

Momentum unleashed: achieving out-performance in asset management

Momentum, one of the most extensively studied and robust market anomalies, has proven to be a powerful strategy in portfolio management.

By Bjorn De Vriese and Raf Jacobs

The principle that stocks with strong historical performance tend to continue outperforming offers investors a systematic way to capture market trends and achieve consistent risk-adjusted returns. This article explores the scientific foundation of momentum, examines its implementation strategies, and demonstrates how it can drive outperformance in complex market environments.

The scientific foundation of momentum

The momentum phenomenon was systematically analyzed for the first time by Narasimhan Jegadeesh and Sheridan Titman in the 1990s. Their groundbreaking research demonstrated that stocks that performed best over the past six to twelve months continued to deliver superior returns in subsequent

months. This discovery catalyzed a wave of academic research, positioning momentum as one of the most universal investment factors.

In 'Dissecting Anomalies' (2008), Eugene F. Fama and Kenneth R. French investigated why momentum persists even after accounting for traditional risk factors. They attributed its existence partially to behavioral biases, such as investors overreacting or underreacting to news. Additionally, they suggested that momentum arises from consistent market dynamics rather than inefficiencies.

Han Liu, John Mulvey, and Tianqi Zhao introduced technological advancements into the discussion in 'A Semiparametric Graphical Modelling Approach for Large-Scale Equity Selection' (2011). Their

work highlighted how advanced statistical techniques, such as semi-parametric graphical modeling, enhance the implementation of momentum strategies across large datasets.

Momentum by the numbers: results and insights

Momentum is not only theoretically robust but also empirically proven. Data from 2004 to 2024 reveals that momentum portfolios achieved an average annual return of 23.69%, nearly double the 11.97% of broad market indices like S&P 500. While momentum strategies come with higher volatility, they compensate for this through superior Sharpe ratios, highlighting their strong risk-adjusted performance.

The optimal portfolios contain 10 to 25 stocks, rebalanced every four to six months. Even with rebalancing frequencies of six or twelve months, results remain strong, though more frequent adjustments deliver marginally higher Sharpe ratios. These findings underscore the importance of

consistency and discipline when implementing momentum strategies (shown in Figure 1).

Momentum continues to deliver exceptional performance, as evidenced by recent examples. In 2024, the S&P 500 achieved a strong return of 24.01%. However, a momentum portfolio consisting of 25 stocks, optimized with a frequent rebalancing strategy, outperformed significantly with an impressive return of 37.98%. This pattern was also observed in previous years, including 2020, 2019, 2007, and 2005. During the COVID-19 pandemic in 2020, stocks such as Zoom, Moderna, and HelloFresh highlighted the power of momentum by delivering outstanding results, even in times of heightened market volatility.

Implementation: systematics and technology

The successful implementation of momentum strategies requires a systematic, data-driven approach. The process begins with analyzing

FIGURE 1: WEALTH ALL STOCKS VERSUS WEALTH R12N25



historical returns, ranking stocks based on their six-to-twelve-month performance. To avoid short-term reversal effects, the most recent month is typically excluded from the analysis.

High-momentum stocks are then selected for equally weighted portfolios, ranging from 10 to 50 stocks. These portfolios are optimized through rigorous backtesting, evaluating 546 scenarios with varying rebalancing intervals and selection criteria. This approach minimizes transaction costs and prevents overfitting.

Machine learning and advanced algorithms have further refined momentum strategies. By modeling network effects between stocks and broader market trends, these technologies enhance the precision and effectiveness of momentum as an investment factor.

Momentum and market dynamics

Momentum has repeatedly demonstrated resilience across diverse market conditions. During corrections, momentum

stocks recovered faster than the broader market and continued to outperform in the subsequent years. This pattern was also evident during the COVID-19 pandemic, when momentum portfolios effectively weathered market corrections (shown in Figure 2).

While momentum strategies can experience higher maximum drawdowns due to their concentration in a limited number of stocks, these losses are often swiftly offset during bull markets. Momentum's ability to adapt to market fluctuations makes it an appealing strategy for investors seeking consistent portfolio performance.

Combination strategies: Momentum and CPPI

A recent innovation in portfolio management is the integration of momentum strategies with Constant Proportion Portfolio Insurance (CPPI). This approach balances momentum's high return potential with dynamic downside risk protection. CPPI adjusts the allocation between risky and risk-free assets based on predefined

parameters, mitigating losses during bear markets.

Backtesting from 2004 to 2024 shows that combining momentum with CPPI delivers superior returns and enhanced risk management. While standalone momentum often outperforms, the addition of CPPI provides an extra layer of stability for investors seeking protection against market volatility.

Conclusion

Momentum is one of the most robust and scientifically validated investment factors, consistently demonstrating effectiveness in both stable and volatile markets. It combines reliable performance with the ability to optimize portfolios through historical data and advanced technologies. By systematically implementing momentum, asset managers can harness market trends and achieve sustainable risk-adjusted returns.

Although momentum strategies face challenges, such as higher volatility and drawdowns, their reward-to-risk profile outweighs these drawbacks. Momentum remains a cornerstone of smart beta strategies and a critical factor for generating long-term value. For long-term buy-and-hold investors with index-like portfolios, allocating a portion to momentum strategies can significantly enhance returns, diversify risk and reduce costs. However, managing a momentum portfolio requires active oversight, enabling it to stand out in a predominantly passive investment landscape and offering a valuable complement to traditional approaches. ■



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FIGURE 2: YEARLY RETURNS S&P 500 TOPMOMENTUM VERSUS EQUALLY WEIGHTED BENCHMARK



Source: MQuants

SUMMARY

Momentum is a scientifically validated and empirically proven investment factor that drives consistent risk-adjusted returns.

By analyzing historical data and employing advanced technologies, asset managers can systematically implement momentum strategies to outperform benchmarks.

From disciplined rebalancing to integration with CPPI, momentum remains a cornerstone for achieving long-term value in asset management.