Is The Trend Your Friend?

From Verdad's Dan Rasmussen on May 11, 2020:

Trend Following in Growth and Value

Can you time the stock market using trend indicators?

Equity markets suffered a swift and painful drawdown in Q1. What if this drawdown could have been avoided? What if you'd sold at the first sign of danger and been in cash during stocks' worst period in March?

Some of the quantitative investors we respect most have written extensively about a strategy that attempts to avoid risk by getting out of the market when volatility spikes. The strategy is called trend following. The simplest version of this idea is: go long equities when the trailing 12-month performance is positive; otherwise hold cash.

Wes Gray at Alpha Architect wrote an excellent piece on trend following in which he finds the strategy to be effective in protecting portfolios from "the most extreme loss situations." AQR's Brian Hurst, Yao Hua Ooi and Lasse Pedersen looked at a century of evidence across multiple asset classes and found similarly favorable results. "Trends are pervasive features of financial markets," they wrote.

We examined whether this strategy was relevant for small-cap value investors—and whether trend following worked differently in different types of stocks. We hypothesized that value is a bet on mean reversion and that trend following might, therefore, hurt returns in value investing. We further hypothesized, however, that if you consider growth investing in part a bet on trends and fads, trend following growth equities could potentially be an effective strategy.

We took the Fama-French data and looked at how the simple trend following rule would have performed. In Figure 1 below, we compare the returns of a buy-and-hold strategy to a trend-following strategy for both small-cap value and large-cap growth back to the beginning of the Fama-French data in 1926.

Figure 1: Buy & Hold vs. Trend Following, 1926–2020

	Buy & Hold		Trend Following		Delta	
	Small Value	Large Growth	Small Value	Large Growth	Small Value	Large Growth
CAGR	13.8%	9.6%	11.9%	9.0%	-1.9%	-0.6%
Avg Return	18.0%	11.5%	14%	10%	-3.9%	-1.5%
StDev	28.2%	18.3%	21%	13%	-7.7%	-4.9%
Sharpe	0.64	0.63	0.69	0.75	0.05	0.12

Source: Ken French Data Library

Holding cash when the trailing 12-month returns were negative reduced small value returns by 1.9% per year in exchange for a small 0.05 improvement in Sharpe ratio. But the same strategy for large growth only reduced returns by 0.6% per year for 0.12 improvement in Sharpe ratio. As hypothesized, trend following worked much better in large growth than small value.

These findings are in line with AQR's research, which concluded "[the value factor] loads negatively on [trend following], so [trend following] naturally cannot explain the value effect, and [size] has a loading close to zero."

We also compared the more recent performance of trend following. Here we used standard commercial indices rather than the academic Fama-French indices. In Figure 2 below, we show the results for the Russell 2000 Value versus the Russell 1000 Growth.

Figure 2: Buy & Hold vs. Trend Following, 1995-2020

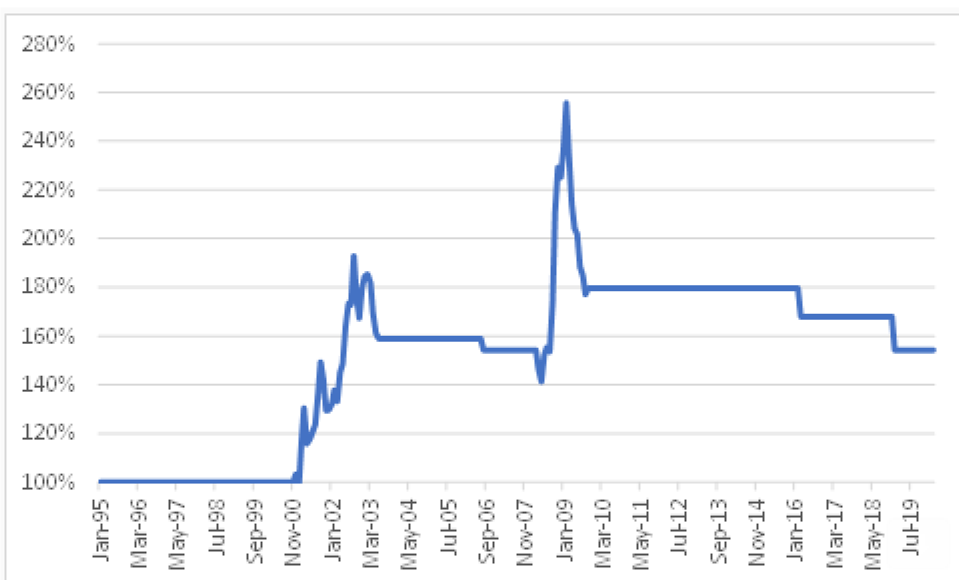
	Buy & Hold		Trend Following		Delta	
	Russell 2000® Value Index	Russell 1000® Growth Index	Russell 2000® Value Index	Russell 1000® Growth Index	Russell 2000® Value Index	Russell 1000® Growth Index
CAGR	8.2%	9.3%	6.8%	11.2%	-1.4%	1.9%
Avg Return	10.0%	10.9%	7.7%	11.0%	-1.5%	0.1%
StDev	18.1%	16.7%	13.2%	12.2%	-5.7%	-4.5%
Sharpe	0.55	0.65	0.58	0.90	0.13	0.25

Source: Russell

Interestingly, we noticed that over the last 25 years, trend following worked especially well on large growth, actually improving returns relative to buy and hold while also increasing Sharpe ratio. But in small value, the more recent period confirms the longer-term result: trend following reduces returns in small value, though with some improvement in Sharpe ratio.

To further illustrate how trend following works in large growth versus small value, we graphed the cumulative alpha of the trend-following strategy relative to the buy-and-hold strategy. Depicted in Figure 3 below is the cumulative alpha of trend following in the Russell 1000 Growth Index.

Figure 3: Trend Following vs. Index Alpha, Russell 1000 Growth

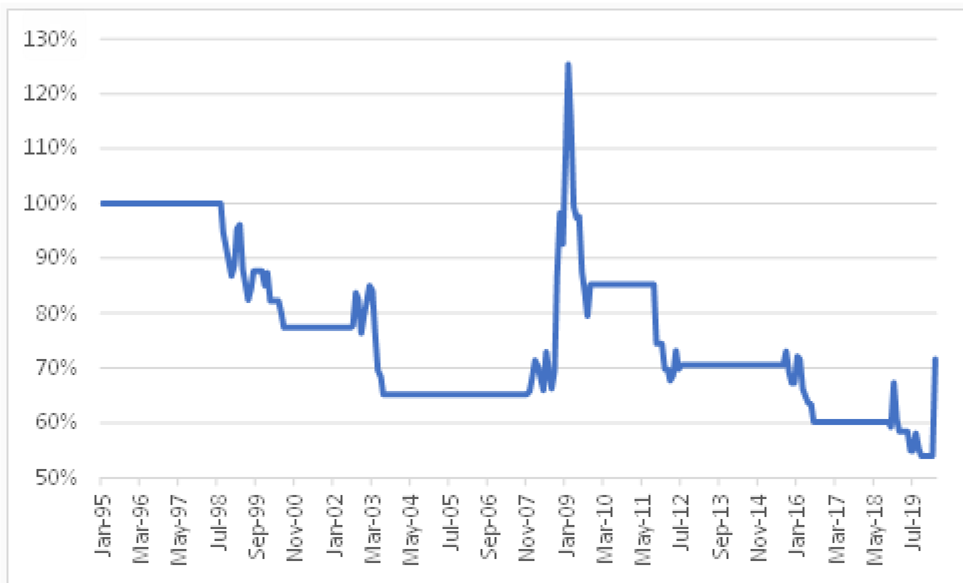


Source: Russell

As we observed, trend following dramatically outperformed the index during growth’s two big drawdowns in 2000–03 and 2007–09, but it also captured most of the upside in the good years, 1995–99 and 2010–2019.

In contrast, look at the chart in Figure 4 below for small value. We observed that small value earns such high returns coming out of high volatility periods that trend following destroys your returns in the 2000–03 period. You even come out flat from 2007 to 2012 because the rally is equal in size to the drawdown. Trend following also makes you miss the 2016 rally. So even though trend following makes you miss the worst month, e.g. March of this year, it would have you miss whatever rally comes in the next 12 months.

Figure 4: Trend Following vs. Index Alpha, Russell 2000 Value



Source: Russell

If you think about growth as a momentum bet and a market-sentiment bet, it makes sense that trend following would work on growth indices. In contrast, value is perceived as a mean-reversion bet, and the times to own the most value generally are the times it’s done the worst, as we’ve seen. Compare, for example, one-year forward returns based on one-year trailing results for the Russell 1000 Growth versus the Russell 2000 Value.

Figure 5: One-Year Forward Returns vs. Trailing Returns

LTM Return	Russell 2000 Value	Russell 1000 Growth
<-20%	29%	6%
-20%-0%	13%	-4%
0-20%	9%	12%
>20%	9%	14%

Source: Russell

Value returns appear to be inversely correlated to historic returns: the worse value’s recent performance, the higher the expected return. Growth appears to be the opposite: the better the historic return, the higher the expected future return. Value is mean reverting. Growth trends.

Our thoughts

We have previously shared our doubts about the efficacy of trend following to reduce risk for Factor investors. The evidence against this approach continues to mount.

In May's Newsletter we shared a portion of Verdad's "Tail Risk Hedging" by Kai Wu. He also analyzed "Trend Following" among the various hedges examined. It produced an annual return of 3.2% vs. 6.8% for the S&P 500 from Jan. 1995 thru Mar. 2020: "Finally, trend following was disappointing. It provided meaningful protection in only the 2000 and 2008 crises. Trend following strategies tend to focus on 12-month trends. As a result, they may get whipsawed in sharp selloffs and W-shaped recessions."

Alpha Architect, mentioned above, launched their Value Momentum Trend ETF (VMOT) at the beginning of May, 2017. It equally weights their 4 other ETFs: Domestic Value (QVAL, orange line), and Momentum (QMOM, turquoise line), and International Value (IVAL, green line), and Momentum (IMOM, purple line), selling Futures when the 12-month trend turns negative. Since inception it has loss 10% as shown below in Morningstar's chart, while an investor just holding their 4 funds would have made 5.9% as of Friday.