Factor Investing's Roller Coaster Ride

By **Corey Hoffstein**, *co-founder and chief investment strategist of Boston-based Newfound Research.* **FEBRUARY 18, 2016**

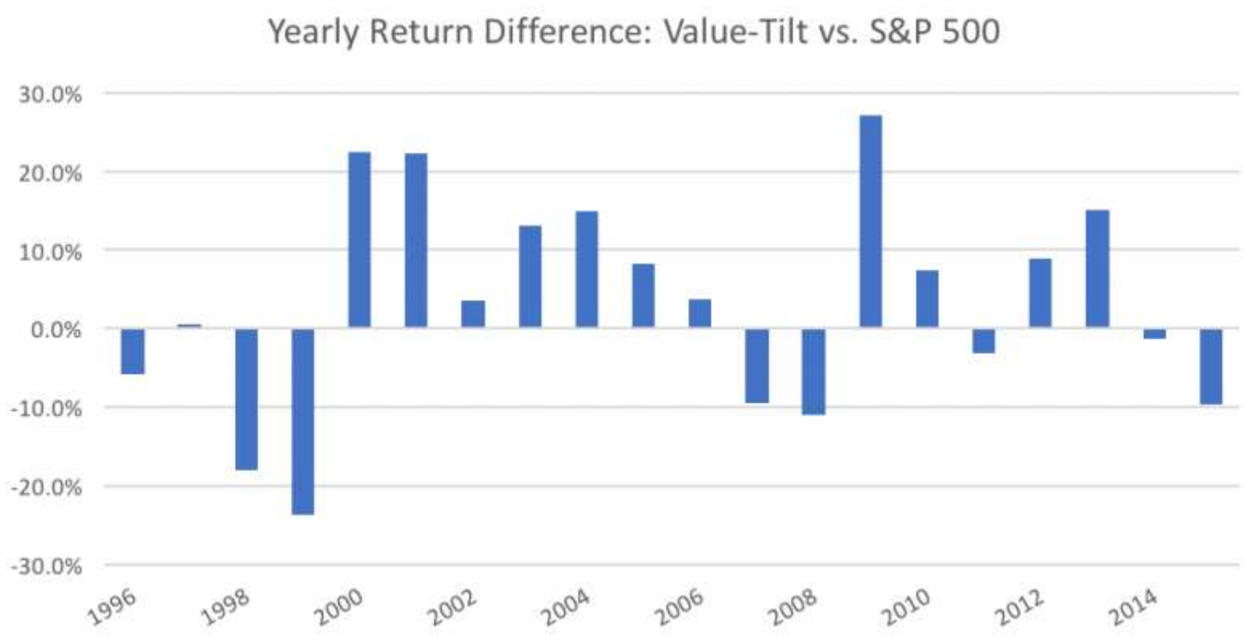
TICKER	FUND NAME
RPV	Guggenheim S&P 500 Pure Value
RSP	Guggenheim S&P 500 Equal Weight
USMV	iShares MSCI USA Minimum Volatility
MTUM	iShares MSCI USA Momentum Factor
NOBL	ProShares S&P 500 Dividend Aristocrats
SCIU	Global X Scientific Beta US
QUAL	iShares MSCI USA Quality Factor

In recent years, factor investing has come into vogue as a better mousetrap than traditional stock picking. Proponents of factor investing argue that instead of focusing on picking individual securities, investing in an index weighted toward a specific factor can more consistently harvest the associated premium.

Numerous studies on empirical asset pricing have shown that there are many characteristics that can deliver superior risk-adjusted returns, including value, size, momentum, quality, low volatility and high yield. In their five-factor model, Eugene Fama and Kenneth French identify four nonmarket factors: value, size, investment and profitability.

Long-Only Tilts

For long-only investors, factors come in the format of *tilts*. For example, a long-only value-factor portfolio will hold exposure to *cheap* securities, or a long-only size- factor portfolio will hold exposure to small companies.
While each of the most popular factors differs in definition and the theories for why it might exist, they all share a similar, promising allure: excess risk-adjusted returns. But these excess risk-adjusted returns are not constant. Consider a value-tilt portfolio over the last 20 years. It has, on an annualized basis, outperformed the S&P 500 by 2.3% a year. **Investors, however, do not experience “average**,” and the yearly ride value took investors on was quite a roller coaster.



Long-Term Premiums & Volatility

It is important to point out that for the long-term premiums to exist in these factors, they must be volatile over time. The excess return generated by one investor is at the detriment of another.
If the returns were not time-varying, they would be viewed as “free.” In that case, there would be significant money inflow into the style, driving up prices and valuations and driving down forward expected returns until the premium converged to zero.

Drawdown Length or when do weak hands fold?

Quite simply, volatility in the premium itself causes weak hands to fold, passing the premium to the strong hands that remain.

This volatility, however, means that factors can go through significant and prolonged relative drawdowns:

	Annualized Premium	Relative Max Drawdown	Max Drawdown Length
Value	2.31%	-33.85%	6 years
Size	0.92%	-31.90%	8 years
Momentum	3.69%	-13.19%	8 years
Minimum Volatility	0.63%	-21.86%	13 years
Dividend Growth	2.45%	-29.52%	6 years

In defence of the minimum volatility tilt, there is no expectation for it to outperform the market on a total return basis. Rather, it is expected to outperform on a risk-adjusted basis.
However, since most individual investors exhibit severe aversion to the use of leverage, I believe it is worth the comparison on a total return basis.

Weak Hands Fold Easily or how long can you maintain your strategic allocation?

So as easy as it is to say a factor tilt will be a strategic allocation, the variation of the premiums that lead to significant, gut-wrenching relative drawdowns can make it hard to actually maintain the strategic allocation.

Worse, factors can actually magnify absolute drawdowns as well. In effect, we're taking the market and layering on top another return source. While the expectation of that return source is additive, so is the volatility.

Let's consider the value tilt again. While the annualized excess return was estimated to be approximately 2.31%, the *volatility* of that premium over the past 20 years was 13.3%. So by taking a value tilt, we're adding an extra 2.3% to our expected return, but also bringing in a new source of volatility.

Volatility Can Makes Losses Worse

Sometimes that volatility may diversify against market returns—but other times it may compound to make them worse. For example, while the S&P 500 was down -36.8% in 2008, the value tilted portfolio was down -47.8%.

So, over the 20-year period, a value tilt would have added 2.31% *per year* to your returns. To put that in dollar terms, $100,000 invested in 1995 would have been worth an extra $248,821 at the end of 2016 if invested in a value-tilt portfolio instead of the S&P 500.

Along the way, however, you would have gone through a six-year period of trailing the market by up to -33.85% and seen nearly half your wealth wiped out in 2008. Needless to say, it would have been hard not to "fold" in those scenarios.

Factor Diversification Works

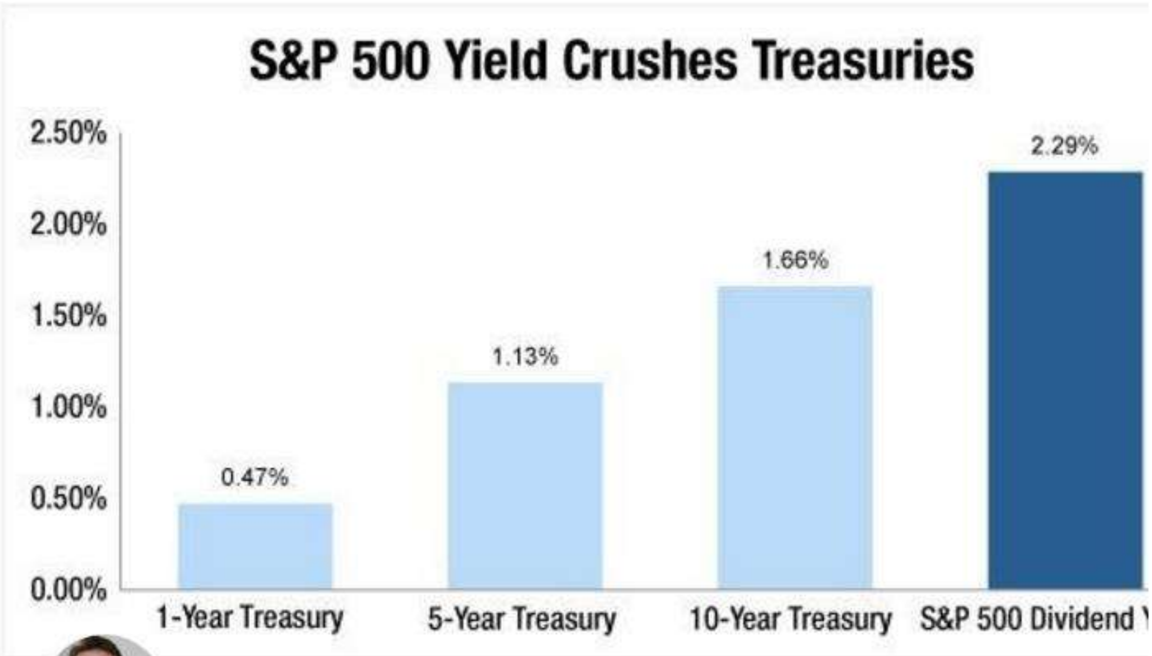
Here's the good news: diversification still works. An equal-weight portfolio of all five factor tilts, rebalanced annually, would have generated an annualized premium of 2.34% a year with a maximum relative drawdown of only -16.05% (though the drawdown length was still seven years; the late 1990s were a "funny" time).

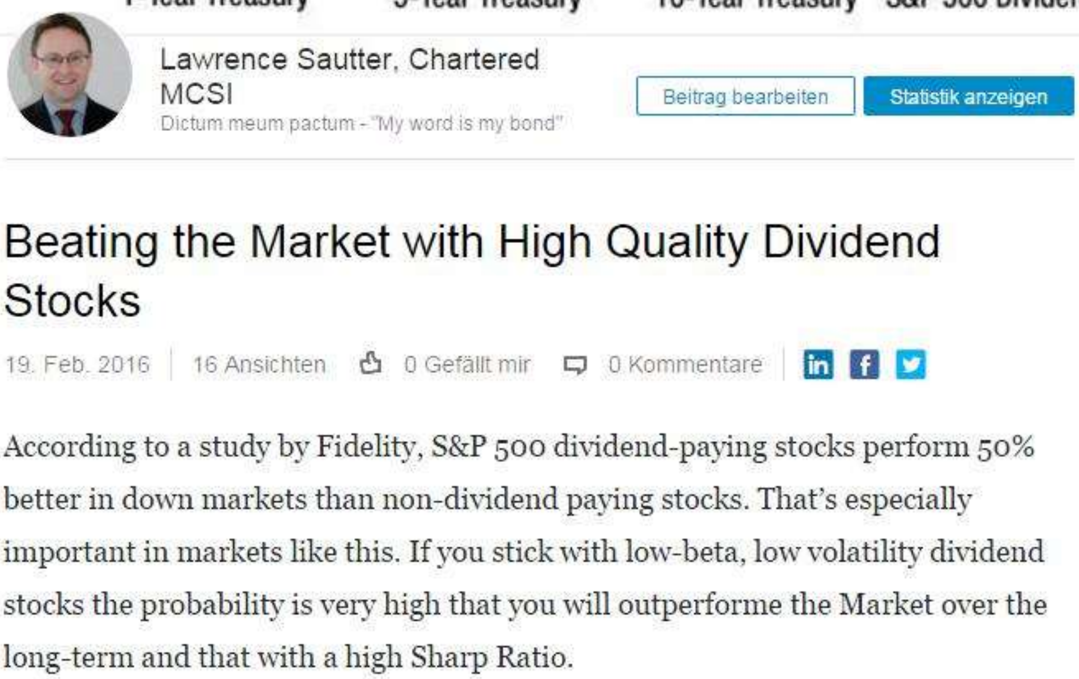
For investors looking to build a diversified portfolio, all the component pieces are available—value: the Guggenheim S&P 500 Pure Value (RPV | A-63); size: the Guggenheim S&P 500 Equal Weight (RSP | A-78); momentum: the iShares MSCI USA Momentum Factor (MTUM | A-71); dividend growth: the ProShares S&P 500 Dividend Aristocrats (NOBL | A-71); minimum volatility: the iShares MSCI USA Minimum Volatility (USMV | A-76); and even quality: the iShares MSCI USA Quality Factor (QUAL | A-84). For those looking to buy a more turnkey solution, there is the new multifactor fund, the Global X Scientific Beta US (SCIU).

The important takeaway here is that while factor investing can help an investor outperform over the long run, an individual factor can underperform significantly for a prolonged period of time, testing the mettle of any investor.

However, to reap their benefits, we have to consider these exposures as long-term allocations, not trades we expect to benefit from in the short run.

Dividend Growth





Lawrence Sautter, Chartered MCSI

Dictum meum pactum - "My word is my bond"

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Beating the Market with High Quality Dividend Stocks

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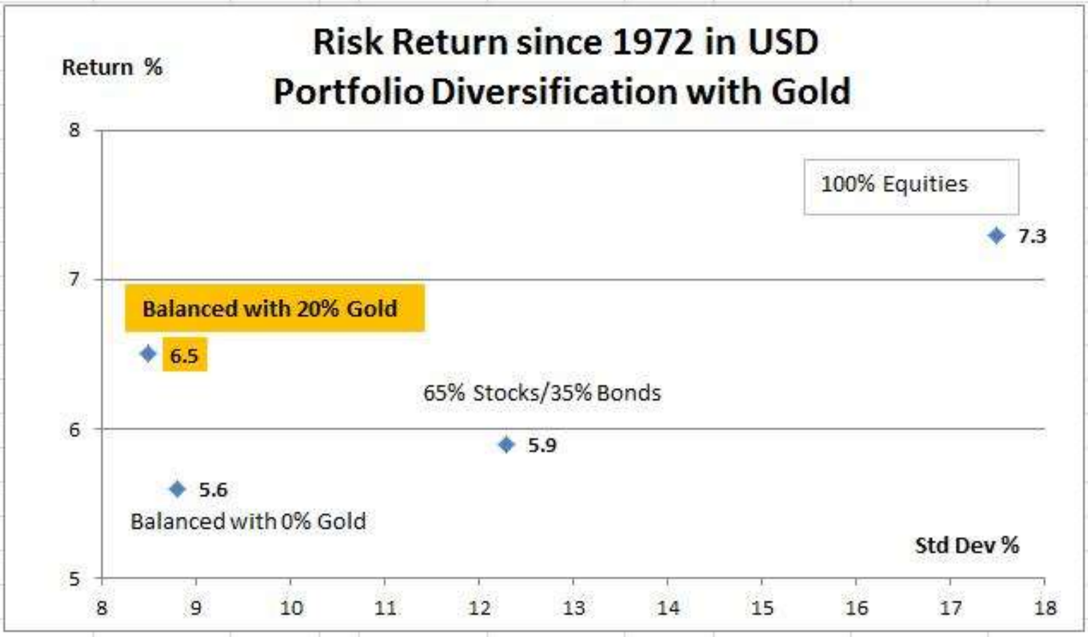
According to a study by Fidelity, S&P 500 dividend-paying stocks perform 50% better in down markets than non-dividend paying stocks. That's especially important in markets like this. If you stick with low-beta, low volatility dividend stocks the probability is very high that you will outperforme the Market over the long-term and that with a high Sharp Ratio.

Factor diversification works, but long term diversification with Gold works even better

Balanced	with Gold	
Perf. Since 1972		
in %		
23.7	Best Year	
-11.6	Worst Year	
Years		
2	longest drawdown	
AVG Return	Std. Dev.	
6.50%	8.50%	
Lost Money	20%	of time
Made AVG	48%	of time

Balanced	without Gold	
Perf. Since 1972		
in %		
21.9	Best Year	
-18.2	Worst Year	
Years		
10	longest drawdown	
AVG Return	Std. Dev.	
5.60%	8.80%	
Lost Money	30%	of time
Made AVG	43%	of time

Portfolio Allocation	
in %	**Equities**
10	Large Cap Value
10	Large Cap Blend
5	Mid Cap Blend
5	Total Intl.
5	Emerging Mkts
	Bonds
15	Long Term Treasury
15	10 year Treasury
5	Short Term Treasury
20	Gold
10	REIT
100	



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