19.0	2.1	15.8	-1.0
I.T.	17.9	2.9	-15.0	6.2	-11.7
Telecom	2.4	1.7	-0.7	6.9	4.5
Utilities	3.1	29.8	26.7	23.1	19.9

Source: S&P Dow Jones Indices LLC. Data as of July 2013. Charts and graphs are provided for illustrative purposes.

While the S&P 500 Low Volatility Index is not designed to capture high-dividend-paying stocks, its sector bias to the utilities and consumer staples sectors results in a higher dividend yield than the S&P 500. Nevertheless, the S&P 500 Low Volatility High Dividend Index, which is designed to capture the highest-dividend-yielding stocks, tends to have a significantly higher dividend yield than the S&P 500 Low Volatility Index (see Exhibit 19).

As you might expect, the S&P 500 Low Volatility Index, designed to capture the least-volatile stocks from S&P 500, has much lower beta than the S&P 500 Low Volatility High Dividend Index. Based on the Fama-French Three Factor model, the S&P 500 Low Volatility High Dividend Index has more significant value bias but less large-cap bias than the S&P 500 Low Volatility Index (see Exhibit 19).

Exhibit 19: Dividend Yield and Factor Exposure of the S&P 500 Low Volatility High Dividend Index Compared to the S&P 500 Low Volatility Index



Source: S&P Dow Jones Indices LLC. Dividend yield data as of July 2013. Factor exposure analysis based on data from December 1999 to June 2013. Charts and graphs are provided for illustrative purposes.

Historical Performance

Based on monthly price returns for the period from December 1990 to July 2013, the S&P 500 Low Volatility High Dividend Index delivered similar historical returns compared to the S&P 500 Low Volatility Index before inclusion of dividend income. However, when dividend income reinvestment return was included, the S&P 500 Low Volatility High Dividend Index delivered higher absolute returns compared to the S&P 500 Low Volatility Index. Since the S&P 500 Low Volatility Index had lower beta than the S&P 500 Low Volatility High Dividend Index, it exhibited lower return volatility and smaller maximum drawdown historically. During up markets, the S&P 500 Low Volatility High Dividend Index had a higher capture ratio and average monthly return than the S&P 500 Low Volatility Index, and vice versa for down markets. After adjusting for risk, both indices offered the same returns, which is significantly higher than that of the S&P 500 (see Exhibits 20 and 21).

Exhibit 20: Return/Risk Summary of the S&P 500, S&P 500 Low Volatility Index and S&P 500 Low Volatility High Dividend Index (December 1990 to July 2013)

Price Return				Total Return			
Period	S&P 500 Low Volatility Index	S&P 500 Low Volatility High Dividend Index	S&P 500	Period	S&P 500 Low Volatility Index	S&P 500 Low Volatility High Dividend Index	S&P 500
Annualized Return				Annualized Return			
3-yr	14.8	13.0	15.2	3-yr	18.7	18.4	17.7
5-yr	8.0	9.1	5.9	5-yr	11.6	14.8	8.3
10-yr	6.8	7.5	5.5	10-yr	10.1	12.6	7.6
20-yr	7.0	7.0	6.8	20-yr	10.4	12.1	9.0
Since YE90	7.4	7.7	7.5	Since YE90	11.0	12.9	9.7

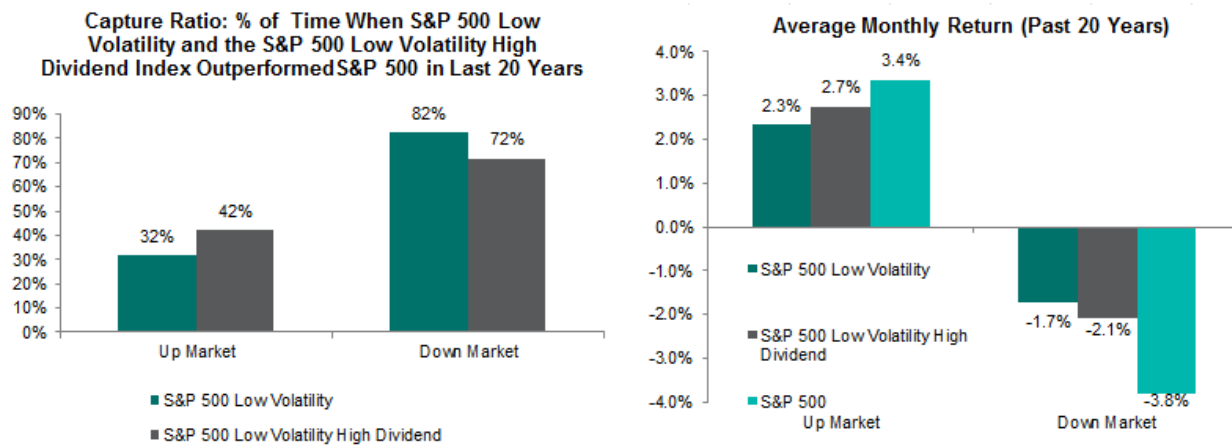
Source: S&P Dow Jones Indices LLC. Data from December 1990 to July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

Exhibit 20: Return/Risk Summary of the S&P 500, S&P 500 Low Volatility Index and S&P 500 Low Volatility High Dividend Index (December 1990 to July 2013) (cont.)

Price Return				Total Return			
Period	S&P 500 Low Volatility Index	S&P 500 Low Volatility High Dividend Index	S&P 500	Period	S&P 500 Low Volatility Index	S&P 500 Low Volatility High Dividend Index	S&P 500
Annualized Volatility				Annualized Volatility			
3-yr	8.6	9.4	13.4	3-yr	8.6	9.4	13.3
5-yr	12.5	16.9	18.5	5-yr	12.5	17.0	18.5
10-yr	10.2	13.5	14.7	10-yr	10.3	13.5	14.6
20-yr	11.4	13.6	15.2	20-yr	11.4	13.6	15.2
Since YE90	11.1	13.2	14.8	Since YE90	11.2	13.2	14.8
Risk-Adjusted Return				Risk-Adjusted Return			
3-yr	1.72	1.37	1.14	3-yr	2.18	1.95	1.33
5-yr	0.64	0.54	0.32	5-yr	0.93	0.87	0.45
10-yr	0.67	0.56	0.37	10-yr	0.99	0.93	0.52
20-yr	0.61	0.52	0.45	20-yr	0.91	0.88	0.59
Since YE90	0.66	0.59	0.51	Since YE90	0.98	0.98	0.66
12-month Max Drawdown				12-month Max Drawdown			
Since YE90	-30.6	-41.4	-47.5	Since YE90	-29.0	-38.8	-46.4

Source: S&P Dow Jones Indices LLC. Data from December 1990 to July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

Exhibit 21: Capture Ratios and Average Monthly Return of the S&P 500, S&P 500 Low Volatility Index and S&P 500 Low Volatility High Dividend Index (December 1990 to July 2013)



Source: S&P Dow Jones Indices LLC. Data from December 1990 to July 2013. Charts and graphs are provided for illustrative purposes. The index data reflected in this chart may reflect hypothetical historical performance. Please see the Performance Disclosure at the end of this document for more information on some of the inherent limitations associated with back-tested Index data and performance information.

PERFORMANCE DISCLOSURE

The S&P 500 Low Volatility High Dividend Index (the "Index") was launched on September 17, 2012. The S&P 500 Dividend Aristocrats Index (the "Index") was launched on May 2, 2005. The S&P High Yield Dividend Aristocrats Index (the "Index") was launched on September 15, 2006. The Dow Jones U.S. Select Dividend Index (the "Index") was launched on November 3, 2003. The Dow Jones U.S. Dividend 100 Index (the "Index") was launched on August 31, 2011. The S&P 500 Low Volatility Index (the "Index") was launched on April 20, 2011. All information presented prior to the Launch Date are 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 on the Launch Date. Complete index methodology details are available at www.spdji.com.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency on their products. The **First Value Date** is the first day for which there is a calculated value (either live or back-tested) for a given index. The **Base Date** is the date at which the Index is set at a fixed value for calculation purposes. The **Launch Date** designates the date upon which the values of an index are first considered live; index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public Web site or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of Introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at www.spdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects 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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