

Factor Timing

From Monday's WSJ:

Value's Rebound Is Unlikely To Last

By James Mackintosh

This week has seen a truly shocking set of reversals in the stock market. On the surface it's been pretty calm, with the S&P 500 moving less than 1% each day. But underneath the churn has been extraordinary, with the biggest rotations out of high-momentum stocks and into cheap value stocks since the 2008 bank bailouts.

I've been waiting a long time for a value resurgence. Unfortunately, I don't think this is it.

To see why, we have to tell a story both about why a strategy of buying cheap stocks has been doing so badly for so long, and about why it turned around this week.

Sadly, the short-term story isn't a reversal of the long-term story, and so isn't likely to persist.

The short-term story is pretty simple: threats to the economy receded, and investors were willing to take risks again.

[Trade talks with China are back on](#), a no-deal Brexit is less likely, hopes are rising for German fiscal stimulus, and [John Bolton's exit](#) means the U.S. is less likely to start a war.

The future looks less dark than it did, so investors sold the defensive positions they'd been buying for ages, and bought the stocks that will benefit if a better economic outlook lifts everything.

Bond yields naturally leapt, with the 10-year U.S. Treasury yield rising by the most in five days since the surge in business optimism that followed Donald Trump's 2016 election.

Momentum investors who buy what's going up hold lots of big safe companies and stocks that look like bonds, and these suffered. Value investors hold lots of banks and cyclical stocks sensitive to the economy, and these benefited.

That this wasn't just about value was shown by smaller company stocks: the Russell 2000 had its best two-day performance compared with the S&P 500 since November 2016.

This week's reverse was so powerful because hedge funds and other leveraged investors were almost unanimous in being defensive, and all rushed at once to cover short positions in value stocks and dump long positions in safer stocks.

As Evercore ISI's macro research analyst Dennis DeBusschere says: "People got overextended on their bearishness on the economy relative to reality. That's reversing because they're realizing that the economy, at least in the U.S., just isn't as bad as feared."

Value did well, but it was a side effect of a broader market move.

It wasn't obviously the end of the trend of cheap stocks being beaten by growth stocks such as the FANGs, [Facebook](#), Amazon, Netflix and Google (now Alphabet), that's lasted for more than a decade—the longest period of value underperformance since the 1930s.

True, there was a significant rotation from growth to value, but there were bigger shifts last year in both November and July that petered out.

There are two leading explanations for value's poor performance for the past decade.

The first is that unending cheap money fueled spending sprees by disruptive tech stocks, allowing them to run at a loss and so steal business from traditional companies that try to make profits.

Leading examples are Tesla, Uber and WeWork, and higher bond yields offer some hope that this might reverse.

I prefer a second, linked, explanation, that there's a [wave of technological change under way](#) and the market has divided between the disrupters, who can afford to take advantage of it, and the disrupted, who can't.

New research by Baruch Lev of New York University's Stern School of Business and Anup Srivastava of Calgary's Haskayne School of Business found that [since 2007 value companies had the weakest profitability since 1970](#), while what they call "glamour" stocks had their best profitability.

With little internally generated cash, low valuations that make it hard to raise new capital, and banks tightening up lending after the crisis, value stocks couldn't finance the research required to keep up with the disruption to their businesses. Losers kept losing, and winners—mostly—kept winning.

My hope earlier in the summer was that the big gap in valuation between growth and value meant much of this disruption was now priced in, although Messrs. Lev and Srivastava conclude that this isn't true for the median stock (I used standard capitalization-weighted gauges).

I still cling to the hope that value stocks are too cheap and investors are paying too much for growth, but this week's value rebound wasn't because others came around to my view.

It's welcome good news for value investors for now, but it's unlikely to last.

Bespoke on both of these "reversals":

Small Cap Surge

Thu, Sep 12, 2019

Value Bounce Overdue

Cheap 'value' stocks have underperformed 'growth' stocks by a lot, for a long time.

Annualized extra 10-year return from U.S. 'value' stocks over 'growth' stocks

16 percentage points a year

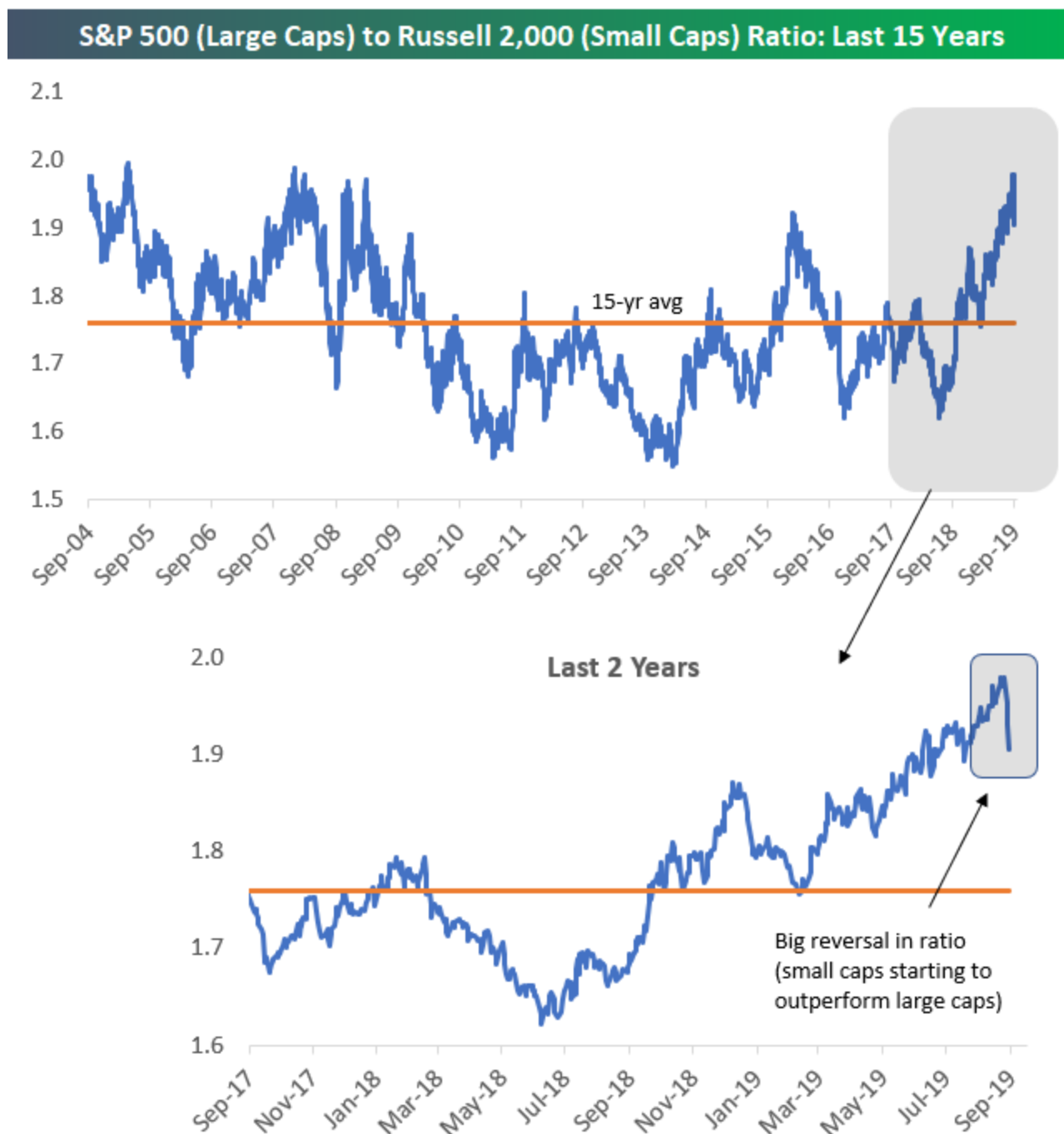


Source: Prof. Kenneth French

Small caps have been serial underperformers versus the large-cap S&P 500 over the last 12+ months, but they're having their day in the sun this week. Not only has the small-cap Russell 2,000 risen more than 1% for three consecutive trading days to start the week, but the index has also outperformed the S&P 500 by more than one percentage point on each of the last three days.

If this is the start of a longer-term small cap resurgence, there is certainly a lot of runway left. Below is a chart of the ratio between the S&P 500 and the Russell 2,000 over the last 15 years. When the line is rising, the S&P is outperforming the Russell. When the line is falling, the Russell is outperforming the S&P.

As you can see in the chart, the S&P has been outperforming the Russell for the last year, and the ratio got extended to the very top of its 15-year range at the start of September. Since peaking earlier this month, however, the ratio has fallen dramatically as small caps have started to outperform. Even after the recent small-cap outperformance, the ratio remains well above its long-term average.

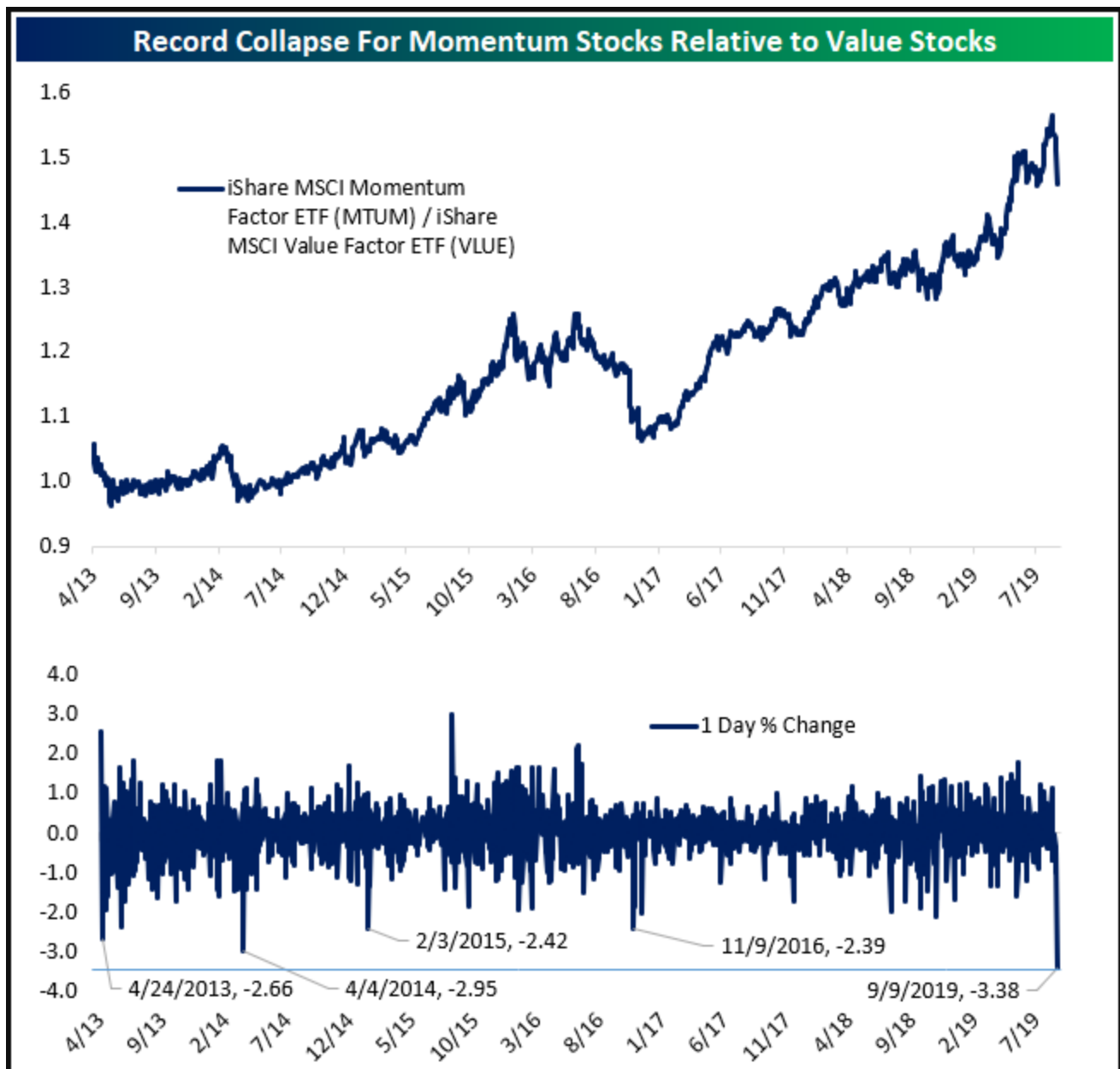


Momentum Massacre

Tue, Sep 10, 2019

Yesterday saw a nearly unprecedented collapse for stocks with high price momentum relative to stocks with value characteristics. These two baskets of stocks are most easily tracked using the iShares Momentum (MTUM) and Value (VLUE) factor ETFs.

Momentum stocks are those that have been going up; momentum refers to the upward trajectory of price. Value stocks are generally low multiple, and often have the opposite price attributes of momentum stocks. As shown in the chart below, yesterday was an absolutely catastrophic day for Momentum (MTUM) relative to Value (VLUE). Part of this was a function of rates, with recent upticks in short and long term interest rates driving utilities and other defensive stocks with strong trailing momentum lower, while banks rallied. But it was broader than that too: software got smashed while oil & gas stocks surged, automakers ripped while stable consumer staples names took a hit, and the market generally reversed all of the trends it has been operating on



so far this year in a massive stop-out of successful (up to now) trading strategies.

So is it possible to time Factors? This is a question we have previously addressed, although OMFL has piqued our interest. From Morningstar:

The Jury Is Still Out on Factor Timing

Alex Bryan, CFA 02 Jan 2019

It is hard to successfully time any investment. Adjusting a portfolio based on expectations about the future can easily backfire because the future is hard to predict. Yet there is an emerging body of research that suggests it is possible to successfully time exposure to factors like value, momentum, small size, quality, and low volatility. While each of these factors has a good long-term record, they all go through cycles of underperformance. If timing really works, it could help mitigate this cyclical, which is one of the biggest drawbacks to factor investing.

A healthy dose of skepticism is in order. Much of the research done thus far has come from practitioners, rather than academia, who work for asset managers with a vested interest in bringing new products to market. As with most financial research, data mining is also a risk because there are many variables researchers could have tested to find a predictive relationship that worked in sample but may not work out of sample. Even if there is a return benefit from factor-timing, implementing it reduces diversification relative to a static multifactor portfolio, which may outweigh the benefit. And it's important to bear in mind that even if a timing signal works on average, it won't always get the calls right. There is no pain-free way to beat the market. That said, factor-timing warrants serious review.

Factor-Timing Signals

A recent paper from BlackRock suggests that there are four types of factor-timing signals that work: valuation, momentum, economic regime indicators, and dispersion.[1] The authors found that each of the four types of signals work well on their own and even better together. BlackRock does not currently have any factor-timing exchange-traded funds on the market, though it did launch a factor-timing model in September 2016 based on these insights.

The few shops that do offer factor-timing ETFs rely on indicators that broadly fit into one of these four categories. For instance, **Oppenheimer (now Invesco) Russell 1000 Dynamic Multifactor ETF** (OMFL) relies on a blend of traditional economic and market sentiment indicators to gauge the economic regime and time its factor exposures accordingly. **Global X Adaptive U.S. Factor ETF** (AUSF) uses a contrarian performance signal, which is a type of value signal because assets that underperform tend to become cheaper and may be poised to do better in the future. **PIMCO RAFI Dynamic Multi-Factor U.S. Equity ETF** (MFUS) relies on momentum and contrarian (value) performance signals to time its exposures.

Let's take a closer look at each type of timing signal.

Economic Regime

The idea that different factors tend to do better at different points in the business cycle is intuitive. BlackRock and Oppenheimer have both found that economic regime indicators were the strongest standalone predictors of

factor performance in their back-tests. However, they use different metrics to define these periods and come to slightly different conclusions about when to overweight certain factors.

There are four stages in the business cycle: recovery, expansion, slowdown, and contraction. These are defined by whether the change in economic activity is positive or negative (Oppenheimer uses "above trend" or "below trend" instead) and whether it is accelerating or decelerating. Exhibit 1 summarizes the firms' findings about when each factor tends to outperform.

Exhibit 1 Factor Outperformance During the Economic Cycle

Size Segments	Recovery		Expansion		Slowdown		Contraction	
	BlackRock	Oppenheimer	BlackRock	Oppenheimer	BlackRock	Oppenheimer	BlackRock	Oppenheimer
Value	◆	◆		◆			◆	
Small Size	◆	◆		◆			◆	
Momentum			◆	◆				◆
Quality					◆	◆	◆	◆
Low Vol					◆	◆	◆	◆

Source: BlackRock and Oppenheimer

Both firms found that the small-size and value factors tended to do the best during recoveries. Smaller stocks tend to be more cyclical than their larger counterparts, as their higher market betas attest. This is likely because fewer of them enjoy durable competitive advantages to insulate their profits from fluctuations in the business cycle.

The relationship between value and the business cycle is less intuitive--and in my view, more suspect. Broad value indexes, like the Russell 1000 Value Index, have a similar market beta to the broad market, which suggests they are not more cyclical. However, deeper-value portfolios tend to have higher betas. A possible explanation for value stocks' observed cyclical, which Andrew Ang of BlackRock posited, is that they have higher fixed costs and less flexibility than growth stocks, so their cash flows may be more sensitive to the business cycle. These stocks may also be more beaten-down than most during tough times and poised to outperform as conditions start to improve.

During expansions, as clearly defined trends emerge, momentum has been the best-performing factor (though Oppenheimer also found that small size and value continue to do well during those periods). Unsurprisingly, low volatility and quality have tended to do the best during slowdowns.

The biggest difference in the findings between the two firms is about which factors have tended to do the best during contractions. Oppenheimer found that quality and low volatility continued to outperform as expected, as well as momentum, which benefits from clear trends in the market. In contrast, BlackRock found that all factors modestly outperform during contractions, but momentum less than the others, which was a bit surprising. However, it's possible that market trends are less clear in contraction periods based on BlackRock's definition because it looks only at traditional economic data, while Oppenheimer pairs economic data with market sentiment data to get a better read of the business cycle.

It is also a little surprising that BlackRock found that value and size tended to outperform in both contraction and recovery periods, as these two regimes represent opposite sides of business cycle trends.

While the relationship between the business cycle and factor performance is interesting, there are good reasons to be skeptical. In hindsight, it's easy to identify each stage of the business cycles past, but it's hard to know where we stand in real time. And although the signals that BlackRock and Oppenheimer tested avoid look-ahead bias, they could have been cherry-picked to look good in sample. There are thousands of data points that could be reasonable indicators of the economic cycle. By chance alone, some of those data points will likely appear to be predictive of factor performance.

In their paper, "The Promises and Pitfalls of Factor Timing," a few researchers from State Street Global Advisors conducted an exercise to illustrate the dangers of data mining.[2] They looked at which signals were most predictive of factor performance from 1970 through 1990. They found that most of the signals with predictive power in sample were not predictive over the next 20 years out of sample.

It's also important to note that economic cycles are slow-moving, so there aren't many full cycles to look at in the back-tests to infer a robust relationship between the stage of the cycle and factor performance. And every cycle is different.

The world is a different place than it used to be. Business has become increasingly global. So, it probably isn't appropriate to look only at U.S. economic data. Even if there was a strong relationship between the U.S. business cycle in the past and factor performance, it may not be as strong now. That doesn't mean that business cycle factor-timing will fail, just that more evidence is needed to build confidence in its efficacy.

Valuations

It is well-established that valuations can predict long-term asset returns (lower valuations are associated with higher future returns). This is true of asset classes, individual securities, and portfolios of securities. But that does not necessarily mean that valuations are an effective timing signal. For example, the U.S. stock market has been trading well above its historical average cyclically adjusted price/earnings ratio, or CAPE (based on data from 1880), since 2010. However, anyone who acted on that information--trimming or liquidating their U.S. stock allocation--probably regretted it, as the market delivered strong performance from January 2010 through August 2018 despite its seemingly high valuation.

If using valuations to time the market is hard, using them to time factors might be even harder, as Cliff Asness and his colleagues at AQR argue in their paper, "Contrarian Factor Timing is Deceptively Difficult." [3] That's because turnover in these portfolios reduces the predictive power of their valuations, as many of the current holdings may not stay in the portfolio long. Portfolio-level valuations are particularly unreliable for high-turnover strategies like momentum.

The relationship between valuations and factor performance is probably modest at best. ...

Other approaches to valuation-timing can lead to different results. BlackRock found that valuation-timing worked by tilting toward factors that were trading the cheapest relative to their own history over the past three years. So, if quality was trading at a significantly lower valuation than in the recent past and value was only a little cheaper than normal, this timing strategy would favor quality. But the fact that the efficacy of valuation-timing depends on how it is defined suggests that it is not particularly robust. Ideally, we'd like to see similar results with different versions of the same idea because that suggests the metric presented wasn't cherry-picked, providing greater confidence that it may work out of sample.

In practice, the two factor-timing ETFs on the market that incorporate a valuation-timing component use contrarian performance signals rather than traditional value signals to time their factor tilts. The idea is that

investors may overreact to a stretch of poor performance, giving up on styles after they have become cheap. Nobel-Prize-winner Richard Thaler and his colleague Werner De Bondt demonstrated that long-term performance reversals among stocks in their 1985 paper, "Does the Stock Market Overreact?"[4]

A similar effect seems to hold at the portfolio level. ... It is less subject to data-mining risk than economic data and has been more extensively tested out of sample.

Momentum

While relative performance tends to revert to the mean in the long term, it tends to persist in the short term. This short-term persistence, known as momentum, is found nearly everywhere in financial markets, just like value. Given its well-documented ability to predict short-term performance, I would expect it to be one of the more-promising candidates for use as a factor-timing signal. But while BlackRock found evidence that momentum-driven factor-timing works, I did not. ...

Dispersion

The argument for using dispersion as a timing signal is that the return to each factor should be greater when there is greater separation among stocks in the starting universe on the metrics used to construct the factor portfolio. For example, if highly profitable stocks are more profitable than usual relative to stocks with weak profitability, the profitability/quality factor should do better.

BlackRock found that dispersion was the weakest standalone timing signal and that it worked better for value and quality than it did for other factors. The firm's study looked at tilting toward factors with the widest dispersion relative to their own history over the past three years, which had some predictive power. ...

The Jury Is Still Out

Given the complexity of factor-timing strategies, potential data-mining issues, limited research on this topic, and results that don't appear to be robust, more out-of-sample testing and live performance are necessary to build confidence in their efficacy. While it isn't prudent to write factor-timing off just yet, it's important to not to lose sight of one of the main goals of multifactor investing: diversification. Tilting toward certain factors at different times reduces diversification and can increase risk if the timing model gets the call wrong. There is also a risk that timing models that rely on valuations or momentum might effectively double down on those factors, potentially causing the portfolio to behave as if it had greater exposure to value or momentum stocks.

If factor-timing has any place at all in a portfolio, it will be important to keep factor tilts modest to maintain diversification. It is also probably best to diversify across multiple signals that tend to work to limit pain when they don't.

[1] Hodges, P., Hogan, K., Pederson, J., & Ang, A. 2016. "Factor Timing with Cross-Sectional and Time-Series Predictors." BlackRock. [// www.blackrock.com/institutions/en-nl/literature/whitepaper/factor-timing-global-12-16.pdf](http://www.blackrock.com/institutions/en-nl/literature/whitepaper/factor-timing-global-12-16.pdf)

[2] Bender, J., Sun, X., Thomas, R., & Zdorovtsov, V. 2017. "The Promises and Pitfalls of Factor Timing." Univ. Pennsylvania, Wharton School of Business. [//jacobslevycenter.wharton.upenn.edu/wp-content/uploads/2017/08/The-Promises-and-Pitfalls-of-Factor-Timing-1.pdf](http://jacobslevycenter.wharton.upenn.edu/wp-content/uploads/2017/08/The-Promises-and-Pitfalls-of-Factor-Timing-1.pdf)

[3] Asness, C.S., Chandra, S., Ilmanen, A., & Israel, R. 2017. "Contrarian Factor Timing is Deceptively Difficult." SSRN. [//papers.ssrn.com/sol3/papers.cfm?abstract_id=2928945](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2928945)

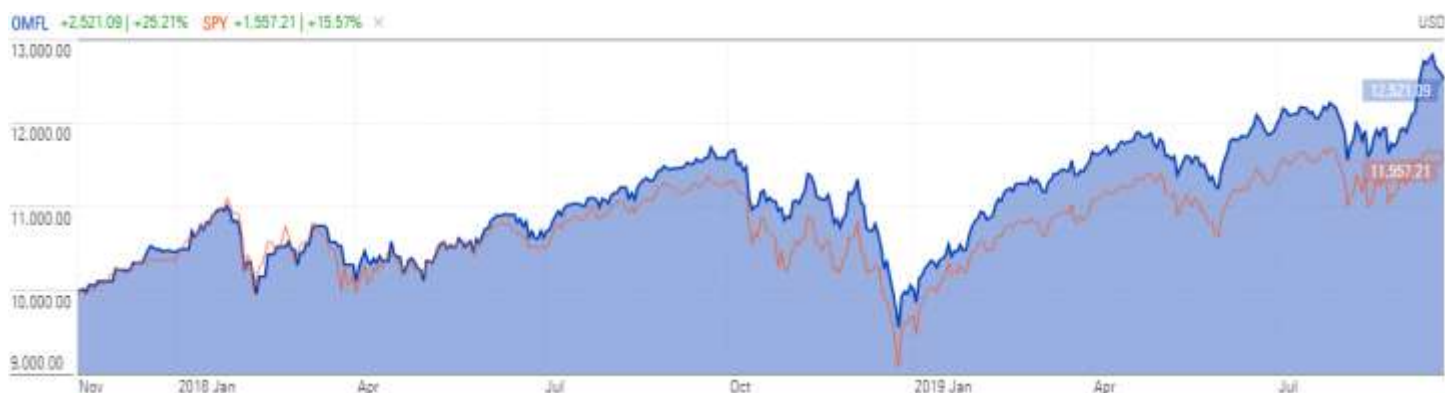
[4] De Bondt, W.F.M., & Thaler, R. 1985. "Does the Stock Market Overreact?" *J. Finance*, Vol. 40, No 3, P. 793. <https://breese.fine7110.tulane.edu/wp-content/uploads/sites/110/2015/10/Debondt-and-Thaler.pdf>

Our thoughts

The 1st of Morningstar's Growth of 10,000 charts compares these 3 ETF's with the S&P 500 (SPY) since the inception of the newest of the 3 Funds:



Now OMFL since inception compared to SPY:



Morningstar's OMLF summary:

NAV	Open Price	Bid / Ask / Spread	Volume / Avg
31.21	31.40	27.48 / 0.00 / 0.00%	16,818.0 / 73,053.6
Day Range	Year Range	SEC Yield ⓘ	12-Month Yield ⓘ
31.23 – 31.56	23.67 – 32.08	1.75%	1.56%
Premium ⓘ	Expense Ratio	Total Assets	Category
—	0.290%	1.1 Bil	US Fund Large Blend

From OMFL's website: "The Invesco Russell 1000 Dynamic Multifactor ETF (the "Fund") is based on the Russell 1000 Invesco Dynamic Multifactor Index (the "Index"). The Fund will invest at least 80% of its total assets in the securities that comprise the Index. The Index is constructed using a rules-based approach that re-

weights large-cap securities of the Russell 1000 Index according to economic cycles and market conditions, reflected by expansion, slowdown, contraction or recovery. The securities are assigned a multi-factor score from one of five investment styles: value, momentum, quality, low volatility and size. The Fund and Index are reconstituted and rebalanced based on economic indicator signal changes, as frequently as monthly."