The JAG Research Series

The Case for Momentum Investing: Building Better Portfolios

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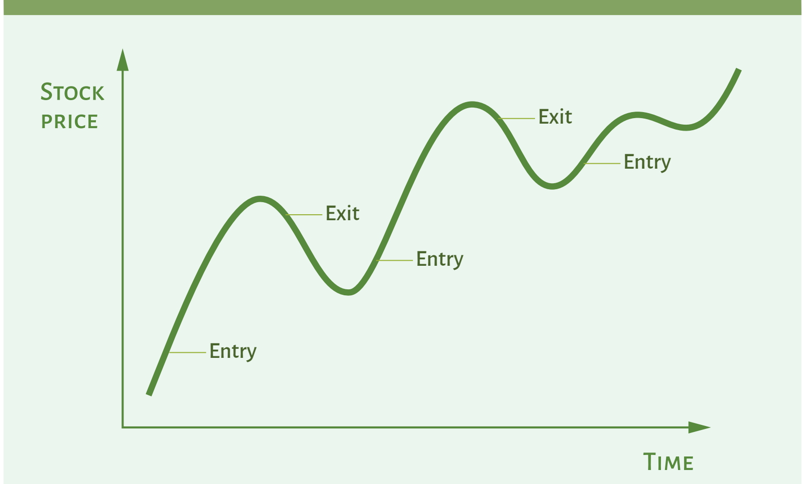
What Sir Isaac Newton Didn't Realize About Investing

Investment management was probably the last thing Sir Isaac Newton had in mind when he postulated that "an object in motion tends to stay in motion." But his basic principle of classical physics offers some insightful lessons when it comes to successfully navigating today's capital markets.

In an investment context, momentum describes the tendency of "winners" (i.e. stocks that are appreciating in price relative to their peers) to continue to appreciate further. For this premise to hold true, the offsetting consequence must also be a potential outcome: stocks that have lagged will continue to languish. Again thinking back to Newton's First Law of Motion, "Objects at rest tend to remain at rest."

When properly constructed, momentum strategies attempt to purchase securities during periods of outperformance, and sell when the security begins to exhibit poor performance. Unlike value strategies, momentum disciplines will rarely (if ever) purchase securities at the "bottom" of a long-term period of declines.

Momentum Investing: The JAG Research Challenge



Similarly, by their very nature, momentum strategies rarely sell securities exactly at the "top" of a long-term period of price increases. Importantly however, well-managed momentum portfolios can and do generate alpha by establishing and maintaining positions in outperforming securities for as long as their discipline allows.

As a growth-style investment manager, JAG Capital Management believes that its research on momentum style investing and its extremely disciplined portfolio management approach are the keys to successfully identifying stocks that offer long-term capital appreciation potential. Despite all the controversy, misinformation, and misperceptions, the historical track record of momentum outperformance is widely supported by many academics. Simply stated, the benefits of this approach should not be ignored.

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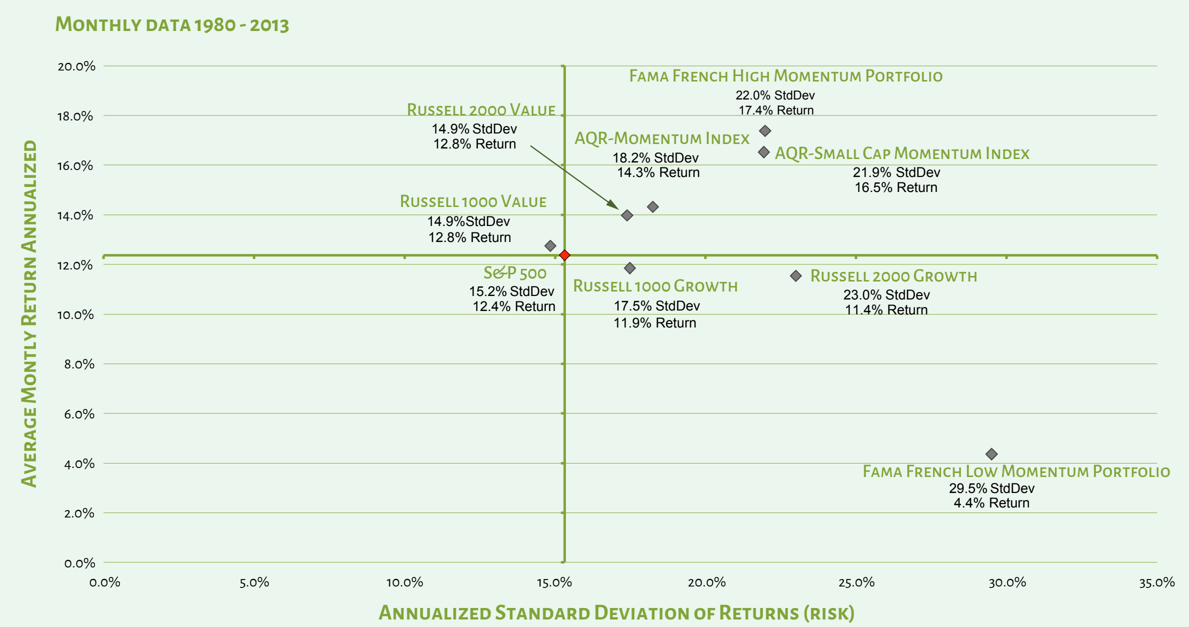
The Research Supports Momentum (Not Just In Theory)

Many investors remain unaware of the significant contribution that momentum investing can make to a well-diversified investment portfolio. Often times, momentum investing is perceived as an unproven or risky discipline. There is also a mistaken belief that since momentum strategies tend to exhibit higher turnover they are, by definition, much less tax-efficient.

In point of fact, none of these common objections are well-founded in either academic literature or actual market experience. The academic research supporting momentum investing is actually quite robust. Momentum has been observed in almost all types of securities markets, across dozens of countries, and can be documented in history spanning back more than two centuries. The considerable body of research that exists on momentum also provides strong evidence that it can work effectively with large or small cap stocks, as a stand-alone strategy, or as a potent diversifier when complemented by a value-oriented strategy.

Momentum has Provided Attractive Premiums vs. Value Stocks



Source: Fama /French Database, Frank Russell, AQR, JAG Capital Management

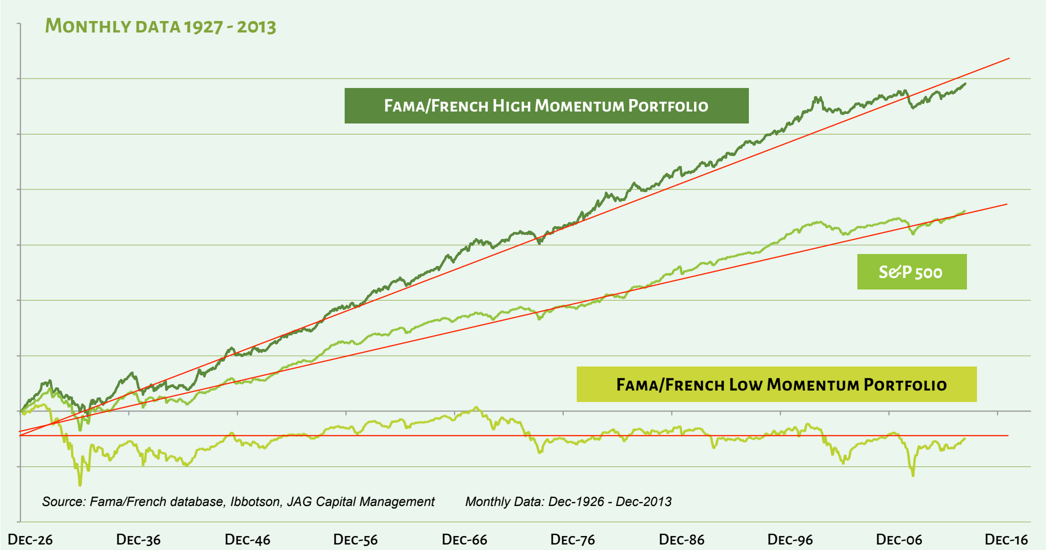
To fully appreciate the long-term potential of momentum investing, we examined market data going back to 1927 produced by the Nobel Laureate Eugene Fama and Kenneth French, both of whom are considered leaders and pioneers in the study of portfolio management. As the chart below illustrates, stocks exhibiting high short-term momentum consistently outperformed the general stock market in the following month.

High Momentum Stocks Outperform the Following Month

Source: Fama/French database, JAG Capital Management

Fama and French's data also shows that over the 87 calendar years ending December 2013, a portfolio of high momentum stocks, rebalanced monthly, returned 16.9% annualized versus an annualized loss of -1.3% for low momentum stocks.

High Momentum Stocks Significantly Outperformed Over Time



Equally important, the standard deviation of the high momentum stocks was appreciably lower than the low momentum stocks (22.6% vs. 34.0%). When compared to the Standard and Poor's 500 Index, the high momentum stocks experienced a 60% higher annualized return (16.9% vs. 10.1%) with only a 19% higher standard deviation (22.6% vs. 19.0%), In our view, this is a highly favorable risk-reward trade-off.

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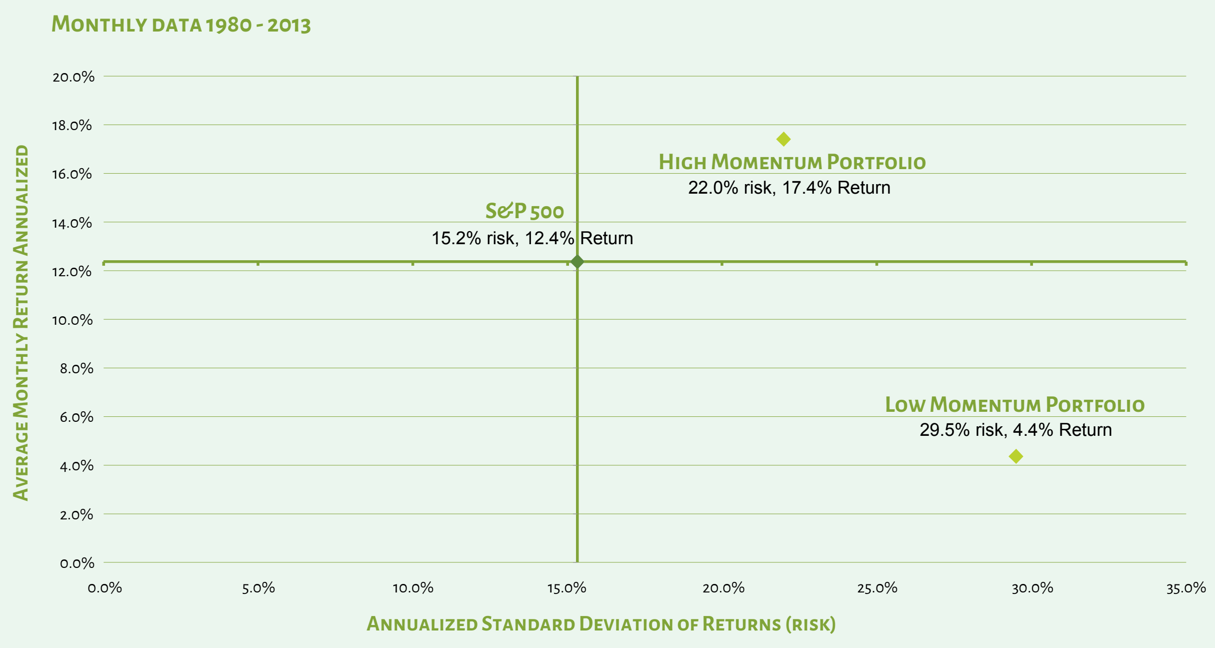
Momentum Has Enhanced Long-Term Risk-Adjusted Returns

While some people believe that momentum is inherently "risky," the research data suggests the opposite is actually true. Used alone or in combination with a value strategy, momentum can help produce higher risk-adjusted portfolio returns over the long term.

One way to illustrate this is by examining the impact a momentum strategy would have on a broad portfolio of stocks such as the S&P 500 index. The most appropriate way to gauge its impact is to compare the Sharpe Ratios of this widely-followed metric by looking at the data with and without a momentum component.

First, it might be helpful to explain why a Sharpe Ratio can serve as an important reference metric for this exercise. The Sharpe Ratio measures the risk-adjusted performance of a portfolio by subtracting the risk-free rate (typically a 10-year Treasury bond) from the portfolio's rate of return and dividing that result by the standard deviation of the portfolio returns.

Higher Risk With Higher Returns for High Momentum Stocks

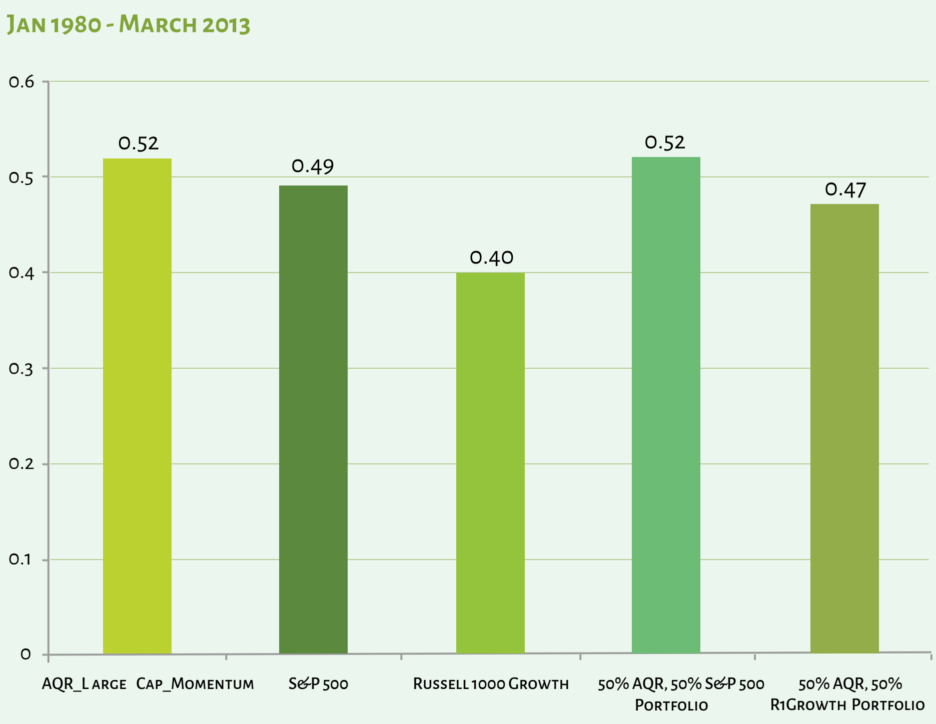


Source: Fama/French Database, JAG Capital Management

Setting the math aside, the Sharpe Ratio, in essence, describes an investment's excess return for each unit of risk, allowing for the comparison of investments with varying risk profiles. Therefore, the Sharpe Ratio is an ideal tool to help investors determine if they are being compensated properly for the amount of risk they assume. The higher the Sharpe Ratio, the better, because an investor would earn more return for the amount of risk they were willing to assume.

In the chart below, we can see that momentum investing as a standalone strategy (as reflected by the AQR Large Cap Momentum Index) delivered a higher Sharpe Ratio than the Standard and Poor's 500 Index and the Russell 1000 Growth Index. When the AQR Large Cap Momentum Index was added to the Standard and Poor's 500 Index and the Russell 1000 Index, each blended hypothetical portfolio model exhibited a superior Sharpe Ratio than either the Standard and Poor's 500 or the Russell 1000 Growth indices.

Sharpe Ratios



Source: AQR, Frank Russell, JAG Capital Management

Tax-Efficiency Despite Higher Turnover

The data also asserts that momentum strategies will tend to have higher turnover than, for example, value strategies. However, higher turnover does not necessarily equate to a higher tax burden. Consider the fact that momentum strategies emphasize holding winners for as long as they remain winners. Conversely, well-executed momentum strategies tend to sell lagging positions relatively quickly. Over time, this combination typically results in a relatively tax-efficient mix of short-term capital losses and long-term capital gains.

While value strategies tend to exhibit lower portfolio turnover, it is important to note that they also tend to generate more of their total return from dividend income. Dividend income today is generally treated less favorably than capital gains under the current tax code.

The tax efficiency debate has recently been buttressed by leading academics such as Israel and Moskowitz (2013): "we find that Momentum generates substantial short-term losses, which offset many of its capital gains, and produces more long-term gains, which makes Momentum more tax efficient ". Recognizing that it's not what you earn, but what you keep after taxes that matters most, the debate over tax-efficiency should probably not be considered a viable reason to overlook a momentum approach.

All Investors Want the Benefits of Momentum (Despite Their Denials)

There is a delicious irony woven into the debate over which investment style is "best" for investors. Across all asset classes and investment styles, every active portfolio managers' primary focus is on generating excess returns relative to some benchmark. For "long-only" active portfolio managers, each stock is bought with the hope and expectation that the security will deliver strong relative returns in the future. We can all agree this is true no matter the manager's investment style—small cap value, large cap growth, or anywhere in between.

For example, if a manager's security selection criteria is arranged around a "deep value" framework (i.e., low price-to-book, low price-to-cash flow, etc.), the purchased security will only prove to be a successful portfolio holding if it (sooner or later) experiences a meaningful period of material outperformance versus its peers and/or its benchmark.

If and when this occurs, that same outperforming security will eventually become attractive to managers using other selection criteria – even momentum investors! This suggests that even though buy disciplines vary quite widely among managers with different styles, an attractively-priced security ultimately will become attractive to a broad array of managers using disparate security selection criteria. In other words, diffuse portfolio inputs can, and oftentimes do, result in similar, potentially overlapping, portfolio holdings.

Buffet: A Closer Look at His Success

Warren Buffett fits no one's definition of a momentum manager. As the most legendary investor of the last century (at least), Buffett's investment career was built upon the deep-value foundation of Graham-Dodd. As his portfolio grew ever larger through the '80's and '90's, his investment decision-making process became more attuned to relative value and even growth-at-a-reasonable price.

Buffett is justifiably famous for the huge gains from investing in Coca-Cola, which is now the second-largest holding of Berkshire Hathaway. Berkshire Hathaway owns roughly 400 million shares of Coke that are worth over $16 billion today. They were originally acquired at a total cost of $1.3 billion.

Coca - Cola's Stock Price

Source: Bloomberg, JAG Capital Management

Most people today assume that Coke was a classic "value stock" when Buffett began building his position in 1988. Not so! In actuality, Coke stock had appreciated every year between 1980 and 1988, posting an average annualized rate of 18% in the five years preceding Buffett's first purchase. By the time Buffett made his initial buy, Coca-Cola was trading at a P/E ratio of roughly 15 – not a lofty valuation by today's standards, but back then it represented an approximate 30% premium to the sector.

As fate would have it – and as Buffett had sagely foreseen - by the late 1980's Coke was just beginning to hit its stride. Under the leadership of CEO Robert Goizueta, who had taken over the company's reigns in 1980, Coca-Cola experienced dramatic improvements in sales, earnings and brand leadership. The stock price rose with Coke's fortunes, and despite his value roots, Buffett went all-in for the ride. He sagely bought more Coke shares in 1989 (at a price more than 30% above than his original cost basis), and rounded out his position in 1994 (by which time the stock had almost tripled from his original cost). By the time the stock peaked in July 1998, Coke had risen more than 15-fold to $43.97/share from a split-adjusted price of $2.79 at the end of 1988.

For most of the 1980's and 1990's, momentum was perhaps the most apt investment descriptor of Coca-Cola's stock performance. Investors focused on momentum factors would have found it very difficult to avoid buying Coke stock through most of those two decades. The irony is that even though we can be quite sure that Buffett cares little for momentum as an investment factor, one of his most famous portfolio investments was initiated during a period in which Coca-Cola clearly had all the characteristics of a classic momentum stock.

The last sixteen years have not been nearly so kind to Coke shareholders. While the stock has had periods of competitive relative and absolute performance, its shares have yet to regain the all-time high they reached in 1998. The stock has woefully lagged the Standard and Poor's 500 during a period in which the benchmark's total return has annualized at a modest 5%. Berkshire Hathaway continues to hold its shares, and by all appearances Buffett remains a huge believer in the company's longer –term potential.

Momentum strategies may have pitfalls, but holding long-term underperformers is not one of them. For those of us who are not Warren Buffet and don't have the luxury of sitting on a non-appreciating asset for more than a decade (or even shorter periods of time), a discipline geared to rotating investment capital out of flat or declining stocks is a compelling alternative to consider. This incentive is what makes incorporating momentum into a diversified portfolio a true benefit.

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Full Circle: Physics, Human Emotion and Investing

All systems tend to move toward complexity. This is true of biology and physics as well as economic systems. Even the world of investing has not escaped this defining principle. Yet, amid all the complexity of our modern world, it can be easy to overlook simple truths.

One simple truth is this: Investing is a means to an end. The prime objective of investing for most Americans is to fund their own retirement and to live off their accumulated investments. The late United States Senator Daniel Patrick Moynihan once remarked "Everyone is entitled to his own opinion, but not to his own facts." Whatever the opinions in the marketplace are about momentum investing, it is important not to lose sight of one undeniable central fact: momentum investing offers investors the potential to achieve more diversified portfolios with better risk-adjusted returns.

The academic research shows that the premiums from momentum investing have generally been as large (or larger) than what was earned in value stocks. This simple but important benefit is needed by many types of investors who hope to meet their most important financial goals.

After more than two decades of broad and growing academic support, it is curious that momentum investing has yet to gain broad acceptance in the professional investing community. We think intuition – as opposed to cognition - is to blame. All of us, intuitively, can get our arms around the fact that a small and cheap asset (i.e. a small cap value stock) can grow to become a bigger company and therefore become more richly valued. People, consumer prices, plants, and animals all "grow" or "inflate." This process is inherent to the rhythm of life. As a result, our internal wiring backs up the belief that small, cheap stocks should also grow in price. So when the academic community discovered the size and value effects, it was easy for people to embrace those effects from a psychological standpoint.

Momentum is an entirely different concept altogether, and for better or for worse it is counterintuitive. Our human intuition leads us to believe "what goes up must come down," despite ample evidence to the contrary. In truth, the evidence shows that "what goes up, tends to continue to go up, for some measurable period of time. And as we saw earlier in the example of Coca-Cola during the '80's and '90's, momentum can be extremely persistent in terms of both price appreciation and duration of holding period.

Provoking Further Consideration

As experienced portfolio managers with a proven long-term track record, JAG's investment style successfully incorporates growth and momentum to help our clients build solid, "better" portfolios. The JAG Large Cap Growth strategy has historically demonstrated many complementary diversification attributes within most asset allocation models. Our in-depth research and analysis on this topic is meant to stimulate further thought and discussion, and reflects the passion we have for our investment philosophy and disciplined approach.

About JAG

JAG Capital Management is an independent, 100% employee-owned registered investment advisor headquartered in St. Louis, Missouri. The firm provides portfolio management services for institutions, individuals, investment advisory firms and corporations. In addition to managing the JAG Large Cap Growth mutual fund, equity and fixed income separate accounts are also offered.

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