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# INVESTMENT PUBLICATIONS HIGHLIGHTS

## A CENTURY OF EVIDENCE ON TREND-FOLLOWING INVESTING

Brian Hurst, Yao Hua Ooi, and Lasse Heje Pedersen, *The Journal of Portfolio Management*, vol 44, no 1 (Fall 2017): 15–29

**Time-series momentum strategies have proven to be profitable in recent decades. Unrelated to economic conditions, these strategies have also helped to diversify portfolios. The authors examine time-series momentum strategies over more than 100 years, finding that trends are a defining characteristic of capital markets.**

Time-series momentum involves establishing long positions in markets with recent positive performance and short positions in markets with recent negative performance. Prior research determined that the strategy is profitable, but the research tends to be based on data since the mid-1980s. To further test the idea, the authors review a 137-year dataset.

The authors create three time-series momentum strategies based on lookback periods of one, three, and 12 months. The trading rules are simple: if excess returns were positive in the lookback period, then establish a long position and if negative, a short position. These three strategies are used in 67 different markets, covering commodity, currency, equity, and fixed income asset classes. Each position is then weighted and pooled into a composite to achieve a 10% annualized volatility target. Individual positions are rebalanced monthly and composite performance accounts for transaction costs and management fees.

The composite delivered a simulated 7.3% annualized excess return over the full period, with consistently positive returns in every decade. The strategy was also pervasive—all 67 markets and all three lookback periods enjoyed positive excess returns over the full period. Notably, the composite performed similarly across different macroeconomic environments and was independent of changes in volatility and the level of bond yields.

Composite returns were also uncorrelated with US equity and bond markets. During the ten worst drawdown periods for a 60/40 US equity/bond portfolio, the composite delivered positive returns 80% of the time. When the strategy was added to the 60/40 portfolio, excess returns, volatility, maximum drawdowns, and Sharpe ratios all improved. The strategy is not without risk, however. The composite experienced drawdowns of up to 25%, which typically coincided with sharp market reversals or no distinct trends to capture.

## **A QUANTITATIVE APPROACH TO TACTICAL ASSET ALLOCATION REVISITED 10 YEARS LATER**

Meb Faber, *The Journal of Portfolio Management*, vol 44, no 2 (Multi-Asset Special Issue 2018): 156–167

**The author revisits a popular article on simple trend following ten years after initial publication for insight into its usefulness. He argues trend-following strategies act as risk-mitigation systems, rather than drivers of outperformance, and emphasizes that investors should have a plan for investing in any environment.**

Trend following is one of the oldest investment strategies having been around since at least the early 20th century. Fundamentally, the strategy is to buy when prices are increasing and sell when prices are decreasing. In practice one of the simplest, most-often-cited forms of long-term trend following is to compare the price level of a security to its 200-day simple moving average (SMA)—a price level above the 200-day SMA is a buy signal, and a price level below is a sell signal.

In the original article revisited by the author, this system is applied, except monthly data is used in order to allow extended historical analysis and 90-day Treasury bills are used to represent cash when a security is sold. It is stressed that this strategy is not meant to outperform the market, but rather to identify a simple trading system that approximated market returns while reducing volatility.

The results of the original article lend support to the idea trend following achieves equity-like returns with bond-like volatility. Additional research conducted on the data ten years since the original article was published (which covers the global financial crisis) adds credence to this conclusion. Compared to a buy-and-hold strategy, the simple market-timing portfolio achieved slightly better returns with significantly less volatility, and a maximum drawdown of only 16.73% compared to 50.95%.

The author conducts additional tests to see if similar results can be achieved for asset owners invested in well-diversified total portfolios. Complexities considered include alternative cash management strategies, weighting schemes, portfolio tilts, and additional asset classes. The results support the idea that adding a trend-following system to manage risk is beneficial to both individual and institutional investors alike in any investing environment, but practical considerations such as management fees, taxes, commissions, and slippage must also be considered.

## **WHERE HAS THE TREND GONE? AN UPDATE ON MOMENTUM RETURNS IN THE US STOCK MARKET**

Steven Dolvin and Bryan Foltice, *The Journal of Wealth Management*, vol 20, no 2 (Fall 2017): 29–40

**Academic research has found that investors can earn an excess return by buying a basket of stocks with strong recent performance. The authors provide evidence that although momentum strategies still appear to beat the market, their efficacy has faded over the last decade.**

Even the strongest backers of the efficient market hypothesis have acknowledged that momentum investing has generated returns that beat the overall market. Prior research indicates that buying top-decile equity performers over a specified time

period and shorting bottom-decile equity performers earns an excess return of approximately 1% per month. This phenomenon has been found in various equity markets, as well as in currency and commodity markets.

The authors examine whether the momentum premium has faded through time. They examined the period from 1986 to 2015, as well as three sub-periods. Over the entire period, the data appear to confirm that the momentum premium remains intact, generating 1.25% in monthly excess returns. However, an examination of more recent data in isolation is much less conclusive.

From 2007 to 2015, the basket of stocks with average performance outperformed top-decile stocks in subsequent periods. In fact, top-decile stocks exhibited a slightly negative excess return over subsequent periods. But, because bottom-decile stocks continued to exhibit very poor subsequent returns, traditional momentum strategies were still profitable, albeit less so than in prior years.

What might explain the fact that the hottest stocks didn't perform as well as they historically have? The authors point to two simple explanations: first, investors have bid up the price of the best performers by increasingly employing momentum strategies, making it less profitable; second, the low levels of volatility markets have enjoyed in recent years may be limiting the difference in performance between top- and bottom-decile performers.

#### **SIZE MATTERS: TAIL RISK, MOMENTUM, AND TREND FOLLOWING IN INTERNATIONAL EQUITY PORTFOLIOS**

Andrew Clare, James Seaton, Peter N. Smith, and Stephen Thomas, *The Journal of Investing*, vol 26, no 3 (Fall 2017): 53–64

**The authors explore the relationship between size and momentum in both developed and emerging markets. They determine that size matters in generating superior returns and that not all momentum strategies enhance those returns equally.**

The size effect is a broadly held principle that suggests small-cap stocks typically outperform larger-cap stocks given that they are riskier. The authors find that the size effect prevails in developed markets, with small-cap stocks outperforming both mid- and large-cap stocks. However, in emerging markets, mid-cap stocks performed the best, challenging the theory behind the size effect.

The authors examine whether overlaying momentum strategies can further enhance the size effect returns. They apply both relative and absolute momentum strategies to different market cap–investment strategies. Relative momentum is defined as systematically buying the “winners” and selling the “losers” of a given group of assets based on their relative return rankings; time-series momentum relies on technical indicators, such as moving average crossovers, to signal whether to initiate a long or short position. Both strategies produce greater returns than an equally weighted portfolio, but trend following outperforms comparatively, producing higher risk-adjusted returns and significantly lower maximum drawdowns across all markets and size segments.

The authors then combine the strategies, forming a volatility-weighted portfolio of assets ranked by their prior 12-month return and subsequently using a ten-month moving average rule to determine when long or short positions are initiated. A price above (below) the moving average would signal a positive (negative) trend, requiring a long (short) position in the given asset. Although the combined approach resulted in greater performance compared to each strategy independently, greater volatility and higher maximum drawdowns overshadow the returns. They conclude that trend following is the dominant momentum strategy across size segments and markets.

To isolate the significance of the excess returns, they expose the trend following and combined strategy returns to known risk factors. By applying both macro factors (various benchmark returns in excess of US T-bills), as well as the Fama–French three-factor model (based on market, size, and value), they discover that significant alpha still remains even after removing these known factors, thus demonstrating that momentum strategies can be a powerful tool to manage portfolio tail risk/drawdowns.

This paper concludes with explaining the key feature behind the success of trend following: the rules-based approach. In a world that is often “noisy” with information, rules foster discipline and help investors avoid behavioral biases. ■

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