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Quantifying Behavior, Harvesting L/S Momentum

Quantifying patterns of growth and decay in equity markets

Introduction to Second Phase

We want our clients to understand fully our quantitative investment process and exactly how we are investing on their behalf – and why. Our goal is to explain the theory and practice of quantitative momentum-factor investing, and thus education and transparency are key on-going values of our firm.

Quantifying behavior and harvesting momentum is a core tenet of our investment philosophy at Second Phase Capital. We have been engineering ways to measure investor behavior and devising ways to capitalize on the resultant market inefficiencies for many years. This effort, which we call Quantitative Momentum factor investing, is the primary source of our competitive advantage.

First, what is a "Factor"?

Factors are measurable and quantifiable characteristics that can explain differences in stock returns. A large and growing body of academic research demonstrates that certain factors, such as value, size, momentum and volatility drive the majority of the returns of an equity specific portfolio. However, there is no universally agreed upon set of factors that all investment professionals agree on. There are, however, some that have more empirical evidence and academic research to support them.

The practical way to think about factors is that they are an innovative step beyond the way that traditional investing has occurred, which is to focus on asset classes only. The traditional viewpoint focuses only on the broader asset class: equities, fixed income, private equity or real estate. Factor based investing breaks these asset classes down further and focuses on the individual component parts driving the risk and return in each. For example the price of Apple (AAPL) is comprised of a bundle of factors including, but not limited to, Valuation based factors such as book-to-market, External Financing factors such as the change in debt or equity, R&D factors such as research and development expenses. Yet, the Profitability Factor, or gross profits is likely one of the most important factors driving the investment return of this particular security.

Second, let's unpack the term "Momentum"

Second Phase did not invent momentum investing, but we believe we are among the first to improve upon the traditional definition of momentum and we believe we are the only firm to quantify a unique variation of momentum that potentially improves upon traditional academic theories and definitions of the concept. Further, we have codified algorithms, technologies and an investment process that together yield practical solutions allowing investors to gain exposure to this unique and persistent factor. We are passionate believers that quantitative factor investing offers a differentiated return stream from traditional equity investments and offers advantages over both passive indexing and traditional active investing.

What is momentum and why does it work?

The Definition Traditionally defined momentum refers to a persistent directional bias in an asset, such as a stock, over some duration of time, such as 12 months. At its core, momentum investing is a trend following strategy driven by investor behavior and collective psychology. Generally speaking, strong trends can signal continued outperformance for a future period, such as the next six to twelve months.

What is Momentum? While markets are often rational and efficient, momentum investing capitalizes on behavioral cognitive pitfalls that periodically cause investors as a group to act irrationally. One such bias is overconfidence, which leads investor(s) to rigidly cling to their prevailing viewpoint and ignore conflicting data at the investor's expense. Another cognitive behavioral pitfall, or bias, is the herding instinct, where less-informed investors simply mimic the crowd and invest in what is faddish or what has outperformed recently. The resultant feedback loop generally leads to continued outperformance, at least for some future period, before a sharp reversion to the mean occurs. Both situations can yield profit opportunities for the quantitative momentum factor investor. Such opportunities often occur near the beginning and end of strong trends, such as the world witnessed during the dot-com boom and bust in the early 2000s and the credit-crisis in 2008.

"…we believe we are the only firm to quantify a unique variation of momentum…"

The Evidence Numerous studies find that momentum is a predictive factor and indicator for future outperformance, or alpha. Even as a standalone factor, momentum often outperforms other investment approaches. Please email us at info@secondphasecap.com if you would like us to provide specific third-party academic studies of momentum or access to our own quantitative studies of momentum.

How we differentiate The question is can we improve upon the momentum factor further in the search for more potent and robust signals? It is an intriguing question, because if successful we can construct superior portfolios with uniquely attractive return expectations. Further, we can design solutions to fit within a specific niche in a broadly diversified portfolio.

As a team we have been researching this very question for more than 5 years. We have witnessed considerable advances in computational processing power, enabling our quantitative investment research effort to analyze vast amounts of information upon which we have been able to fine-tune our theories in a rigorous and highly methodical fashion. We have become fluent in recent data visualization technologies that have allowed us an ever more granular understanding of momentum. And we have worked with other technology providers to better understand how recent advances in machine learning and mean variance optimization can benefit our investment efforts. The result is algorithms that maintain an ever-changing picture of the market and its constituent behavior – the primary driver of our investment returns, and a clear cut innovation beyond traditional momentum factor definitions. Trending behavior is a staple in markets. Trends may come and go, some are brief affairs while others continue for long durations, but the patterns repeat and have strong similarities. In contrast with other data mining approaches, trends both positive and negative, effective in both bull and bear markets, are a robust factor evident across diverse sectors, asset classes, and countries. Focusing technology on such a constant, underpinned and driven by human psychology means we don't spend time or money attempting to predict the future, a futile effort, or perfecting a certain method of investing that would have worked perfectly in the past but not the present. An analytical data-driven approach frees up time and resources to focus solely on what matters - generating attractive risk-adjusted returns, rather than playing the expert role, promoting and defending a view of the economy and the market that may well be stale, lagging or simply wrong.

We continue to spend our waking hours working to continually enhance our investment management process and our understanding of investment return drivers. We will continue to seek out, work with and create ever more sensitive and precise instruments – allowing us to best locate the market's most aggressive institutional buying and selling currents and cross-currents, as well as the inefficiencies and behavioral anomalies that occur around these events.

"…we don't spend time or money attempting to predict the future..."

Our Value Proposition – Systematically Harvesting Momentum Our team's work has resulted in an abundance of quantitative evidence, resting on a strong theory, itself grounded in the logic of behavioral economics. We have devised automated processes that minimize the impact of emotions in the investment management process, so that we don't fall prey to the same emotions that generate the types of events our investment approach capitalizes on. Other managers may rely on a unique one-time insight, a hot hand or favorable market timing. In contrast, our quantitative framework makes it more likely that we are able to find robust trends that correlate to broad and sustainable developments in the markets or underlying economy. This unique investment skill-set is process-driven, repeatable and capable of delivering meaningful returns over time. We implement these advances in the form of live investment strategies, managed by our team, with strategic tilts and exposures to our proprietary version of the quantified momentum factor, allowing our firm and its investors to collect risk premiums in a systematic fashion which our research has shown should compensate patient, long-term investors with excess returns relative to the appropriate benchmark.

We also license our technology in the form of data feeds and research-as-a-service directly to asset managers. Please email us at info@secondphasecap.com if you would like to speak with one of our representatives.

Our Hedge

At Second Phase Capital, while we believe a process-driven approach to quantifying behavior and harvesting momentum offers a superior way to invest, we are fully aware that all markets have cycles and all investment styles suffer periods of underperformance. A certain amount of patience is required to sit through these periods. In order to protect against market corrections and to mitigate risks against catastrophic market downturns we have devised a hedge overlay. There are a number of variations one can devise when erecting a hedge framework and we have explored a number of possibilities in our research – including technical, fundamental and macroeconomic valuation overlays. Our final result includes all of these inputs and has circuit breakpoints to adjust exposure weights when called for. Combined with our self-adjusting dynamic share sizing and a long/short approach we believe we have arrived at a solution that is superior to an approach that lacks a hedging overlay entirely. The results suggest that it is possible to reduce risk without giving up returns over time.

Conclusion

Quantitative Momentum-factor investing can be thought of as a unique way to invest with distinct advantages for long-term investors over both passive indexing and traditional active management. We hope that this primer has provided some education and helped the reader to acquire a sound understanding of the factor-investing approach and specifically how Second Phase Capital invests.

"Our Value Proposition – Systematically Harvesting Momentum"

About Second Phase

Second Phase Capital LLC is an Atlanta-based registered investment advisor and quantitative asset manager focused on rule-based, outcome-oriented investment strategies and specializing in tactical asset and risk management. We are the pioneers of dynamic, volatility-adjusted momentum models and believe that a dynamic, quantitatively-driven process facilitates long-term consistency and success in both investment performance and risk-management.

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