Investment Case for the Nasdaq US Low Volatility Dividend Achievers Index (LVDA)

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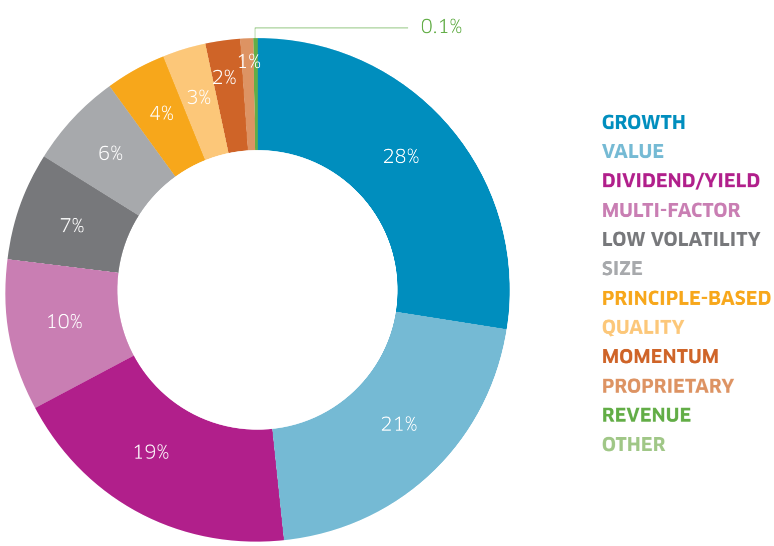
Low Volatility and Dividend Growth as Factors

Low volatility and dividend are some of the most popular factors that receive investments. As of September 14, 2020, there were close to $987 billion allocated to US-listed equity smart-beta ETFs[1]. Of that, there was over $187 billion allocated to Dividend/Yield strategies and over $73 billion allocated to Low Volatility strategies[1]. As the chart below shows, Dividend/Yield based ETFs were the third most popular factor behind Growth and Value, and Low Volatility was the fifth most popular factor based on assets under management (AUM) tracking all US-listed ETFs underlying those strategies.

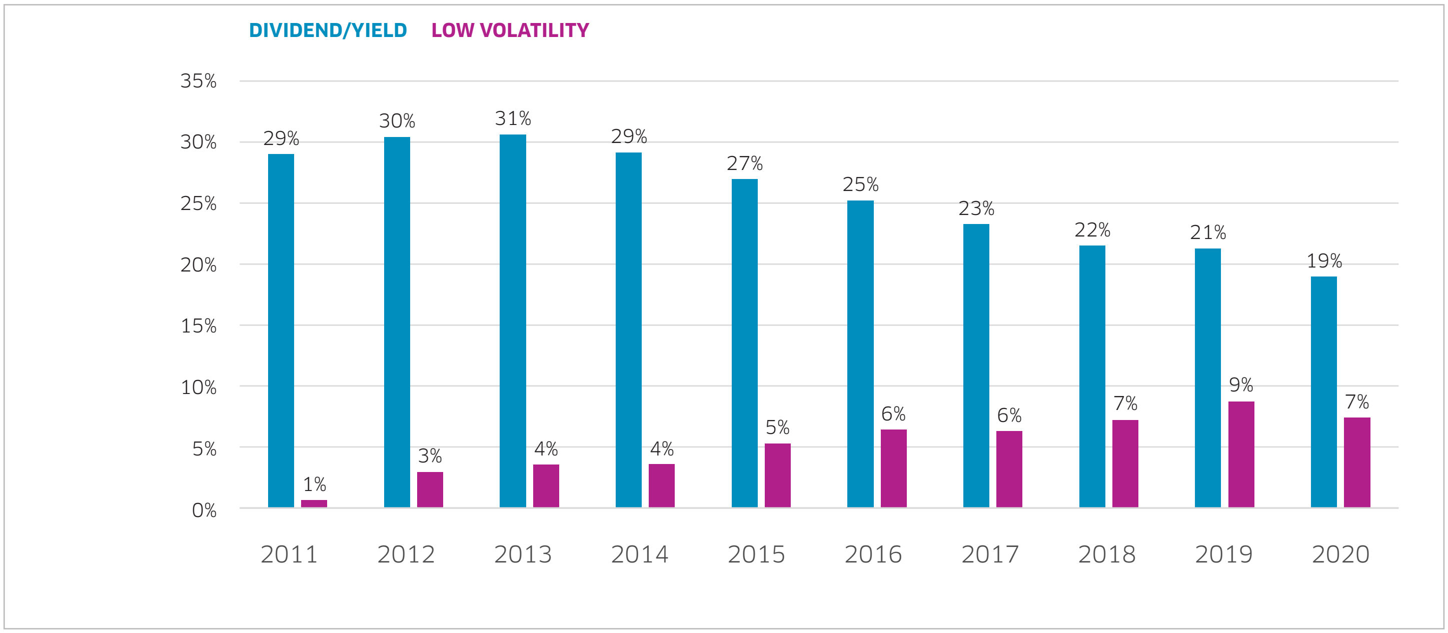
US-Listed Equity Smart-Beta ETF AUM Breakdown - 2020 YTD



Source: Bloomberg Intelligence. Data as of 9/14/2020.

Even though the proportion of AUM in dividend strategies has decreased over time, as shown in the chart below, dividend strategies have grown from about $42 billion in AUM in 2011 to about $187 billion in AUM in 2020[1]. The decrease in proportion of AUM is largely attributable to new strategies emerging in the marketplace, such as low volatility. The proportion of AUM in low volatility strategies has grown from less than 1% in 2011 to close to 7.5% in 2020, or from about $940 million in AUM in 2011 to about $73 billion in 2020[1].

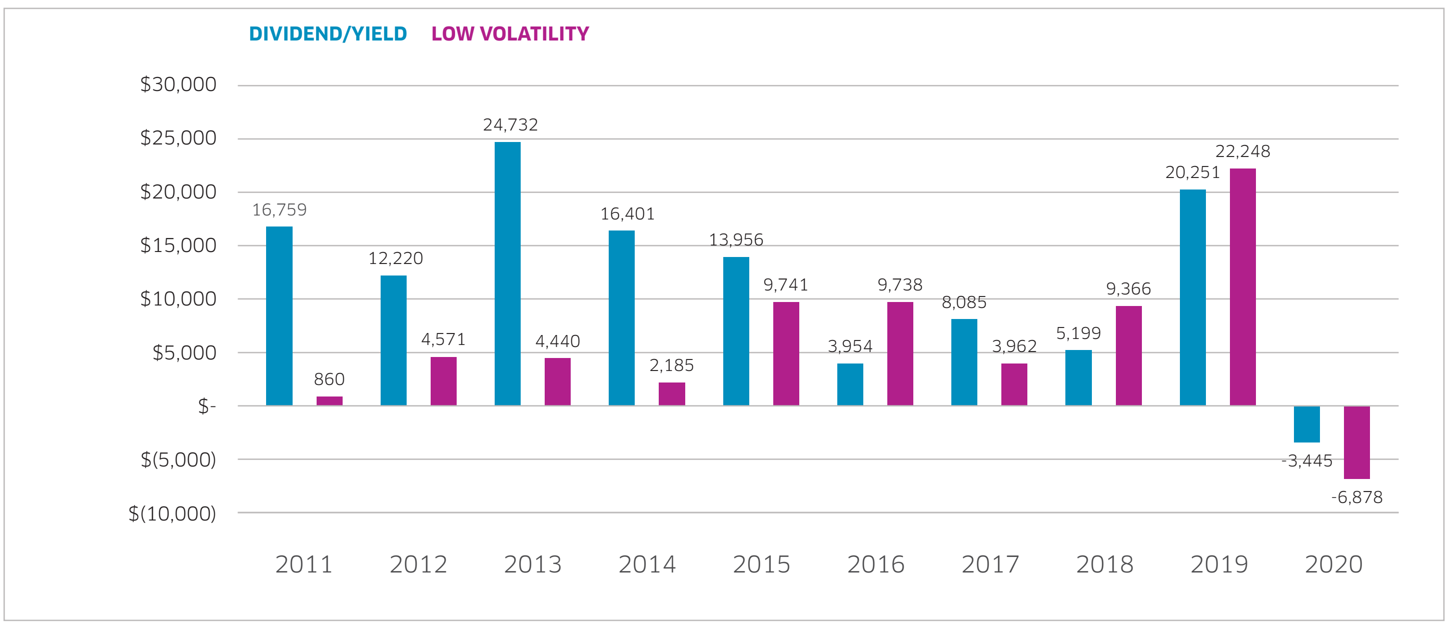
% of Total US-Listed Equity Smart-Beta ETF AUM



Source: Bloomberg Intelligence. Data as of 9/14/2020.

From a fund flows perspective, the chart below highlights that, except for the volatile market in 2020 where flows decreased in the ETFs underlying dividend and low volatility strategies, both of these strategies were seeing positive flows for the previous nine years.

US-Listed Equity Smart-Beta ETF Fund Flows ($mil)



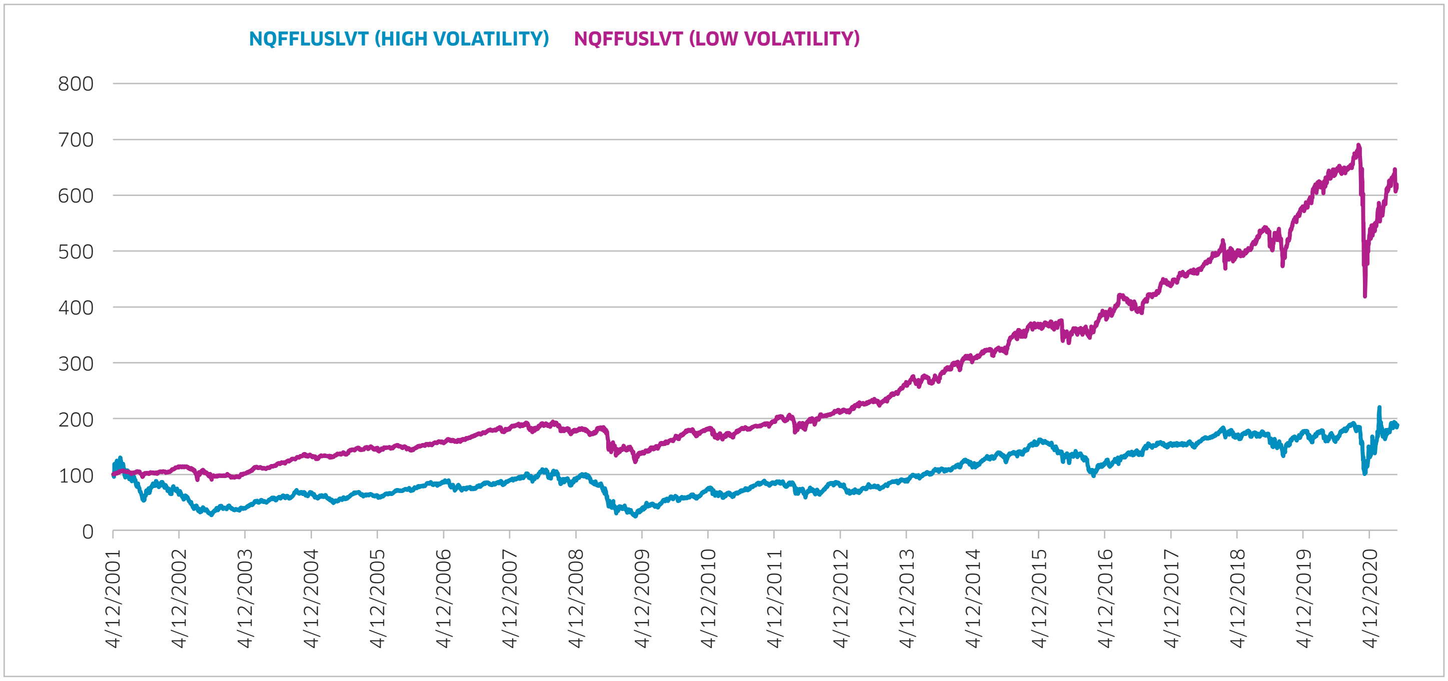
Source: Bloomberg Intelligence. Data as of 9/14/2020.

The Nasdaq US Low Volatility Dividend Achievers Index (LVDA) is a unique index that combines the benefits of low volatility and dividend growth. It aims to select US securities that have grown their dividends for at least 10 consecutive years and that reside in sectors that exhibit relative low volatility. The following analysis will first explain the importance of low volatility and dividend growth from an investment perspective, and then it will demonstrate the advantages of LVDA over established benchmarks.

Why is Low Volatility Important?

Low volatility strategies, as shown in the aforementioned charts above, have been gaining market share over the last several years. One of the reasons for this is because low volatility strategies have been outperforming strategies that invest in stocks that have higher volatilities. This seems counterintuitive at first because Modern Portfolio Theory dictates that if there are two portfolios that offer the same return, investors will generally prefer the less risky portfolio. In other words, investors will only take on increased risk if they are compensated for it by higher returns. As the data below shows, however, a low volatility strategy has had superior risk-adjusted returns over the long run compared to a high volatility strategy. The Nasdaq Factor Family US Low Volatility Index (NQFFUSLV) selects US securities that exhibit low volatility whereas the Nasdaq Factor Laggard US Low Volatility Index (NQFFLUSLV) selects US securities that exhibit high volatility. Aside from the 1-year data, the low volatility strategy has had superior risk-adjusted returns on a 3, 5, 10-year, and since inception basis. This shows that low volatility is better at providing long-term capital appreciation compared to high volatility strategies, which makes low volatility a critical investment factor to consider.

Low Volatility vs. High Volatility



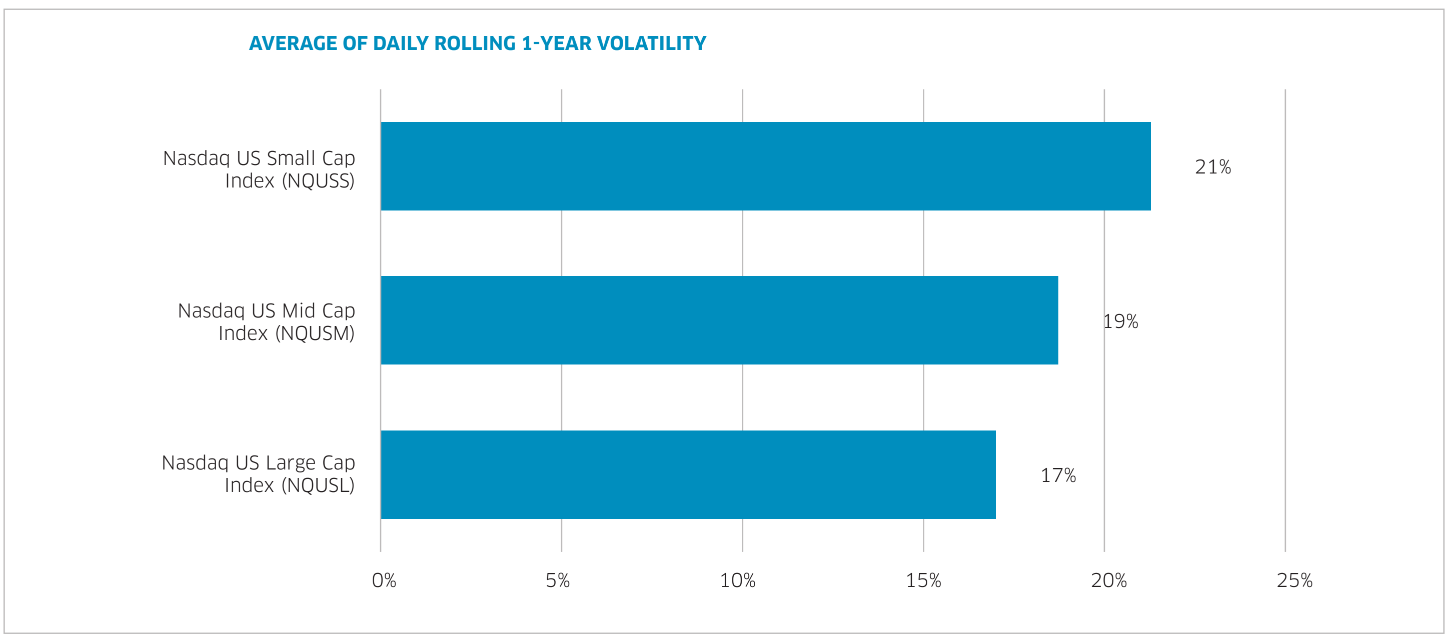
Source: Nasdaq. Data from 4/12/2001 to 8/31/2020.

INDEX	ANNUALIZED RETURN	ANNUALIZED VOLATILITY	SHARPE RATIO
		1-Year	
NQFFLUSLVT	15.23%	53.44%	0.285
NQFFUSLVT	0.62%	32.10%	0.019
		3-Year	
NQFFLUSLVT	7.09%	34.98%	0.203
NQFFUSLVT	11.12%	20.94%	0.531
		5-Year	
NQFFLUSLVT	7.05%	30.48%	0.231
NQFFUSLVT	12.48%	17.57%	0.710
		10-Year	
NQFFLUSLVT	12.02%	27.29%	0.440
NQFFUSLVT	14.40%	15.08%	0.955
		Since Inception	
NQFFLUSLVT	3.34%	34.76%	0.096
NQFFUSLVT	10.05%	14.74%	0.682

Source: Nasdaq. Data from 4/12/2001 to 8/31/2020.

Several aspects are important to consider as part of low volatility strategies, in particular sector-volatility dispersion as well as size-volatility dispersion. With respect to size-volatility dispersion, the chart below illustrates the average of the daily rolling 1-year volatility of the Nasdaq US Small Cap Index (NQUSS), Nasdaq US Mid Cap Index (NQUSM), as well as the Nasdaq US Large Cap Index (NQUSL) from 2001-2020. The chart shows that securities in NQUSL have experienced lower volatility, accounting for varying market cycles in the two-decade span. As a result, exposure to large cap securities will generally provide lower volatility over the long run. This makes empirical sense as larger companies have the financial prowess to withstand market shocks better than their mid or small cap counterparts do because they tend to have better ability to raise debt in tough times or have healthier balance sheets.

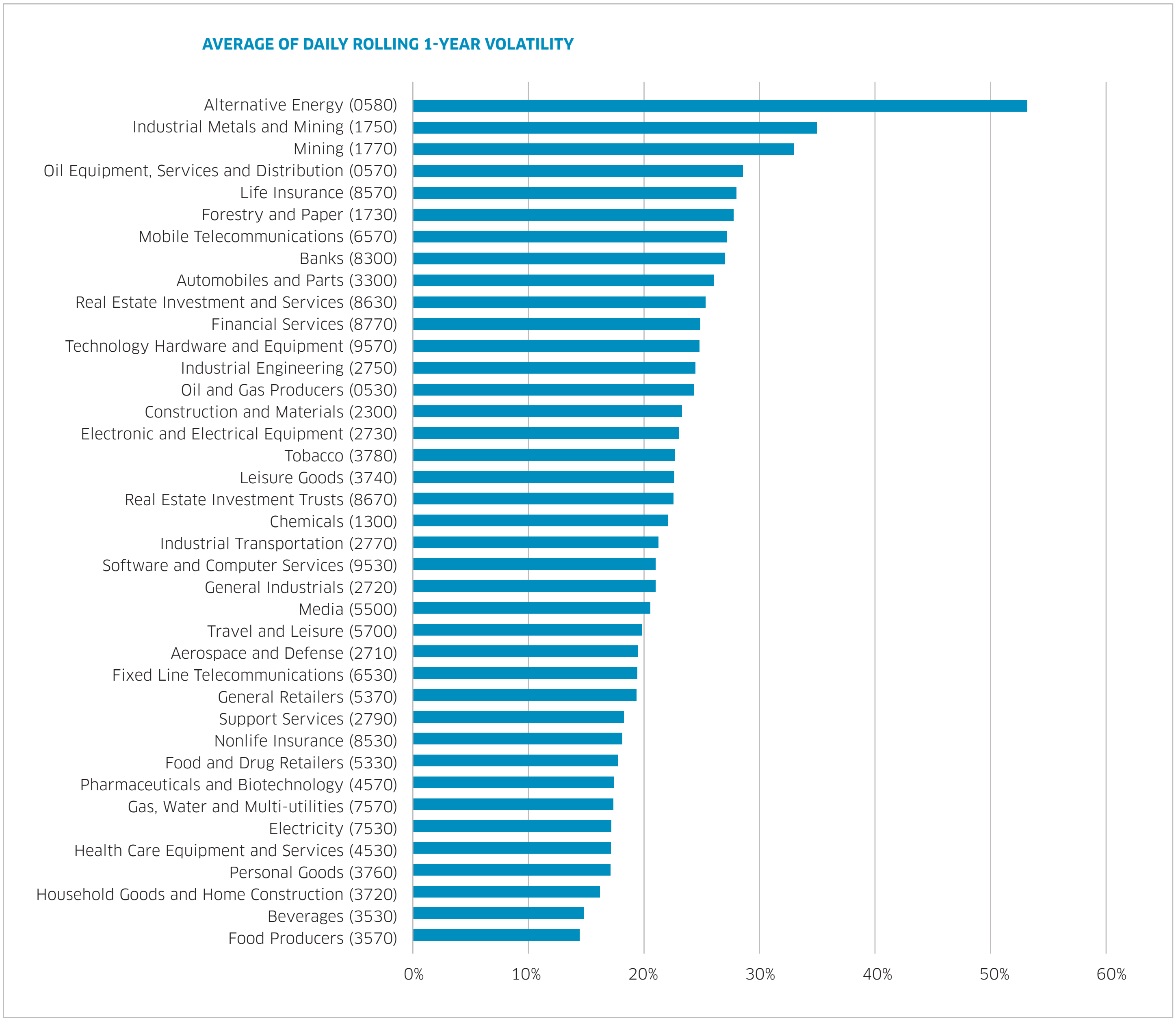
Rolling 1-Year Volatility of Nasdaq Size Indexes



Source: Nasdaq. Data from 3/30/2001 to 8/31/2020.

Within sectors, this volatility dispersion is even wider. Similar to the size-volatility dispersion chart above, the chart below shows the average of the daily rolling 1-year volatility of every sector classified by Industry Classification Benchmark (ICB), which is a product of FTSE Russell. The ICB taxonomy consists of industries, super-sectors, sectors, and sub-sectors, with industries being the broadest and sub-sectors being the narrowest. Looking at sector volatility allows one to evaluate various areas of the economy without being either too broad or too granular. As the data shows, several ICB sectors such as Food Producers, Beverages, Healthcare Equipment and Services, and several others have had the lowest volatilities across varying market cycles from 2001-2020. This once again makes empirical sense because these sectors tend to provide goods and services that are necessities and generally tend to be inelastic, meaning that consumers generally want the products and services from these sectors irrespective of market conditions (i.e. people need basic food necessities, medical equipment, heat and other utilities, shelter, etc.).

Rolling 1-Year Volatility of ICB Sectors



Source: Nasdaq. Data from 3/30/2001 to 8/31/2020.

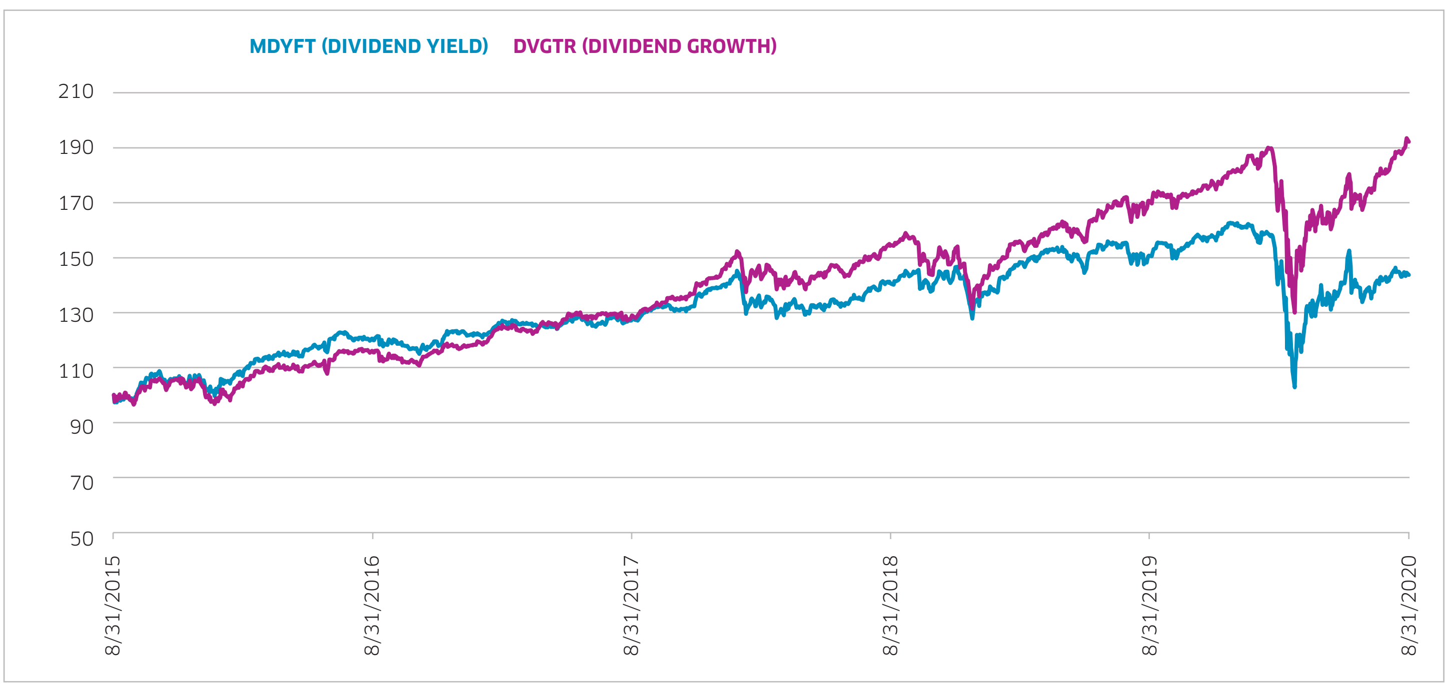
This data reveals that it is important that investors continue to consider low volatility strategies, as they have consistently outperformed higher volatility strategies over the long run. The analysis also shows that it is vital to consider different aspects of volatility as well, particularly size and sector exposure, as this will drastically affect the volatility structure of any portfolio. The data has revealed that large cap securities and certain sectors within the market have consistently experienced low volatility over varying market cycles. This makes low volatility a pertinent factor and one of the key reasons as to why the Nasdaq US Low Volatility Dividend Achievers Index considers low volatility as part of its methodology.

Why is Dividend Growth Important?

Next, similar to low volatility, dividend growth is also a crucial factor. Income-oriented strategies generally tend to veer in two different directions; they focus on dividend yield strategies or they focus on dividend growth strategies. Dividend yield strategies tend to invest in stocks that exhibit high current yield, or, in other words, the dividend payout as a ratio of the price of the security is higher relative to that of other securities. Dividend growth stocks on the other hand tend to focus on securities that have grown that dividend payout over time, irrespective of the yield on that payout. One of the major drawbacks of dividend yield strategies is that they can tend to invest in securities that have falling prices. This is because dividend yield is equal to the dividend payout divided by price, so a security can have a high dividend yield by either having a rising dividend payout or by having a falling price. Dividend growth strategies, on the other hand, tend to consider only rising dividend payouts.

In order to show the robustness of dividend growth strategies, one can compare the Morningstar Dividend Yield Focus Total Return Index (MDYFT), which selects companies based on high dividend yield, with the Nasdaq US Dividend Achievers Select Total Return Index (DVGTR), which selects companies that have grown their dividends for at least 10 consecutive years. In other words, MDYFT is a good proxy for a dividend yield strategy while DVGTR is a good proxy for a dividend growth strategy. As the tables below show, even though MDYFT had a higher dividend yield in each year, DVGTR had a better risk-adjusted total return profile, which is inclusive of dividends, on a 1, 3, and 5-year basis. This shows that while MDYFT had a high yield, DVGTR had higher capital appreciation in addition to a moderate yield, which led to an overall better performance.

Dividend Growth vs. Dividend Yield



Source: Nasdaq & Bloomberg. Data from 8/31/2015 to 8/31/2020.

CALENDAR YEAR DIVIDEND YIELD	MDYFT	DVGTR
2015	1.36%	0.78%
2016	3.56%	2.31%
2017	3.56%	2.06%
2018	3.66%	1.99%
2019	3.56%	1.94%
2020	3.02%	1.29%

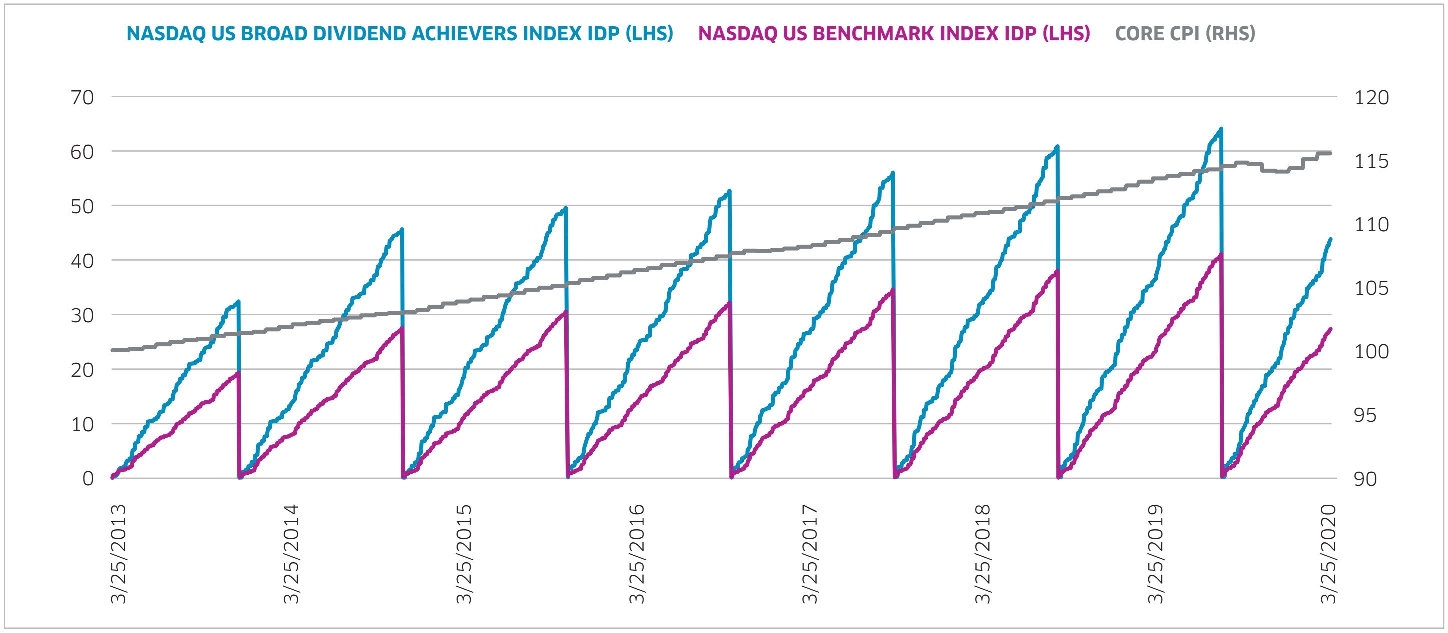
Source: Nasdaq & Bloomberg. Data from 8/31/2015 to 8/31/2020.

INDEX	ANNUALIZED RETURN	ANNUALIZED VOLATILITY	SHARPE RATIO
		1-Year	
MDYFT	-4.68%	33.09%	-0.141
DVGTR	12.55%	31.39%	0.400
		3-Year	
MDYFT	4.10%	21.58%	0.190
DVGTR	14.27%	21.27%	0.671
		5-Year	
MDYFT	7.53%	18.05%	0.417
DVGTR	13.97%	17.87%	0.782

Source: Nasdaq & Bloomberg. Data from 8/31/2015 to 8/31/2020.

Another reason as to why dividend growth is an important factor is because dividend growth is a check against the erosion of the value of dividends over time due to inflation. In other words, if dividend payments stay constant, or worse, go down, then over time the true purchasing power of those dividends will diminish with inflation. As such, dividend growth that is at least in line with inflation will help to preserve the value of dividends. The chart below compares the index dividend point (IDP) values of the Nasdaq US Broad Dividend Achievers Index (DAA) and the Nasdaq US Benchmark Index (NQUSB) against the Core Consumer Price Index (CPI). DAA is comprised of US companies that have increased their dividends for at least 10 consecutive years. The IDP is a measure of all the dividends paid by the underlying constituents of the index normalized to the index value itself. Core CPI is a widely used measure to track inflation in the economy. Summing the IDP values of DAA and NQUSB in each year will provide an indication of the extent to which the constituents in each of these two indexes are increasing their dividend payouts. The chart below reveals that the members of DAA have been growing their dividends at least as much as Core CPI. Further, the table below explicitly reveals that the 1-year growth rates of the IDP values in DAA have been higher than Core CPI in each year from 2014 to 2020[2].

Index Dividend Point Comparison



Source: Nasdaq, Federal Reserve Economic Data (FRED). Data from 3/25/2013 to 8/31/2020.

1-YEAR GROWTH RATE	NASDAQ US BROAD DIVIDEND ACHIEVERS INDEX IDP	CORE CPI
2014	11.83%	1.62%
2015	8.54%	2.07%
2016	6.38%	2.21%
2017	6.77%	1.77%
2018	7.77%	2.20%
2019	5.76%	2.25%
2020	2.51%	1.10%

Source: Nasdaq, Federal Reserve Economic Data (FRED). Data from 3/25/2013 to 8/31/2020.

The above data shows that when considering income-oriented strategies, investors should look to dividend growth strategies over dividend yield strategies. This is because dividend growth strategies focus on the growth of the dividend payouts that investors receive, which has shown to lead to better capital appreciation and risk-adjusted returns over dividend yield strategies. In addition the data illustrates that dividend growth strategies can also ensure the preservation of dividend value over time due to inflation. As a result, dividend growth is a critical factor that investors should consider when looking for moderate yield, capital appreciation, and inflationary protection.

The following analysis will show the ways in which these two vital factors, low volatility and dividend growth, are combined to create a unique and robust investible solution.

How Can People Invest in Low Volatility & Dividend Growth?

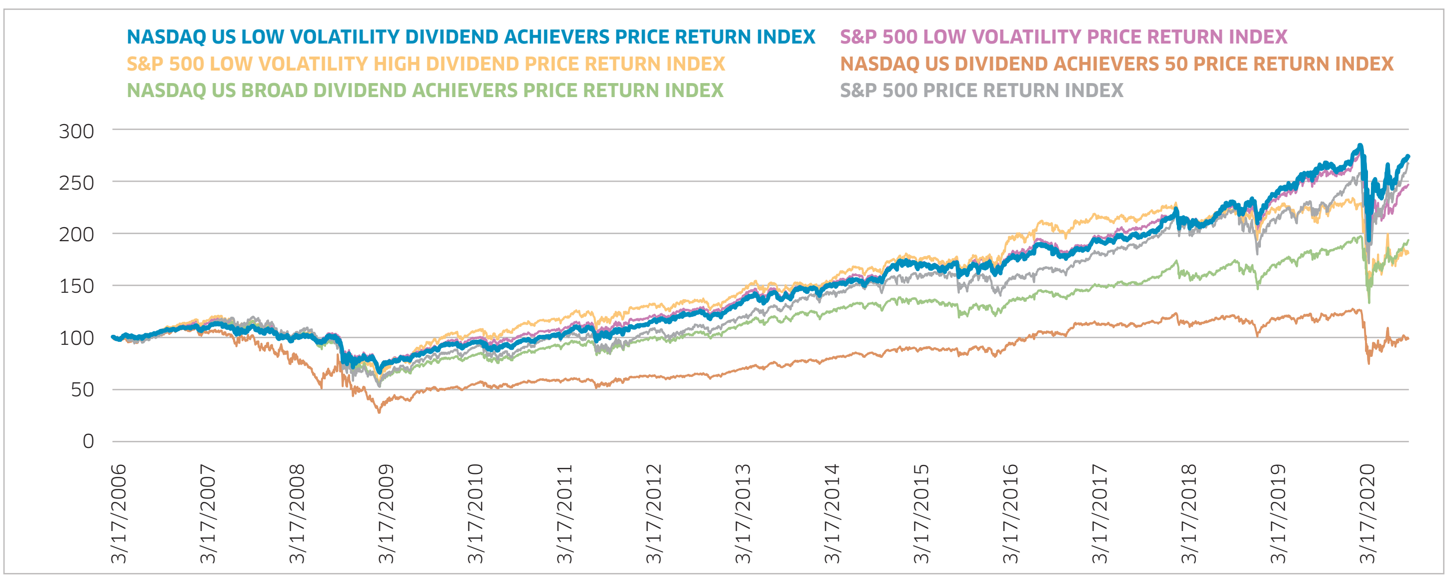
The Nasdaq US Low Volatility Dividend Achievers Index (LVDA) is one way that people can track a strategy that combines the aforementioned benefits of low volatility and dividend growth. A security in LVDA must be a member of both the Nasdaq US Broad Dividend Achievers Index (DAA) as well as the Nasdaq US Large Cap Index (NQUSL). In essence, the index tracks the performance of US large cap securities that have at least 10 consecutive years of increasing annual regular dividend payments. Further, each ICB sector from the Nasdaq US Benchmark Index (NQUSB) is ranked based on its trailing 1-year volatility, with the least volatile sector getting a rank of 1, the second least volatile sector getting a rank of 2, and so on. The ICB sectors ranked within the top 10 by trailing 1-year volatility are eligible for inclusion and an ICB sector that is in the top 15 by trailing 1-year volatility is also eligible for inclusion if that ICB sector is currently included in LVDA. The index then weighs each security according to its volatility. The weight of each security in the index is set inversely proportional to its trailing 1-year volatility. In other words, a security with the least volatility will have the highest weight in the index and vice versa.

In order to show the advantages of the Nasdaq US Low Volatility Dividend Achievers Index, the ensuing analysis will compare this index to the following table of peer indexes. These indexes will allow for an adequate comparison of LVDA against various established benchmarks in the market.

INDEX	METHODOLOGY	SIZE EXPOSURE	FACTOR EXPOSURE	WEIGHTING
S&P 500 Low Volatility Index	Top 100 stocks from S&P 500 with lowest volatility based on trailing 1-year data	Large Cap	Low Volatility	Low Volatility Weighted
S&P 500 Low Volatility High Dividend Index	Selects top 75 stocks with highest 1-year trailing dividend yield and then the top 50 by volatility based on 1-year data	Large Cap	High Yield, Low Volatility	Yield Weighted
Nasdaq US Dividend Achievers 50 Index	Selects top 50 stocks from those that have increased their dividends for at least 10 consecutive years based on trailing 1-year dividend yield	All Cap	High Yield, Dividend Growth	Yield Weighted
Nasdaq US Broad Dividend Achievers Index	Selects stocks that have increased their dividends for at least 10 consecutive years	All Cap	Dividend Growth	Market Cap Weighted
S&P 500 Index	Selects top 500 stocks by market capitalization	Large Cap	Size	Market Cap Weighted

The cumulative performance chart and table below reveal that the Nasdaq US Low Volatility Dividend Achievers Index outperformed these other peer indexes over the long run. In addition, LVDA did so while having the lowest annualized volatility, highest Sharpe ratio, and lowest max drawdown over the time period from March 2006 to August 2020.

Price Performance: March 2006 - August 2020



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

INDEX	CUMULATIVE RETURN	ANNUALIZED RETURN	VOLATILITY	SHARPE RATIO	MAX DRAWDOWN
Nasdaq US Low Volatility Dividend Achievers Price Return Index	174.42%	7.24%	16.24%	0.446	-42.44%
S&P 500 Low Volatility Price Return Index	147.23%	6.47%	16.25%	0.398	-43.48%
S&P 500 Low Volatility High Dividend Price Return Index	81.28%	4.20%	18.28%	0.23	-54.58%
Nasdaq US Dividend Achievers 50 Price Return Index	-0.66%	-0.05%	25.46%	-0.002	-75.71%
Nasdaq US Broad Dividend Achievers Price Return Index	93.09%	4.66%	18.49%	0.252	-55.14%
S&P 500 Price Return Index	167.76%	7.06%	20.40%	0.346	-56.78%

Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

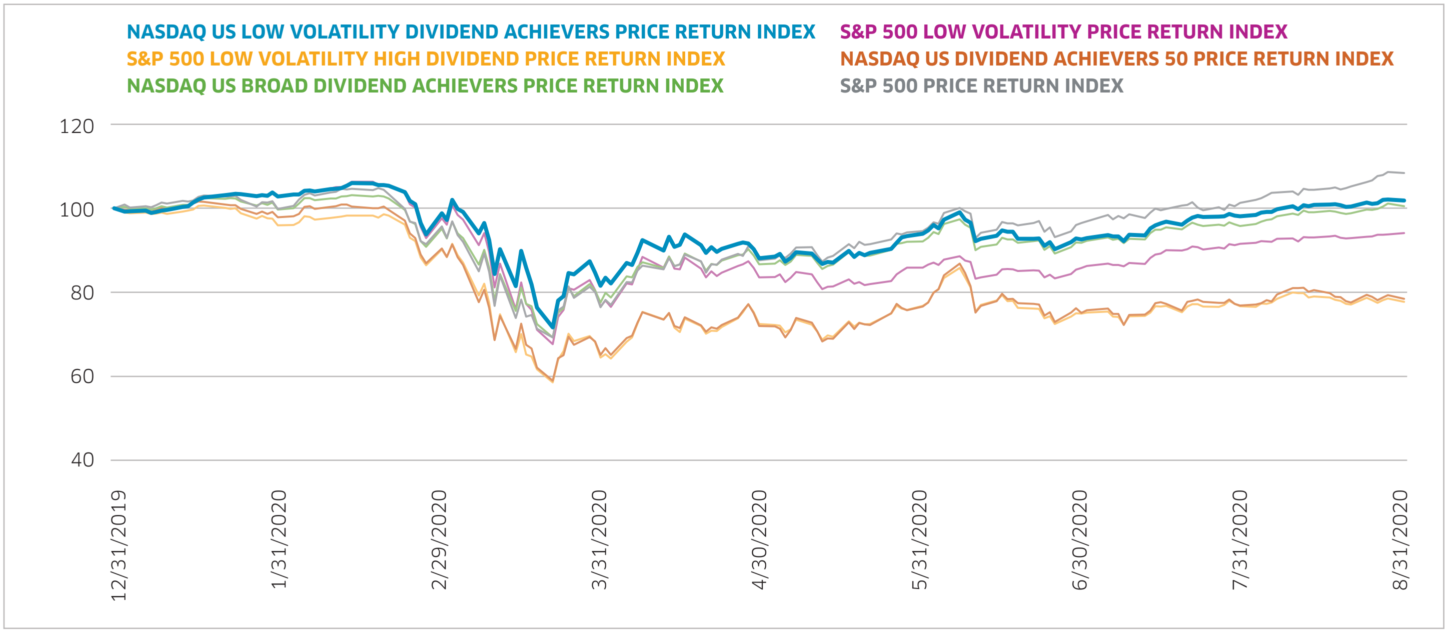
In looking a little closer at the monthly performance, the data shows that the Nasdaq US Low Volatility Dividend Achievers Index had the highest average monthly return and the lowest monthly volatility.

INDEX	% OF MONTHS INDEX HAD HIGHEST RETURN	% OF MONTHS INDEX HAD LOWEST RETURN	AVERAGE MONTHLY RETURN	MONTHLY VOLATILITY
Nasdaq US Low Volatility Dividend Achievers Total Return Index	20.11%	13.79%	0.87%	11.32%
S&P 500 Low Volatility Total Return Index	9.20%	13.22%	0.81%	11.47%
S&P 500 Low Volatility High Dividend Total Return Index	17.24%	13.79%	0.82%	14.50%
Nasdaq US Dividend Achievers 50 Total Return Index	21.26%	29.89%	0.52%	18.59%
Nasdaq US Broad Dividend Achievers Total Return Index	1.72%	5.17%	0.70%	13.18%
S&P 500 Total Return Index	30.46%	24.14%	0.84%	15.05%

Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

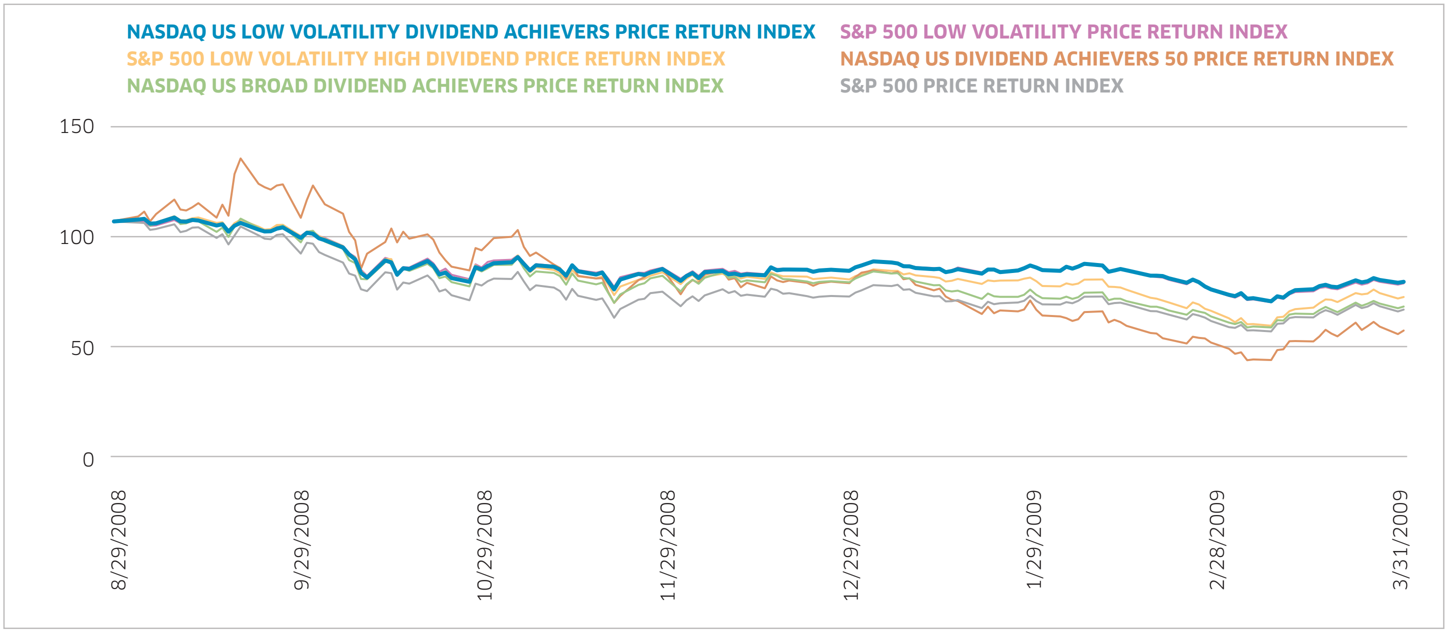
It is also important to see the extent to which LVDA can withstand market downturns. The two charts below illustrate that during two major market events, the 2008 Financial Crisis and the 2020 pandemic, the Nasdaq US Low Volatility Dividend Achievers Index had a smaller drawdown than the peer indexes. LVDA's relatively lower drawdown during market turmoil is one of the reasons that explain its superior cumulative performance over the long run. In other words, LVDA's ability to lose less when the market goes down helps it in succeeding over the long run.

2020 Pandemic: Year-to-Date



Source: Nasdaq & Bloomberg. Data from 12/31/2019 to 8/31/2020.

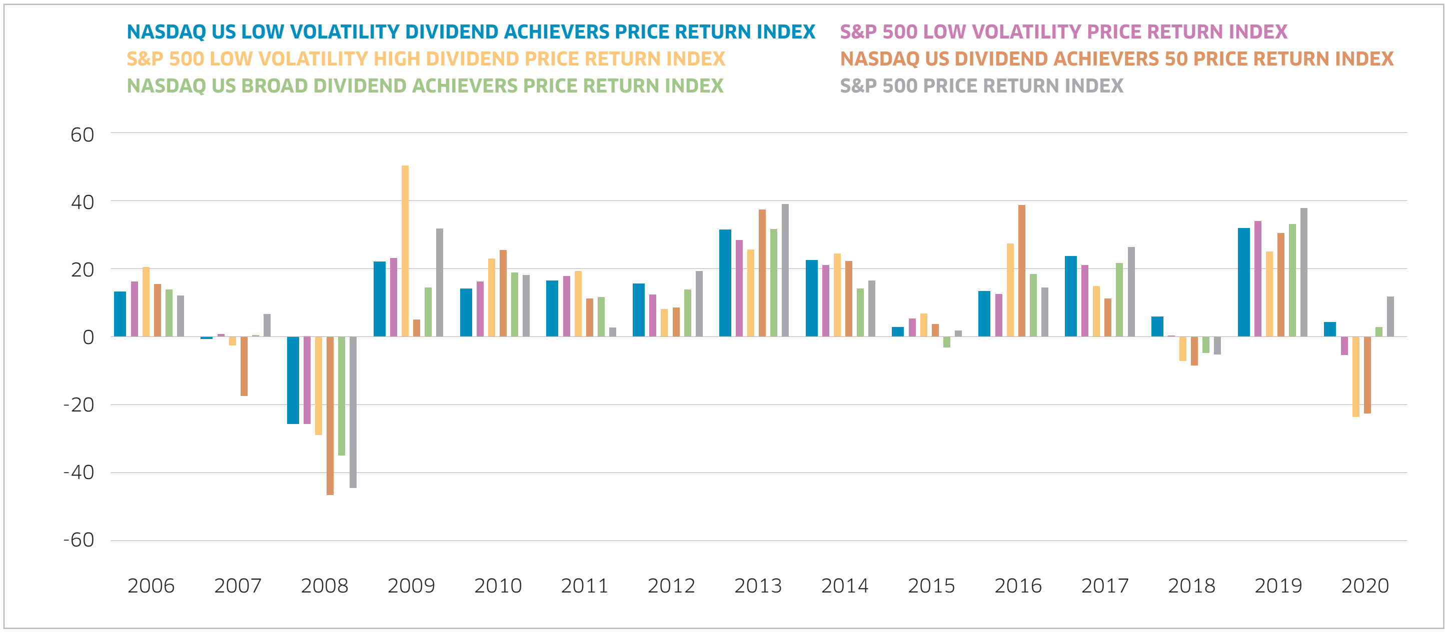
Financial Crisis: September 2008 - March 2009



Source: Nasdaq & Bloomberg. Data from 8/29/2008 to 3/31/2009.

Next, the calendar year total returns will explicitly show LVDA's ability to outperform during market crashes. The chart shows that during 2007/2008, 2015, 2018, and 2020, which were all times when the market had heightened volatility, the Nasdaq US Low Volatility Dividend Achievers Index was able to outperform most peers.

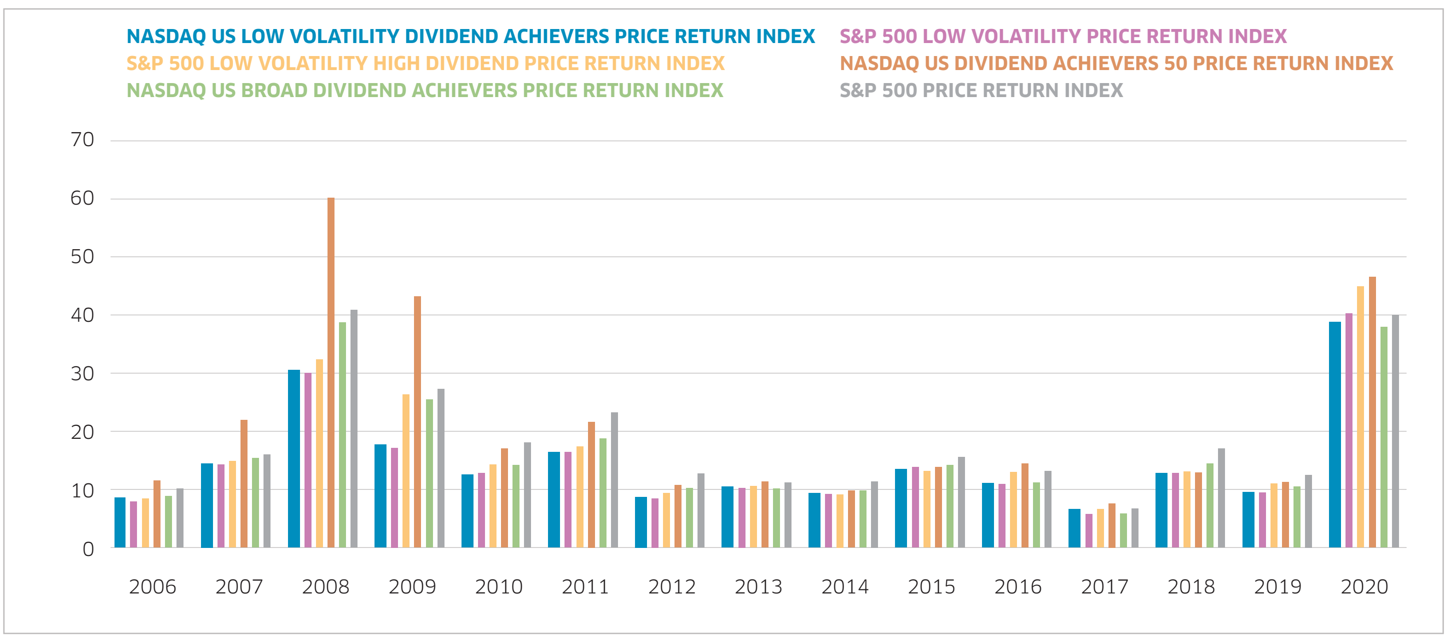
Calendar Year Total Return (%)



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

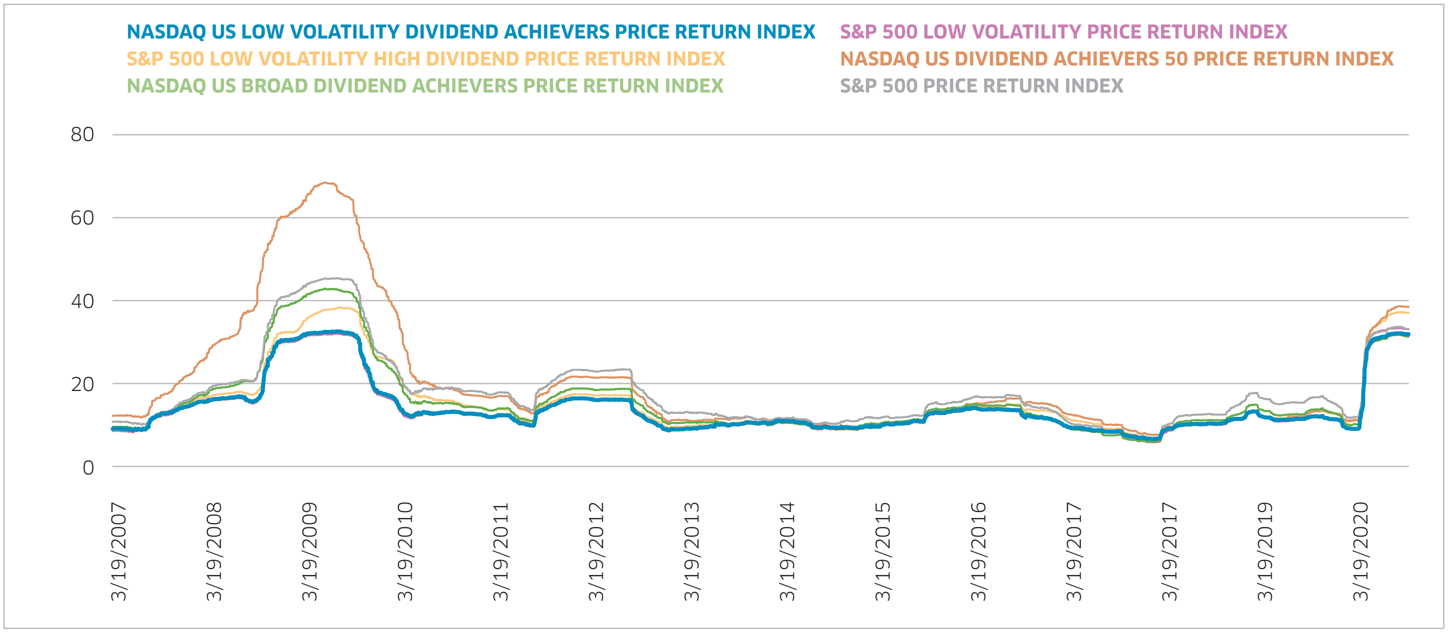
Since one of the main components of this index is that it focuses on low volatility, it is important to compare LVDA's volatility to that of the peer indexes. The calendar year volatility chart below shows that LVDA has lower volatility if not the lowest volatility in most years relative to the peer indexes. Further, the rolling 1-year volatility chart below shows that LVDA has had consistently lower volatility than its peer indexes.

Calendar Year Volatility (%)



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

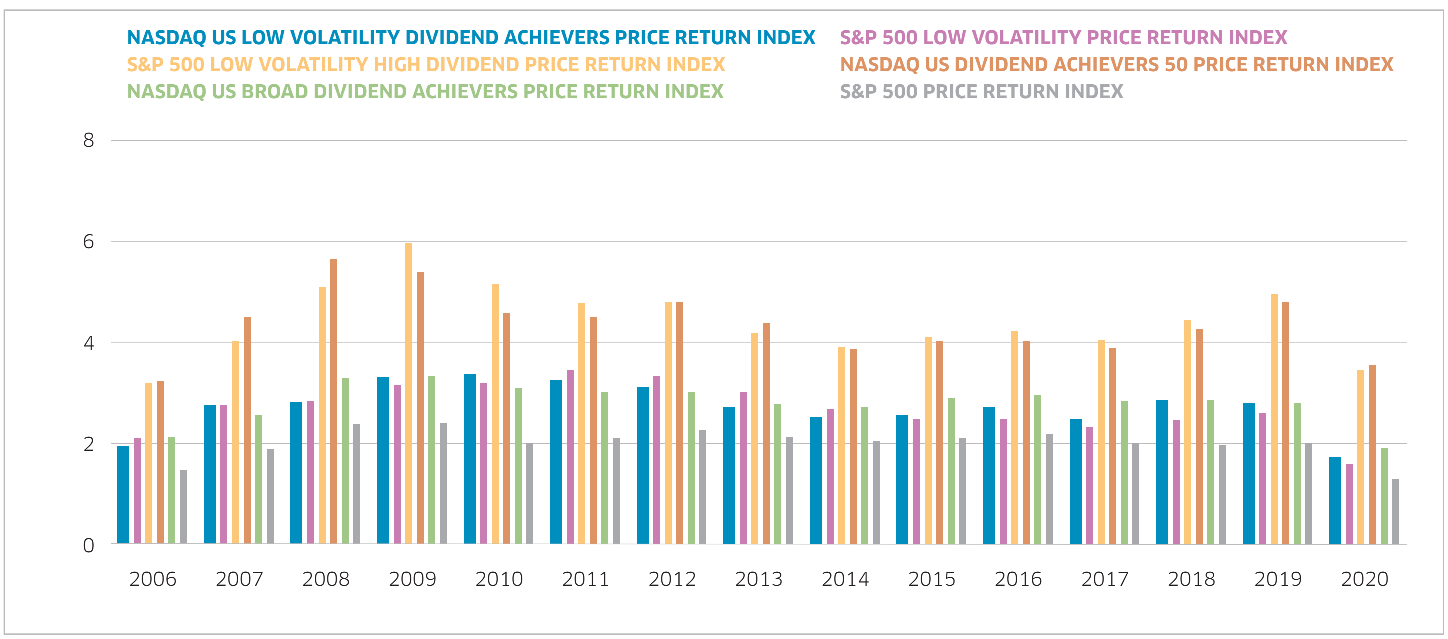
Rolling 1-Year Volatility (%)



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

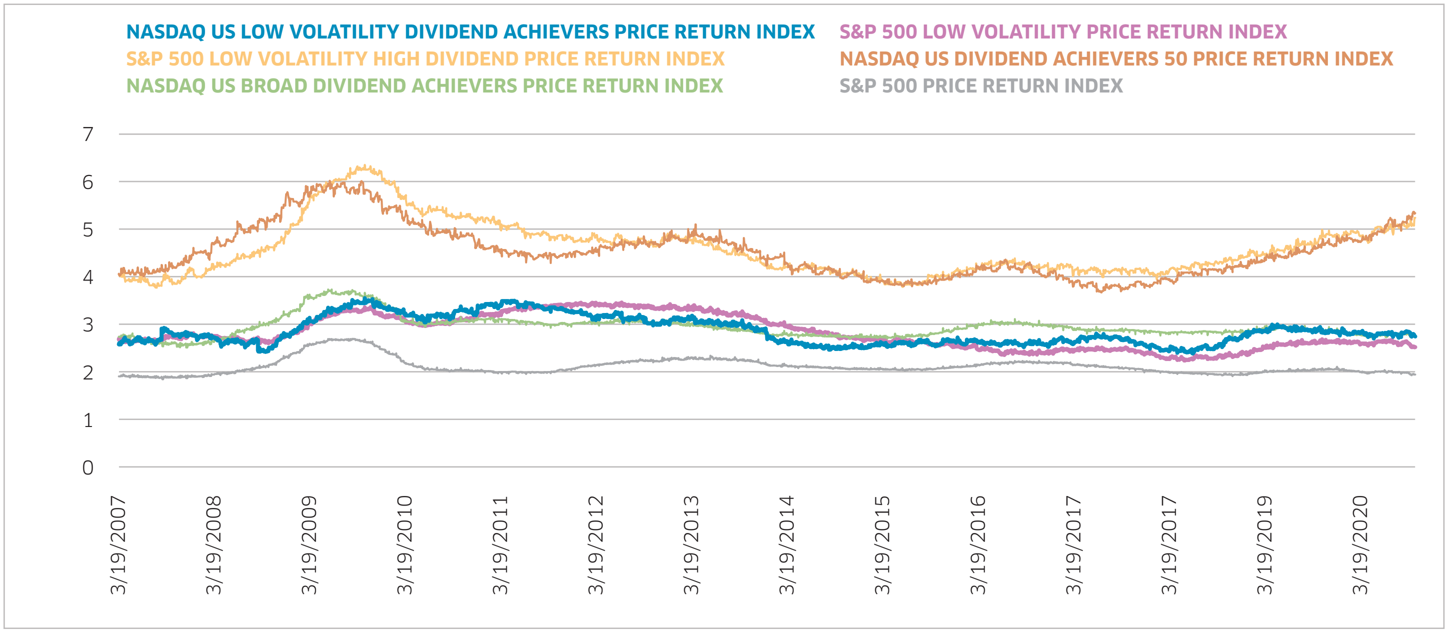
Since the other important aspect to this index is dividend growth, it is important to compare the dividend yield that investors would expect to receive from this index. Some of the other peer indexes are yield-weighted, so it is not surprising that LVDA does not have the highest dividend yield. As the data above has shown, however, the same indexes that have high dividend yield also have lower return and higher volatility than LVDA. In addition, LVDA also has, on average, a 75 basis-point higher dividend yield over the S&P 500 Index. This coupled with the fact that LVDA also outperforms S&P 500 Index with lower volatility over the long run, shows that LVDA's unique approach of looking at low volatility and dividend growth leads to a superior solution when compared to the peer indexes.

Calendar Year Dividend Yield (%)



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

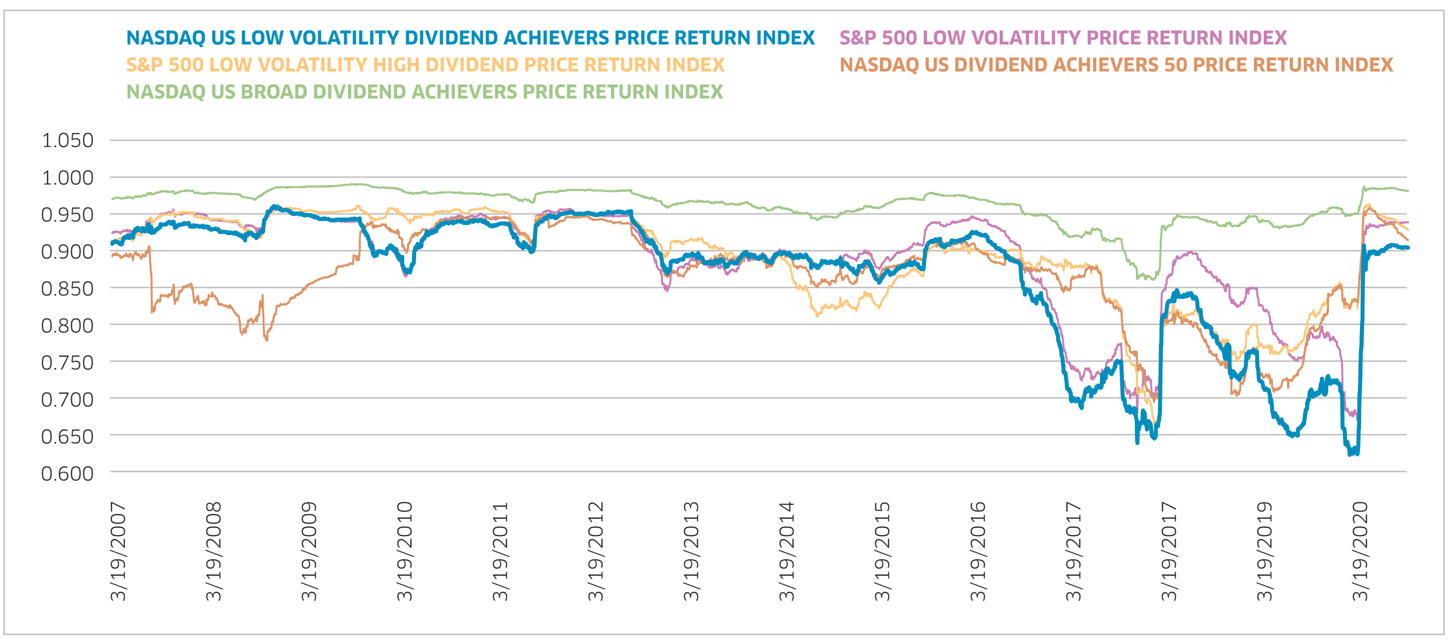
Rolling 1-Year Dividend Yield (%)



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

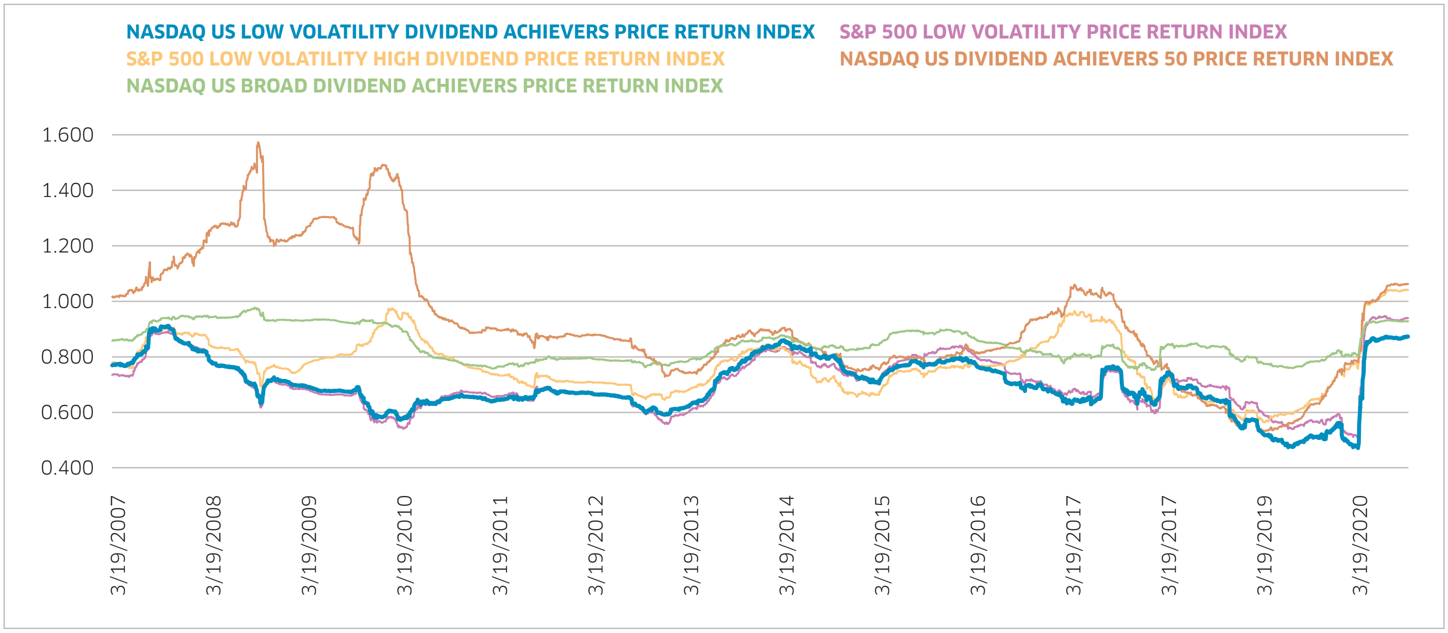
In terms of correlation and beta, the charts below show that LVDA has relatively lower correlation and beta to the S&P 500 Index. This reveals that investors are largely getting a differentiated solution when investing in companies in LVDA. The market crash in March 2020 led to a spike in the correlation and beta to bring it closer to that of S&P 500 Index, though LVDA still had a relatively lower correlation and beta in that time span compared to the peer indexes.

Rolling 1-Year Correlation to SPX



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

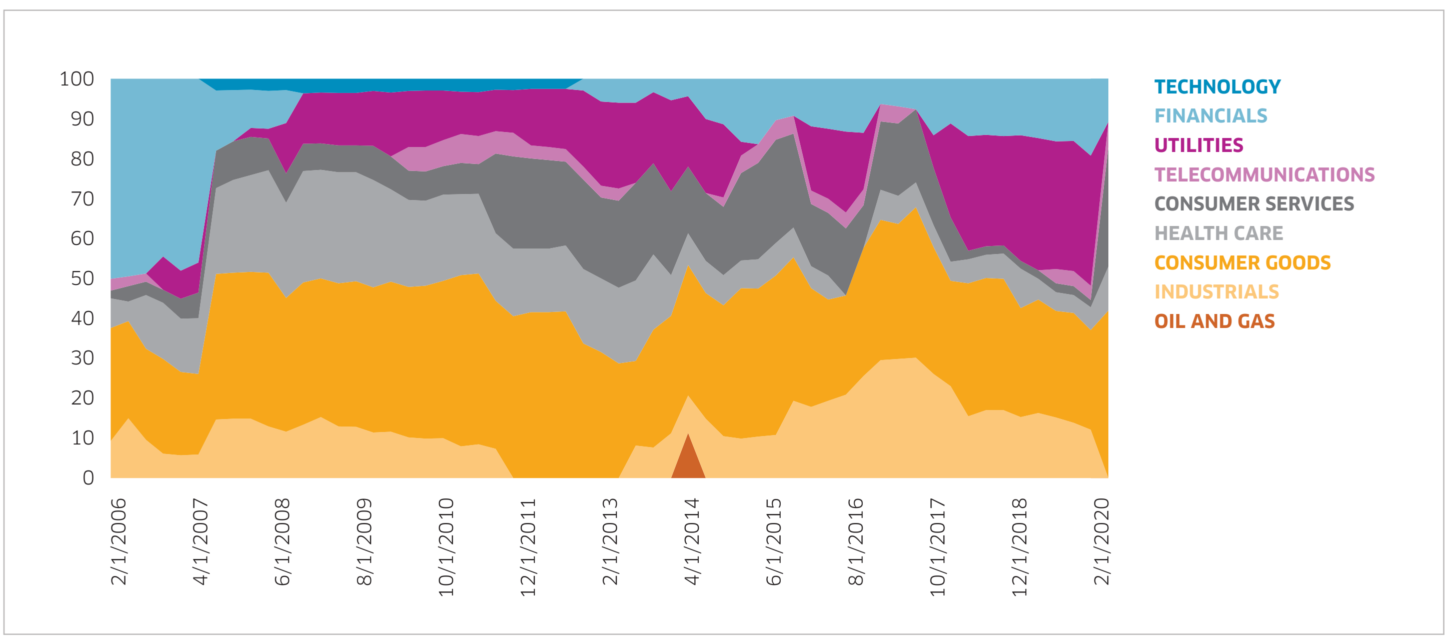
Rolling 1-Year Beta to SPX



Source: Nasdaq & Bloomberg. Data from 3/17/2006 to 8/31/2020.

Since the Nasdaq US Low Volatility Dividend Achievers index has a dynamic sector-rotation strategy, it is important to see the ways in which the industries and sectors are shuffling around in the index historically. The chart below illustrates that consumer goods has largely dominated the index in terms of representation. This makes sense because many companies within consumer goods are defensive in nature and the products and services they provide (e.g. food, beverages, etc.) are basic necessities. Other industries such as healthcare and utilities also have had a strong presence in the index historically for largely the same reason.

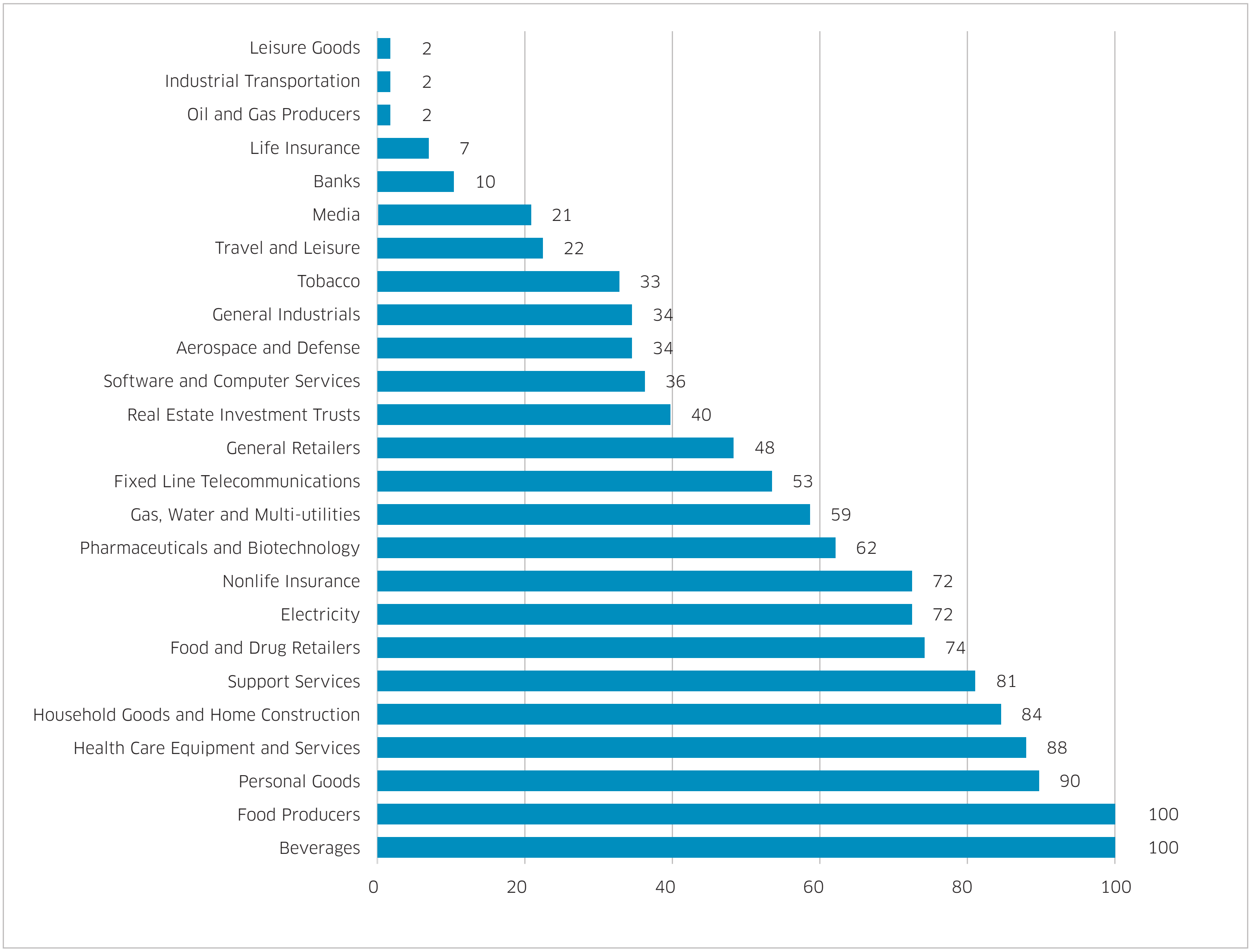
ICB Industry Weight (%)



Source: Nasdaq. Data from 3/17/2006 to 8/31/2020.

Looking more closely at the sector representation, the chart below shows the proportion of time that each sector appeared in the Nasdaq US Low Volatility Dividend Achievers index historically. Twelve sectors appeared in the index more than 50% of the time, with food producers and beverages appearing in the index 100% of the time historically.

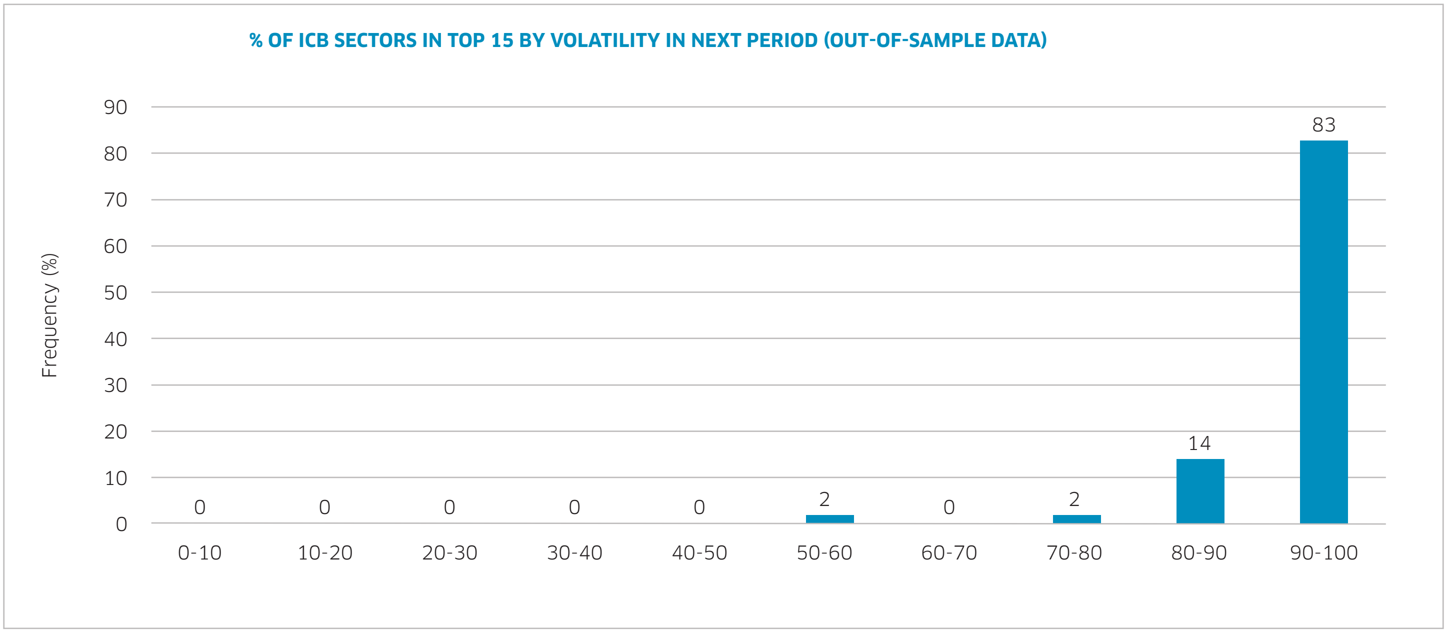
% of Time ICB Sector Appeared in LVDA Historically



Source: Nasdaq. Data from 3/17/2006 to 8/31/2020.

Since LVDA selects the top 10 ICB sectors by volatility along with a buffer rule that allows an ICB sector to be in the top 15 by volatility if that ICB sector is currently in the index, it is important to analyze the success and persistence of those ICB sectors in the following period (i.e. looking at out-of-sample data). This will give an indication of the “hit rate” or the success of the strategy in predicting sector-level volatility. The following chart shows that 97% of the time, at least 80% of ICB sectors that are included in the index in a given period are also included in the index in the following period. Further, 83% of the time, at least 90% of ICB sectors that are included in the index in a given period are also included in the index in the following period. This explicitly reveals the high persistence of sector-level volatility and shows that it is a stable predictor of volatility in the subsequent period.

Hit Rate



Source: Nasdaq. Data from 3/17/2006 to 8/31/2020.

The above analysis shows that the Nasdaq US Low Volatility Dividend Achievers Index successfully combines the benefits of low volatility and dividend growth into a single elegant strategy. LVDA has outperformed peer indexes with lower volatility, lower drawdown, lower correlation to SPX, lower beta to SPX, and a yield that, while not as high as some of the high dividend-yielding strategies, is still significantly higher than the S&P 500 Index. In addition, the data shows that, due to the sector-rotation strategy, LVDA largely provides exposure to defensive sectors that have been a part of the index many times. Finally, the sector-volatility data illustrates that the ICB sectors that were included in the index are persistent and had a high chance of staying in the index in the subsequent period.

Conclusion

Overall, low volatility and dividend strategies are two key factors in the market today. Low volatility has shown to have superior performance compared to high volatility strategies. Further, within low volatility, large cap securities and securities within certain sectors have shown to exhibit the lowest volatilities historically. From the various income strategies that exist today, dividend growth strategies have shown to outperform dividend yield focused strategies. The other crucial benefit of dividend growth oriented strategies is that they provide protection against inflation eroding the value of dividends. The Nasdaq US Low Volatility Dividend Achievers Index (LVDA) is a sophisticated and unique solution that combines the size and sector aspects of low volatility along with dividend growth to create an investable index that focuses on US large cap securities that have grown their dividends for at least 10 consecutive years from sectors that exhibit relative low volatility.

ENDNOTES

All data referenced herein is from Nasdaq, unless otherwise stated.

1.Bloomberg Intelligence ETFs (BI ETFS), AUM & Fund Flows, 9/14/2020.

2.Federal Reserve Economic Data (FRED), 3/25/2013 to 8/31/2020. https://fred.stlouisfed.org/series/CPILFESL