JULY 2017

Inflation Talk – Dividend Strategy under the Rising Rate Environment

Summary

- **The traditional dividend discount model is based on simplified assumptions and does not accurately represent all dividend paying companies.**
- **During periods of normal or high inflation dividend growing companies tend to outperform the S&P 500 with less volatility.**
- **The NASDAQ US Dividend Achievers 50 Index is a concentrated 50 stock index that has the potential for strong performance as the economy continues to mature.**

Fallacy of Dividend Stock Valuation Model

The traditional dividend discount model (DDM) states that rising interest rates will negatively impact stock valuations. The higher the interest rate, the more a stock will be discounted for total future dividend cash flows, hence lowering the stock's present value. Given this, investors could draw the simple conclusion that when inflation increases, interest rates go up so you should sell (or underweight) dividend stocks. Theoretically the model still makes sense, however it is based on several simplified yet critical assumptions. For example, it assumes that a company's dividend payments will follow a constant growth path into the future. In other words, a company will increase its dividends by the same amount year over year forever, which is an impractical assumption. The reality is that companies prefer to increase dividends in order to attract more investors. In the following chart (Figure 1), using almost a half century of U.S. economic history, we found that in every period of inflation hikes, companies increased their dividend payments. Since the inflation and dividend growth rates tend to offset each other in the model, the realized impact of inflation to dividend stocks is dramatically reduced.

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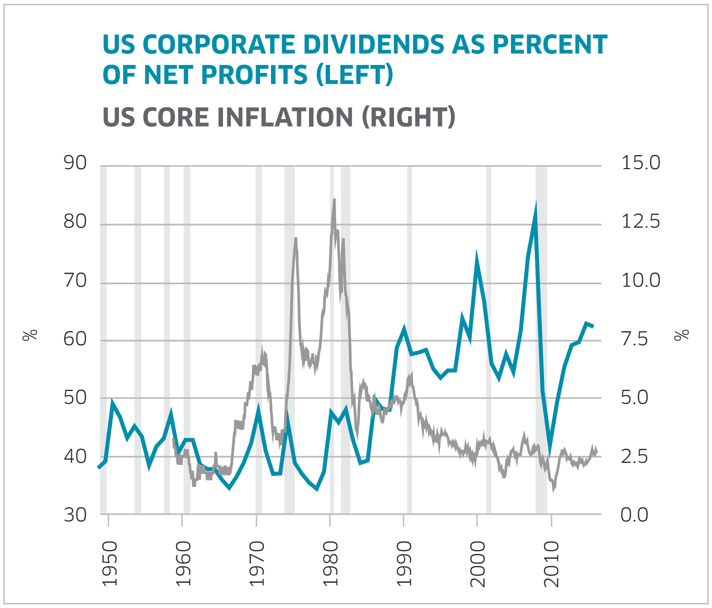
Figure 1: Corporations tend to increase dividends to match up with inflation

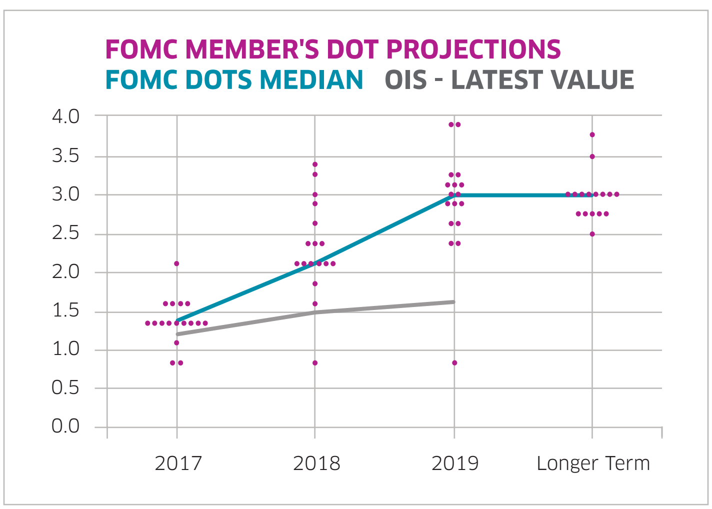


Sources: BEA, BLS

Investment Strategy to Overcome the Current Economic Uncertainty

Interest rates have been historically low since the financial crisis and the Federal Reserve (the Fed) has reached strong consensus to raise rates to above 2% in 2018 (Figure 2). At the same time investors have seen nothing come out of President Trump's first 100 days and the Trump trade is quickly fading away. Investors who are seeking a margin of safety to overcome the current market unrest should look beyond traditional large cap equities and consider a growth-focused dividend strategy.

Figure 2: FOMC Meeting Survey on 03/15/17

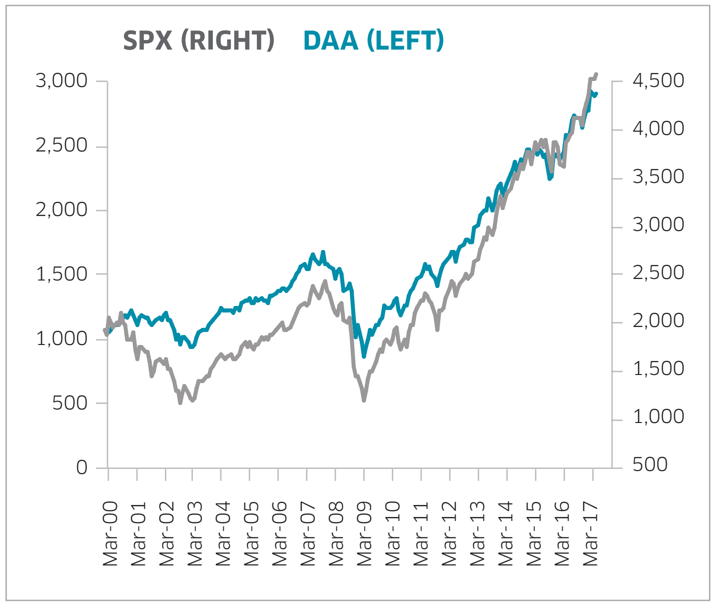


The reasons are obvious: steady dividend income has long been proved to be an effective equity strategy to survive rainy days. The focus on dividend growth, in our view, is the most reliable approach to monetarize the growth-oriented Trump trade. Let's look at two U.S. large cap equity indexes:

SPX – The Standard &Poor's 500, or S&P 500, is an American stock market index based broadly on the market capitalization of 500 large companies with a common stock listing on the NYSE or Nasdaq.

DAA – The NASDAQ US Broad Dividend Achievers Index is comprised of U.S.-accepted securities listed on AMEX, NYSE or Nasdaq with at least ten consecutive years of increasing annual regular dividend payments.

Figure 3: SPX and DAA total return history from 2000



In order to better gauge the relative advantage of these two indexes under different economic scenarios, we broke down their performance history into three different matrixes:

1. Inflation Strength
2. Real GDP Growth
3. Fed Reactions

Inflation Strength

We broke down the history into three categories of economic cycles based on U.S. core inflationary periods. Inflation is measured by the seasonally adjusted YoY changes of Urban Consumer Pricing Index excluded foods and energy.

- High Inflation – when U.S. core inflation exceeds 2.5%;
- Normal Inflation – when U.S. core inflation is between 1.5% and 2.5%; and
- Low Inflation - when U.S. core inflation is below 1.5%.

Our comparison shows that DAA is outperforming in terms of both total return and volatility in high inflation periods. It also exhibited lower volatility in low inflationary periods leading to a higher Sharpe ratio.

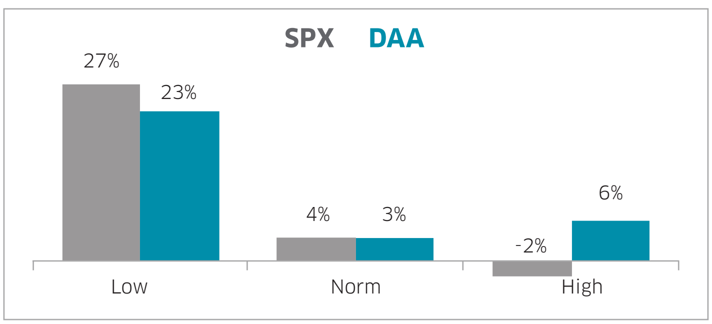
Real GDP Growth

We broke down the history into four categories of economic cycles based on U.S. real GDP growth.

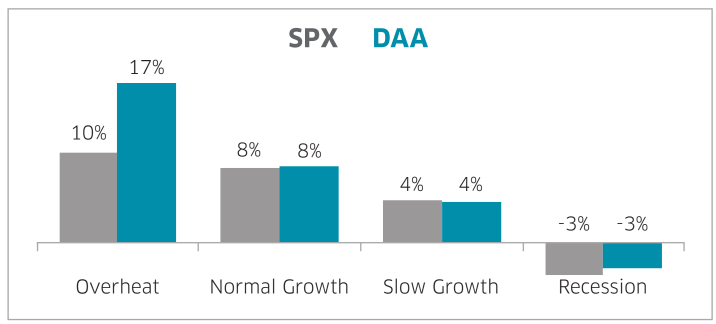
- Overheat – when U.S. real GDP growth exceeds 4%;
- Normal Growth – when U.S. real GDP growth is between 2% and 4%;
- Slow Growth - when U.S. real GDP growth is below 2% but positive; and
- Recession – when U.S. real GDP contracted.

We found that when the U.S. economy is overheating (early 2000 and Q4 2003 to Q2 2004), DAA did exceptionally well and beat SPX with higher return and lower volatility. During all other economic cycles, including the financial crisis in 2008-2009, we saw the two indexes tracked closely with DAA performing slightly better. On a risk-adjusted basis, DAA outperformed SPX in all economic cycles.

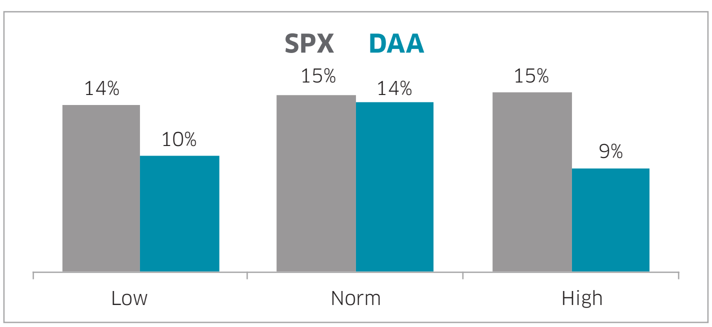
Average Total Return under Different Inflation Cycles



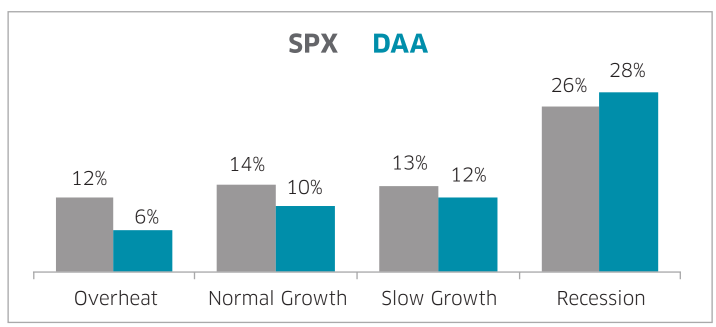
Average Total Return under Different Economic Cycles



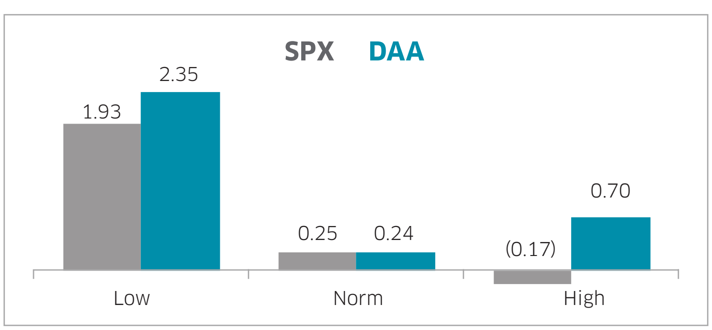
Average Volatility under Different Inflation Cycles



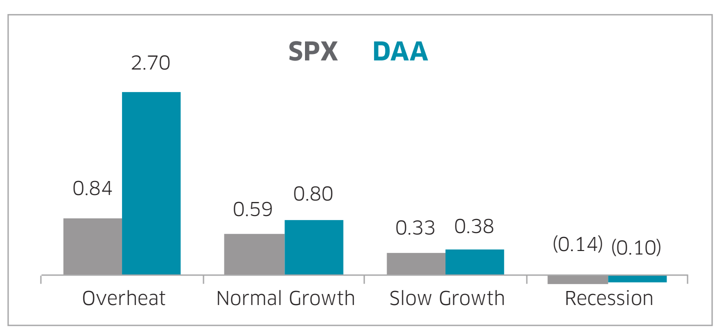
Average Volatility under Different Economic Cycles



Average Sharpe Ratio under Different Inflation Cycles



Average Sharpe Ratio under Different Economic Cycles



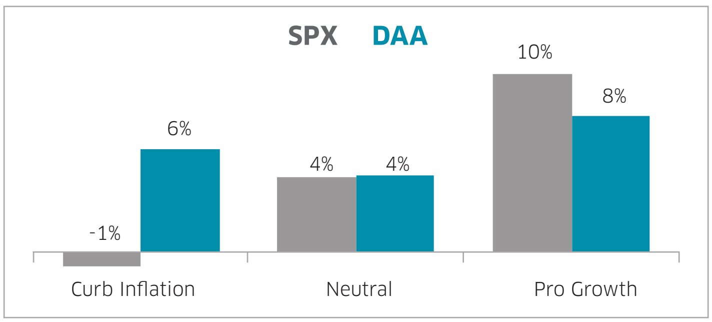
The Federal Reserve Reaction

Now let's focus on the Fed's reactions to inflation and growth. In this view, we examine the performance history by the Fed's three different courses of action:

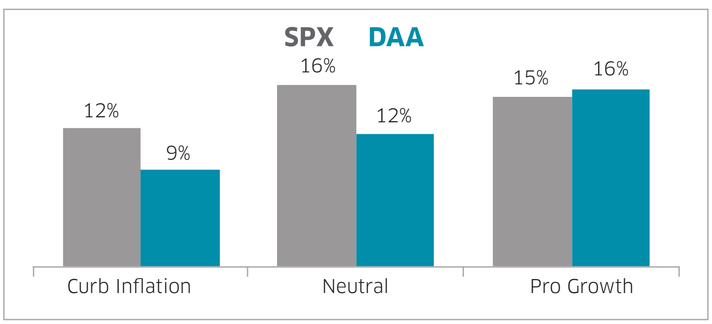
- Pro-Growth – the Fed kept the target rate lower than the core Inflation rate (<-1%)
- Neutral – the Fed kept the target rate around the core Inflation rate (with a range of +/- 1%)
- Curb Inflation – the Fed deliberately raised the target rate above the core inflation rate (>1%)

Our finding shows that when the Fed really took actions to cool down inflation it often negatively impacted the equity market. DAA again outperforms SPX in this environment which may be the direct result of the underlying firms' sufficient cash cushion. This cushion allows the company to be less sensitive to the rising borrowing costs.

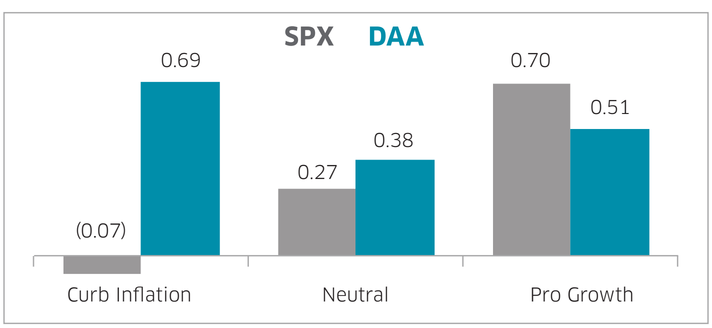
Average Total Return under Different Fed Reactions



Average Volatility under Different Fed Reactions



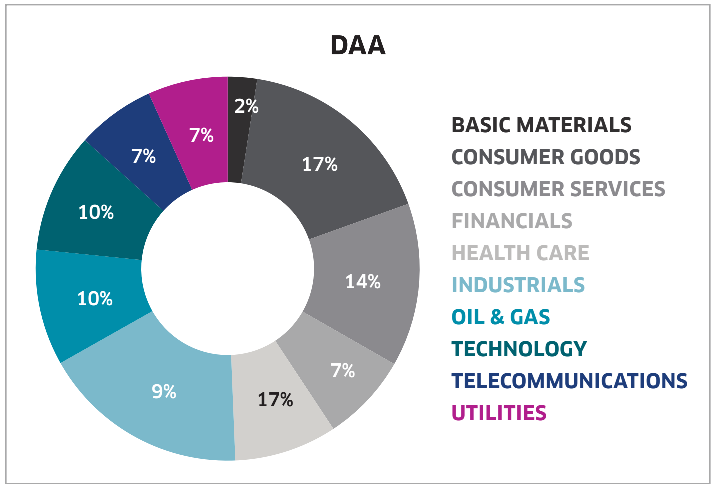
Average Sharpe under Different Fed Reactions



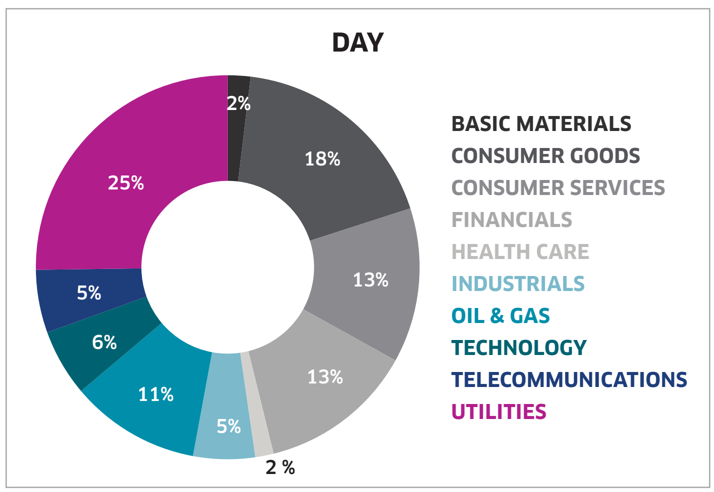
Portfolio Analysis

DAA is a well-diversified index with the top three industries in Industrials (17%), Consumer Goods (17%) and Consumer Services (14%). This makes sure that investors will receive a steady stream of dividend income over time. Investors that like more concentrated active shares and richer dividends can look at the NASDAQ US Dividend Achievers 50 Index (DAY). DAY is comprised of the top 50 securities by dividend yield from DAA. It's more concentrated than DAA with the top 3 industries in Utilities (25%), Consumer Goods (18%) and Financials (13%).

DAA Industry Breakdown (Update as of 3/31/2017)



DAY Industry Breakdown (Update as of 3/31/2017)



We've been experiencing lower growth in interest rates in recent, post-crisis years. As we expected, DAA is lagging SPX in terms of total return, but it has experienced lower volatility. On the other hand, DAA is outperforming both during the crisis period and in 2016 when inflation hopes were revived.

Given the high yield characteristics, DAY is often concentrated with stocks at a good discount. Although this might make the portfolio underperform in the short term, as we've observed during the financial crisis, it can still perform well over the long term. Because it is a subset of DAA, DAY follows the same stock selection rule to include stocks with at least ten consecutive years of increasing annual regular dividend payments. This value strategy can play out in favorable macro-economic environments. For example, DAY has outperformed both SPX and DAA in the most recent three consecutive years from 2014 to 2016.

Annual Performance (Updated as of 3/31/2017)

	TOT RETURN			VOLATILITY		
	SPX	DAA	DAY	SPX	DAA	DAY
2001	-11.89%	-4.87%		21.55%	16.32%	
2002	-22.10%	-15.84%		26.04%	23.79%	
2003	28.68%	20.88%		17.07%	15.56%	
2004	10.88%	9.79%		11.10%	10.02%	
2005	4.91%	2.40%		10.29%	9.79%	
2006	15.79%	16.66%	14.39%	10.04%	8.82%	11.25%
2007	5.49%	0.40%	-14.49%	15.96%	15.37%	21.88%
2008	-37.00%	-29.06%	-38.69%	40.96%	38.77%	60.26%
2009	26.46%	11.95%	4.16%	27.28%	25.43%	43.17%
2010	15.06%	15.59%	21.09%	18.06%	14.18%	17.03%
2011	2.11%	9.71%	9.29%	23.29%	18.78%	21.64%
2012	16.00%	11.42%	7.14%	12.75%	10.19%	10.70%
2013	32.39%	26.31%	31.06%	10.99%	9.96%	11.12%
2014	13.69%	11.76%	18.45%	11.38%	9.85%	9.81%
2015	1.38%	-2.58%	3.07%	15.49%	14.16%	13.83%
2016	11.96%	15.22%	32.15%	13.10%	11.12%	14.41%
2017Q1	6.07%	4.03%	1.59%	6.73%	5.65%	8.14%

Cumulative Performance (Updated as of 3/31/2017)

	TOT RETURN			VOLATILITY		
	SPX	DAA	DAY	SPX	DAA	DAY
1 Year	17.17%	12.55%	24.29%	10.01%	8.70%	12.02%
3 Year	34.45%	28.72%	57.90%	13.12%	11.56%	12.65%
5 Year	86.71%	72.67%	123.17%	12.73%	11.12%	12.07%
7 Year	134.35%	122.74%	182.52%	15.34%	12.82%	14.47%
10 Year	106.27%	86.29%	70.64%	20.84%	18.81%	27.26%

Conclusion

Misinterpreting the dividend discount model based on its underlying assumptions can lead to disincentives for investors when deciding whether to purchase dividend paying stocks during periods when inflation and interest rates are both rising. By selecting companies that continually grow their dividend, the effects of the DDM are negated. Under three macroeconomic scenario matrixes based on Inflation, GDP growth and the Fed's reaction, Nasdaq's flagship dividend index, DAA, showed positive performance relative to the U.S. large cap index, SPX.

Rising dividend strategies cope well with mid to late economic cycle environment: rising inflation, strong growth and a hawkish Fed. Based on current market observations, we believe this is the economic environment we will be in for the coming years. The PowerShares High Yield Equity Dividend Achievers Portfolio (ticker PEY) tracks the NASDAQ US Dividend Achievers 50 Index (DAY) allowing access to the top 50 dividend yielding and fairly valued stocks in the dividend growers universe. While in the short term we was face some headwinds as policy and economic conditions continue to normalize, over the long term we should see the portfolio continue with its strong performance and reduced volatility against large cap equities.

Appendix: US Economy Indicators and Scenarios