Can Behavioral Factors Improve Tactical Performance?

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More and more, Financial Advisors agree that portfolios with a tactical tilt provide increased asset allocation flexibility that can improve returns and help manage risk. With a growing awareness of the role that investor behavior plays in driving markets, many are asking if those same behaviors can be used to successfully inform a tactical strategy. Our research shows they can indeed.

With a strong foundation in academia and over 35 years of interaction with institutional managers and leading academics, AthenaInvest, Inc. has conducted extensive research on the use of behavioral factors to estimate expected returns and, in turn, to make market-rotation and beta-exposure investment decisions. This research informed the development of the Athena Global Tactical ETFs portfolio.

Market Exposure & Stock Picking

Market exposure and stock picking strategies can both generate excess returns but typically do well in different environments.

In response to this, a growing number of Financial Advisors are combining long-term stock picking skill with tactical management to create dynamic portfolios that benefit from both approaches.

A Behavioral Approach

AthenaInvest believes that opportunities in broad markets are driven by macro-level crowd behavior. We analyze those behaviors to identify deep behavioral currents that are driving market returns. These behavioral currents create signals that can be used to determine the best markets and levels of exposure for improved performance. As evidenced by the data below, the approach delivers impressive results.

The portfolio has a 5-Star Overall Morningstar Rating™ out of 270 Tactical Allocation strategies as of 12/31/2017[1] and is highly ranked on 1, 3 and 5-year performance in the Morningstar Tactical Allocation category. The Athena Global Tactical ETFs portfolio showed the effectiveness of the behavioral tactical approach by becoming the #1 Tactical Equity ETF Managed Portfolio for five-year performance as of 9/30/17.[2]

Figure 1 SINCE INCEPTION PERFORMANCE (Sep 2010 – Dec 2017)

Performance (As of 12/31/2017)	One Year	Three Year	Five Year	Inception
Global Tactical ETFs (Net)	26.3%	10.6%	20.2%	20.1%
MSCI ACWI Benchmark	24.0%	9.3%	10.8%	10.8%
M* Category Average	11.0%	4.9%	6.5%	N/A
M* Category Ranking	#8 / 329	#6 / 270	#2 / 211	N/A

See Endnotes and Important information and disclosures for more information.

What are Behavioral Currents?

Aggregate stock market returns are driven by the collective buy and sell decisions of individual and institutional investors. Many market factors enter investment decisions, with the relative importance of each always in flux. Economy-wide data is at times more important while stock market activity or the relative attractiveness of sectors or stocks may matter more at other times.

Athena refers to these preferences as deep behavioral currents and their ever-changing relative importance is a major determinant of market returns. Sometimes the mix is more favorable and thus expected returns are higher. Other times it is less favorable, resulting in lower expected returns. When estimating market-expected returns, the mix of behavioral currents flowing through the market matters greatly.

An Organizing Framework

Athena uses active equity mutual fund manager strategies as a framework to assess behaviors. Active equity managers use different strategies to analyze, buy and sell stocks. For example, valuation managers hold stocks driven by value-oriented return factors such as low PE, while future growth managers hold stocks driven by factors such as earnings growth and high R&D.

For the last 10 years, AthenaInvest has compiled a comprehensive database of strategy information on U.S. and International active equity mutual funds, placing each fund into one of 10 strategy clusters. This clustering provides an intelligent organization of investor decisions driving overall market returns.

Predictive Power of Strategy Returns

With the equity fund universe organized in this way, we examine how investors respond to each strategy – specifically, their preference, captured by ranking recent strategy returns, for one strategy relative to another is estimated. We compare recent strategy performance ranks to long-term ranks. Our development research revealed that an alignment of recent ranks with long-term ranks is predictive of higher expected returns in that market, while a lack of alignment is indicative of lower returns.

Figure 2 RELATIONSHIP BETWEEN STRATEGY RANKS AND EXPECTED MARKET RETURNS

Strategy Ranking (1988-2007)

RANK	STRATEGY
1	Future Growth
2	Competitive Position
3	Opportunity
4	Profitability
5	Quantitative
6	Valuation
7	Market Conditions
8	Economic Conditions
9	Social Considerations
10	Risk

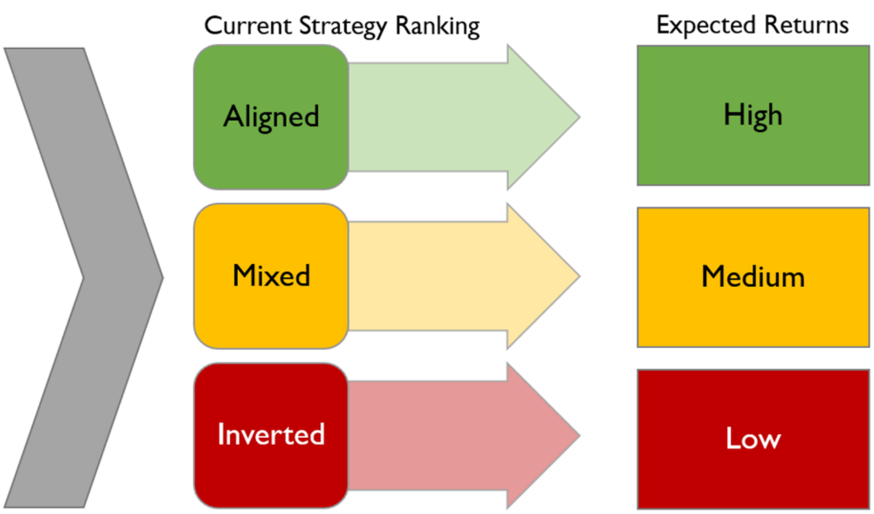


Figure 2 provides a graphical representation of the relationship between these strategy ranks and expected market returns. If current strategy ranks align with long-term ranks, then expected returns are high. This means investors are currently rewarding strategies in the same way they have performed over the long-run. More specifically, investors are driving up prices of the stocks held by future growth and competitive position funds relative to the stocks held by other strategies. This is a positive sign for the market and leads to expected returns well above the 10% long-term average.

Reading the Signals

If current strategy ranks align with long-term ranks, then expected returns are high. This means investors are currently rewarding strategies in the same way they have performed over the long run.

On the other hand, if ranks are inverted in relationship to long-term ranks, investors are driving down future growth and competitive position stock prices relative to risk, social considerations, economic conditions and market conditions stock prices. These four are historically weaker strategies. This is a bad sign for the market and indicates investors are taking a defensive position rather than focusing on long-term stock market drivers. As a result, expected market return is weak or even negative. For example, social considerations, risk, and market conditions were top relative strategies in 2008, as expected. When strategy ranks fall somewhere in between aligned and inverted, a mixed situation exists, and the expected market return is somewhere around the long-term nominal average of 10%.

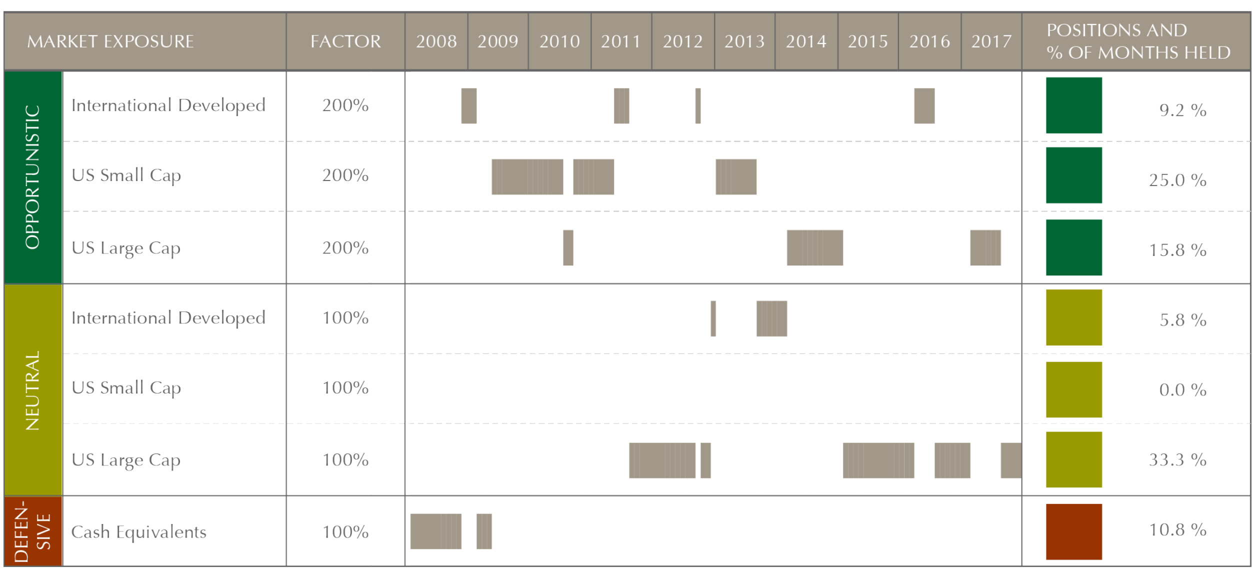
To be clear, the Athena Market Barometers capture actual behaviors and are not a measure of sentiment. They differ from technical concepts as the barometers focus on relative strategy performance, rather than on whether recent returns have been positive or negative.

Market Rotation and Exposure Level

Athena uses the difference in long-term and current relative rankings of the 10 strategies to estimate expected market returns. With the Athena Global Tactical ETFs portfolio, once the best market is identified using the Athena Market Barometers, that market is invested in 100% using broad market ETFs. Markets considered are US small cap, US large cap, international developed equities and cash.

The magnitude of the barometer reading is used to determine if market exposure should be one or two times to optimize returns. If expected return is high enough, the position is levered up to two times with the purchase of a 2X leveraged ETF, the maximum leverage used.

Figure 3 MARKET ROTATION AND EXPOSURE RESEARCH (2008 - 2017)



Conversely, if no market has a high enough expected return, 100% cash is held. The cash signal acts as catastrophic insurance and is designed to protect against significant market losses, typically greater than 20% and considered "Bear Markets." The cash signal is not driven by short-term negative price action or increased market volatility, only by the collective Athena Market Barometer signals. Positions are held six to nine months on average, with investment decisions driven by the slower moving, deep behavioral currents underlying the Barometers.

Protecting the Downside

The cash signal acts as catastrophic insurance and is designed to protect against significant market losses, typically greater than 20%, and considered "Bear Markets."

Figure 3 gives a historic look at rotation signals and the level or exposure indicated by the Athena Market Barometers. They would have suggested a move to cash in parts of 2007, 2008 and 2009.

The Behavioral Tactical Opportunity

Deep behavioral currents are important drivers of equity returns. Behavioral market barometers, which are based on how investors reward various equity strategies, provide a reliable proxy for these currents. With our unique organizing framework, we assess the difference in long-term and current relative rankings of strategies to estimate expected market returns and determine the best markets and level of exposure. This unique approach generates excess returns from market exposure, rather than stock picking skill. The performance of the Athena Global Tactical ETFs portfolio demonstrates that behavioral factors can successfully be used in a market-rotation-style portfolio to generate superior returns over the long run.

About the author

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C. Thomas Howard is the co-founder, chief investment officer, and Director of Research at AthenaInvest. Building upon the Nobel Prize winning research of Daniel Kahneman, Howard is a pioneer in the application of behavioral finance for investment management. He is a professor emeritus at the Reiman School of Finance, Daniels College of Business, University of Denver, where he taught courses and published articles in the areas of investment management and international finance. He is the author of Behavioral Portfolio Management. Howard holds a BS in mechanical engineering from the University of Idaho, an MS in management science from Oregon State University, and a PhD in finance from the University of Washington.

Important information and disclosures

This document is informational in nature only. Nothing herein is intended to imply that an investment in this portfolio may be considered "safe" or "risk free." This investment portfolio may not be suitable for all types of investors. This information is not intended to constitute legal, tax, accounting or investment advice. Prospective clients should consult their own advisors about such matters. No regulatory authority has passed upon or endorsed this summary or the merits of an investment using our strategy.

PORTFOLIO PERFORMANCE Monthly performance results include all discretionary accounts within the Athena Global Tactical ETFs portfolio including accounts that are no longer active as of the time of the publication of this document. Accounts are included in the composite performance after the day the initial portfolio position trades settle to the present or to the closing of the account. Performance results are asset-weighted composite returns calculated using a daily wealth relative method. Composites are valued daily, and cash flows are accounted for on a daily basis. Monthly returns are calculated based on the daily wealth relative series and monthly geometric linking of performance results is used to calculate longer time period returns. Return figures are calculated using posting date accounting. All realized and unrealized capital gains and losses as well as all dividends and interest from investments and cash balances are included. The performance figures presented are net of brokerage commissions and all other expenses, including Athena's management fee. The investment results shown are not representative of an individually managed account's rate of return, and differences can occur due to factors such as timing of initial investment, client restrictions, cash movement, etc. Securities and portfolio weights used to implement the portfolio can differ based on account size, custodian, and client guidelines.

PORTFOLIO ALLOCATION GUIDELINES Information concerning portfolio allocations is representative of the target portfolio guidelines as of the publication date and does not necessarily reflect an actual client account. Actual client account composition may differ as a result of client-imposed investment restrictions, the timing of client investments, current market and economic conditions, and security availability. The investment manager may choose to substantially change asset class and individual security allocations at any time and without notice.

PRINCIPAL INVESTMENT RISKS An investment utilizing our investment methodology involves risks, including the risk of loss of a substantial portion (or all) of the amount invested. There is no assurance that the investment process outlined in this document will consistently lead to successful results. PAST PERFORMANCE DOES NOT GUARANTEE OR INDICATE FUTURE RESULTS. Risks of investing in the Athena Global Tactical ETFs portfolio include, but are not limited to: ETF, MF AND CEF RISK The cost of investing in the portfolio will be higher than the cost of investing directly in Electronically Traded Funds (ETFs), Mutual Funds (MFs) and Closed-End Funds (CEFs) and may be higher than other portfolios that invest directly in stocks and bonds. Each ETF, CEF and MF is subject to specific risks, depending on the nature of the fund. LEVERAGE RISK The portfolio may invest in ETFs which employ leverage, options, futures and other derivative instruments in order to amplify stock market movements or invert such movements. When the portfolio is invested in these ETFs, the portfolio will experience much greater volatility than does the underlying equity market. DERIVATIVES RISK Futures, options and swaps involve risks different from, or possibly greater than the risks associated with investing directly in securities including leverage risk, tracking risk and counterparty default risk in the case of over the counter derivatives. Option positions may expire worthless exposing the Fund to potentially significant losses. FOREIGN INVESTMENT RISK Foreign investing involves risks not typically associated with U.S. investments, including adverse fluctuations in foreign currency values, adverse political, social and economic developments, less liquidity, greater volatility, less developed or less efficient trading markets, political instability and differing auditing and legal standards. Investing in emerging markets imposes risks different from, or greater than, risks of investing in foreign developed countries.

BENCHMARK DISCLOSURE The benchmark for the Athena Global Tactical ETFs portfolio is comprised of 100% MSCI ACWI . This benchmark was selected to generally represent a similar opportunity set of investments compared with the portfolio. The portfolio does not seek to replicate the composition, performance, or volatility of the benchmark or its constituent indices and can be expected to have investments that differ substantially from the securities included in any index. Accordingly, no representation is made that the performance, volatility, or other characteristics of the portfolio will track the benchmark. It is not possible to invest directly in an index.

INDEX DEFINITIONS: MSCI ALL COUNTRY WORLD NET RETURN INDEX The Morgan Stanley Capital International (MSCI) All Country World Index (ACWI) is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets, including the United States. The MSCI ACWI consists of 45 country indices comprising 24 developed and 21 emerging market country indices.

CALCULATION DEFINITIONS: STANDARD DEVIATION Standard deviation measures the volatility of a return series around its mean. The higher the standard deviation, the more volatile the investment is. R-SQUARED R-squared is the percentage of a portfolio´s movements that are explained by movements in its benchmark. If a portfolio has an R-squared of 1.0, its price movements are explained entirely by its benchmark´s price movements. Conversely, a portfolio with an R-squared of 0.0 has no price movements which can be explained by its benchmark´s price movements. ALPHA Alpha is a measure of performance on a risk-adjusted basis. Alpha takes the volatility of a portfolio and compares its risk-adjusted performance to a benchmark. The excess return of the fund relative to the return of the benchmark index is a fund´s alpha. Alpha can be used as a measure of the value added or subtracted by the investment selection process. BETA Beta is a measure of the degree of change in value one can expect in a portfolio given a change in value in its benchmark. A portfolio with a beta greater than 1.0 is generally more volatile than its benchmark, while a portfolio with a beta of less than 1.0 is generally less volatile than its benchmark. SHARPE RATIO The Sharpe Ratio was developed by William Sharpe to measure risk-adjusted performance. The Sharpe ratio is calculated by subtracting the risk-free rate (3-Month US Treasury Bill Rate in this case) from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns. The greater a portfolio´s Sharpe ratio, the better its risk-adjusted performance has been. A negative Sharpe ratio indicates that a risk-less asset would perform better than the security being analyzed. UPSIDE / DOWNSIDE CAPTURE Upside capture is the average ratio of the return on the fund to the return on its benchmark for those periods in which the benchmark return was positive. Conversely, downside capture is the average ratio of the return on the fund to the return on its benchmark for those periods in which the benchmark return was negative. An upside capture ratio of greater than 100% means that the portfolio had greater gains than its benchmark during periods of positive benchmark returns while a ratio of less than 100% means that its participation in periods of positive benchmark returns was less than that of the benchmark. A downside capture ratio of greater than 100% means that the portfolio had greater losses than its benchmark during periods of negative benchmark returns while a ratio of less than 100% means that its participation in periods of negative benchmark returns was less than that of the benchmark. The combination of upside and downside capture ratios helps to determine how the portfolio´s volatility is split between periods of positive and negative benchmark returns. Upside and Downside Capture are not calculated for periods shorter than one year.

DATA DISCLOSURE All of the information included in this document is current as of the date indicated and is subject to change. Certain information has been obtained from various third-party sources believed to be reliable, but we cannot guarantee its accuracy or completeness. This information is not intended to be complete, and material aspects of the descriptions contained herein may change at any time. While the information prepared in this document is believed to be accurate, we make no express warranty as to the completeness nor can we accept responsibility for errors made in good faith.

INVESTMENT MANAGER Portfolio management is provided by AthenaInvest Advisors LLC, an SEC-registered investment advisor. Such registration does not imply that the Securities and Exchange Commission approves or endorses AthenaInvest, its investment strategies, or any of its marketing materials. The portfolio manager may invest all or a portion of this portfolio in pooled investment vehicles such as mutual funds or ETFs which are advised or sub-advised by the manager. In such circumstances, the portfolio manager will be paid a management fee for this portfolio and on the underlying pooled investment vehicle.

1. Ranking for 5-Year performance is based on the Q3 2017 Morningstar ETF Managed Portfolio Landscape Report. At the time of publication, Morningstar was tracking 1,023 strategies from 178 firms with total assets of $107 billion. The ranking may not be representative of any one client’s experience because the ranking reflects composite performance of multiple clients. The ranking may not be considered indicative of future performance and AthenaInvest did not pay to participate in the Morningstar ranking. Download report: https://corporate1.morningstar.com/ResearchLibrary/article/842421/morningstar-etf-managed-portfolios-landscape---q3-2017/

2. Morningstar Ratings™ are based on risk-adjusted performance as of 12/31/2017. The Morningstar Rating™ for a strategy is derived from a weighted-average of the performance figures associated with its three-, five- and ten-year (if applicable) Morningstar Rating™ metrics. For each strategy with at least a three-year history, Morningstar calculates a Morningstar Rating™ based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a strategy’s monthly performance (including the effects of applicable fees), placing more emphasis on downward variations and rewarding consistent performance. The top 10% of strategies in each category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars and the bottom 10% receive 1 star.

It should not be assumed that recommendations of AthenaInvest made herein or in the future will be profitable or will equal the past performance records of any AthenaInvest investment strategy or product. There can be no assurance that future recommendations will achieve comparable results.

You are solely responsible for determining whether any investment, investment strategy, security or related transaction is appropriate for you based on your personal investment objectives and financial circumstances. You should consult with a qualified financial adviser, legal or tax professional regarding your specific situation. Investments involve risk and unless otherwise stated, are not guaranteed. Past performance is not indicative of future performance. FSv2-GT-201709