

Bull Cipher



A Versatile Approach for Both Bull & Bear Markets

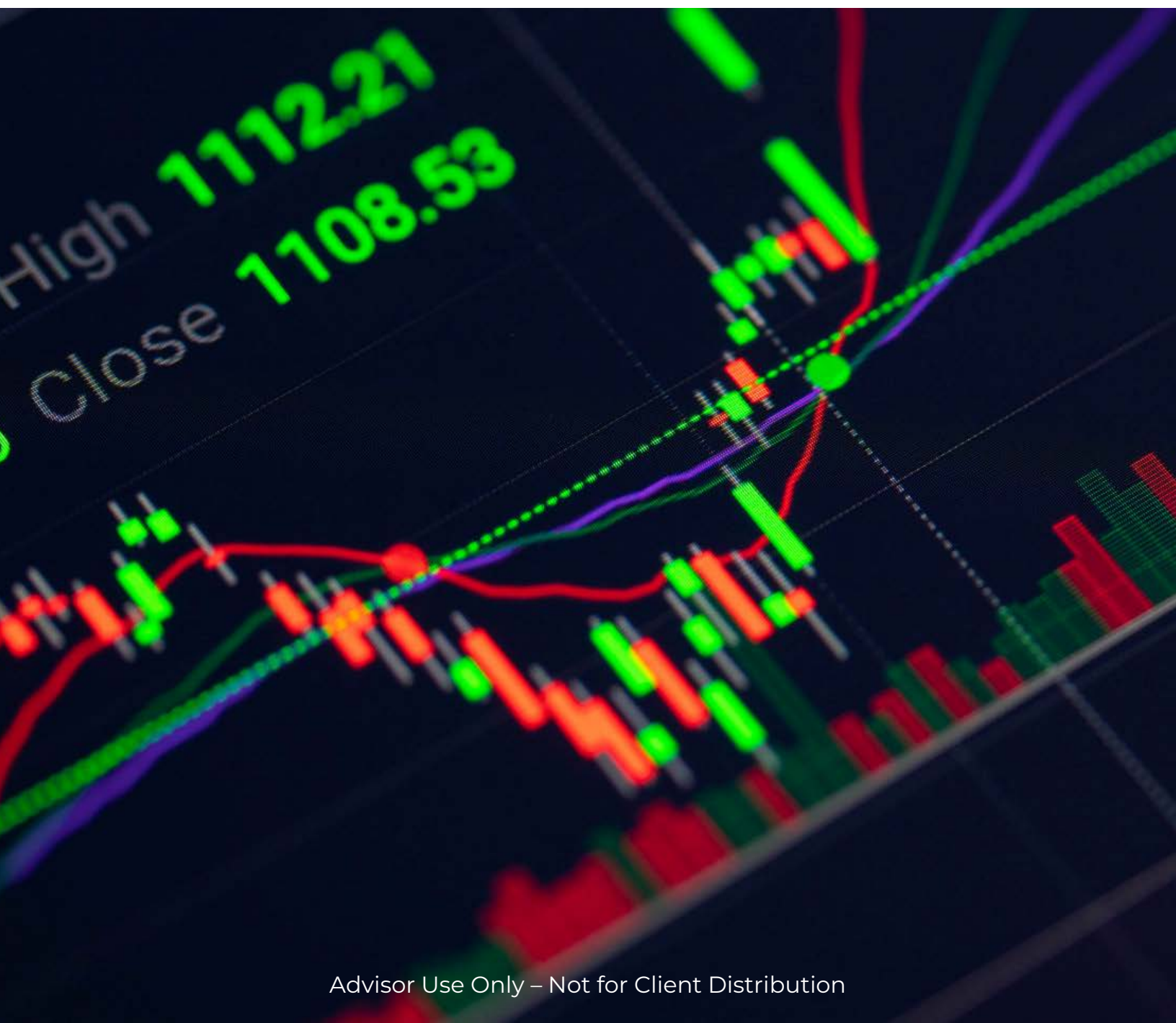


TABLE OF CONTENTS

Background	3
Investment Process	4
Bull Cipher Performance Results	5
Model Account Performance	6
Using Bull Cipher in a Portfolio	8
Enhancements	9
Defense Mechanisms	10
Available Platforms	11
Disclosures	12
About Q3 Asset Management	13

ABOUT Q3

Q3 Asset Management (Q3) is an SEC-Registered Investment Advisory Firm that offers professional money management services to investment professionals through a suite of investment strategies, retirement tools, self-directed brokerage accounts, proprietary mutual funds and ETFs.

Q3's roots trace back to 1982 when Brad Giaimo began his career in the COMEX Gold Pit. In 1984, Brad was recruited to work for Paul Tudor Jones, where he learned the importance of "risk control" from someone considered by many to be one of the greatest money managers of the modern era.

RESEARCH TEAM

Bruce C. Greig, CFA, CAIA, CMT
Director of Research

Adam Quiring
Principal Partner

Bradford Giaimo
Principal Partner

BACKGROUND

Bull Cipher is an active investment strategy. Its tactical approach is designed to take advantage of short-term volatility in equity market indexes. It employs three unique signals to measure trading ranges and reversions from low to high. Essentially, the model measures the current day's index level relative to the recent range of price action and seeks to enter near the lows of the calculated range to capture market overreactions. Exits occur when the index reverses from the lows and returns to a higher point within the recent range.

Bull Cipher's algorithms recalculate daily to identify trading opportunities in both the S&P 500 and the NASDAQ 100 indexes. When no opportunities are present, the model will hold cash equivalents to preserve capital and earn a risk-free rate of return while waiting for the next opportunity.

“ seeks to enter near the lows of the calculated range to capture market overreactions.”

Strategy Highlights

- Bull Cipher enters the market during equity market pullbacks (aka 'buy the dip').
- Tactics adapt to deal with both Bull and Bear markets.
- Return profile results in a low correlation to traditional equity and bond-based approaches.

INVESTMENT PROCESS

A wide range of research has revealed that investors don't always act rationally when making decisions. This irrational behavior often produces exploitable market opportunities, that appear as 'overbought' or 'oversold' conditions. Often, after the market becomes overbought or oversold, the short-term result is a reversion to the mean of the recent range. Mean-reversion is the concept that an overextended market will eventually return to its recent trading range. The essence of Bull Cipher is to capitalize on these overreactions in the market.



The Rubber Band Analogy

“ ***irrational behavior often produces exploitable market opportunities*** ”

An analogy may help understand mean-reversion trading. Picture a rubber band as it becomes stretched. Negative emotions of market participants stretch the index values down in a single day or a series of days. Positive emotions stretch the index values up. In both cases, the rubber band is stretched with tension. No matter what caused their emotions, the move often proves to be temporary.

When the irrationality passes, the tension is released, and the prices adjust over the course of a few days returning the rubber band back to its normal shape. Whenever sentiment drives the market too far from its recent average, the efficiencies of the market often cause it to revert to its mean in a short period of time. Bull Cipher is designed to take advantage of these overreactions as opportunities to profit.

BULL CIPHER PERFORMANCE RESULTS

Bull Cipher has been in operation since April 2016. The model has been tested over various market conditions and longer time periods to observe its tendencies. The tables below are statistics for Bull Cipher going back to 1998. Over this 25+ year period the S&P 500 and Nasdaq indexes have experienced a combination of severe bear markets, choppy sideways markets, and raging bull markets.

HYPOTHETICAL (BACKTESTED) REWARD STATISTICS

	Bull Cipher	Dow Jones Moderate Index
Return (Ann)	17.7%	6.3%
Consecutive Wins	11.0	15.0
% Winning Periods	74.4%	62.7%
Average Gain	2.8%	2.3%
Upside Deviation	9.1%	5.9%
Alpha	14.0%	0.0%

HYPOTHETICAL (BACKTESTED) RISK STATISTICS

	Bull Cipher	Dow Jones Moderate Index
Standard Deviation	12.1%	10.4%
Downside Deviation	9.4%	8.0%
Max Drawdown	-15.7%	-35.1%
Consecutive Losses	2.0	5.0
% Losing Periods	25.4%	37.1%
Average Loss	-2.5%	-2.4%
Sharpe Ratio*	1.3	0.4
Beta	0.58	1.00

All data gross of fees, 1.1.1998 through 4.30.2024

While the above tables include HYPOTHETICAL data that was generated from the backtested research, the results are very informative nonetheless. Most notably, the risk statistics. The maximum drawdown for Bull Cipher was 15.7% while the S&P 500 (not in table) was just over 50% and even a “moderate” index (the Dow Jones Moderate Portfolio Index) was in excess of 35%.

Staying with a strategy when it is down 35% can be a challenge for even the most seasoned investor. It can be at that point investors let emotions take over and end up selling out at the bottom and miss subsequent growth to recover the loss. It is for this reason that Bull Cipher was designed to minimize losses while retaining the ability to participate in positive market movements.

5 Worst Drawdowns

STRATEGY DRAWDOWN REPORT

No.	Depth	Decline*	Recovery*	Start Date	End Date
1	-15.7%	1	4	7/30/1998	12/30/1998
2	-9.6%	4	4	5/30/2011	1/30/2012
3	-9.4%	1	2	8/30/2001	11/29/2001
4	-9.3%	1	2	1/30/2001	4/29/2001
5	-8.2%	2	1	5/30/2002	8/30/2002
Avg	-10.4%	1.8	2.6		

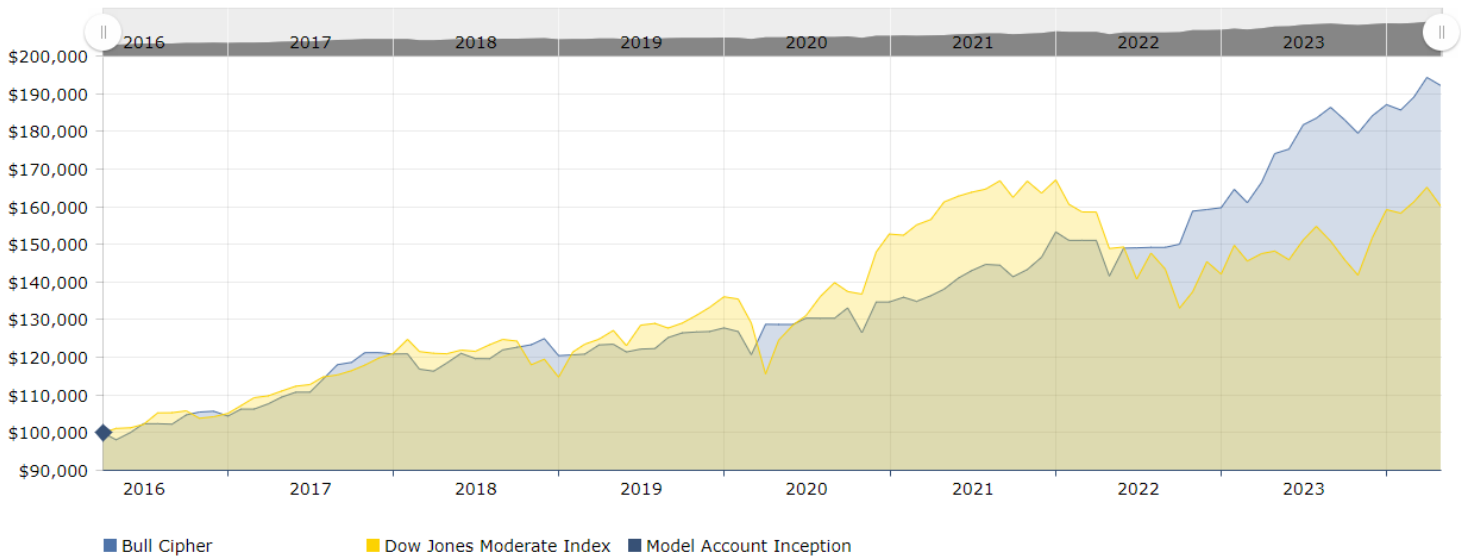
BENCHMARK DRAWDOWN REPORT

No.	Depth	Decline*	Recovery*	Start Date	End Date
1	-35.1%	16	22	10/30/2007	12/30/2010
2	-20.4%	9	19	12/30/2021	4/29/2024
3	-18.7%	30	13	3/30/2000	10/30/2003
4	-15.1%	3	4	12/30/2019	7/30/2020
5	-13.2%	4	4	4/29/1998	12/30/1998
Avg	-20.5%	12.4	12.4		

*Months

MODEL ACCOUNT PERFORMANCE

The chart below shows the cumulative growth of \$100,000 since inception (April 2016) of the strategy. The main takeaway when looking at the equity curve is the lack of significant drawdowns, leading to a smoother, upward-sloping journey – one that is much easier to stick with compared to the benchmark.



Bull Cipher has been tracked by Morningstar as a Separately Managed Account format and can be viewed in their Morningstar Direct financial data service. As of the end of 2023, Bull Cipher received a 5-star rating for the Overall and 5-Yr performance in the Equity Market Neutral category. This rating reflects both the return and risk characteristics.

Ratings and Risk 12-31-23		Incep. Date 04-01-16			
	Overall	3Yr	5Yr	10Yr	
Morningstar Rating™	★★★★★	★★★★★	★★★★★	—	
Morningstar Risk	Average	Average	Average	—	
Morningstar Return	High	Above Avg	High	—	

MODEL ACCOUNT PERFORMANCE

Bull Cipher is included within the Morningstar “Tactical Allocation” category within their Separately Managed Accounts database. While every strategy within the category employs a slightly different methodology, they all (in the words of Morningstar) “...shift between asset classes in an attempt to benefit from shorter-term changes in market trends.” The strategies intend to reduce risk by moving out of riskier asset classes – generally equities – and into lower-risk assets – generally bonds or money market funds.

Over the last five years the results are not exactly eye-popping. The table below consists of the 10 largest funds (by AUM, as of 4.30.2024) funds in the Morningstar Tactical Allocation category.

Name	2023	2022	3-Year	5-Year	Risk (3Yr)	Sharpe
Q3 - Bull Cipher	17.1%	4.2%	11.6%	9.2%	8.3%	1.4
Goldman Sachs Tactical Tilt	6.0%	-15.5%	2.8%	3.6%	4.2%	0.67
Kensington Dynamic Growth	15.3%	-9.0%	7.0%	N/A	13.0%	0.54
Horizon Active Asset Alloc	17.0%	-17.1%	2.9%	7.8%	16.7%	0.17
Horizon Active Risk	16.5%	-19.5%	1.8%	4.8%	13.1%	0.14
PIMCO All Asset	8.0%	-11.9%	0.0%	4.4%	10.8%	0
BNY Mellon Glob Real Return	2.6%	-8.6%	0.0%	3.8%	6.9%	0
Columbia Adaptive Risk	8.6%	-15.1%	-0.4%	3.5%	10.2%	-0.04
Invesco Balanced Risk	6.0%	-15.0%	-1.0%	3.0%	11.0%	-0.09
Columbia Thermostat	11.4%	-13.1%	-1.6%	6.9%	9.0%	-0.18
SEI Multi-Asset	6.8%	-15.5%	-3.2%	1.6%	12.4%	-0.26
Average of Top 10	9.8%	-14.0%	0.8%	4.4%	10.7%	0.09

Source: Morningstar, all data through 4.30.2024, 3 and 5-year returns annualized. Q3 results gross of fees.

In an unusual year, both bonds and stocks suffered double-digit losses in 2022. The significant losses in experienced by the tactical funds seem to indicate a certain lack of risk control in the strategy methodology. Bull Cipher, on the other hand, was able to produce a profit in 2022 through a combination of timely entries and exits along with the yield collected on cash while patiently waiting for opportune moments.

When the market recovered in 2023, Bull Cipher still outperformed as it continued to participate in short-term moves after market dips. The top 5-year annualized return, and highest risk-adjusted return (Sharpe) measure for Bull Cipher is especially telling as it encompasses two bear markets as well as three years of above-average positive returns.

Above average returns do not have to come with higher risk.

USING BULL CIPHER IN A PORTFOLIO

Advisors commonly ask how to best incorporate Bull Cipher within portfolio of equities and bonds. For example, consider the traditional 60/40 Equity-Income portfolio and what might be a suitable weighting for Bull Cipher.

The table below illustrates allocating 20% to Bull Cipher by taking 10% from both Equities and Income.

	Return	Risk	Sharpe	Drawdown
50/30/20 Blend	9.2%	8.4%	1.10	-24.1%
“Traditional” 60/40 Blend	6.8%	9.7%	0.70	-32.5%
Bull Cipher	17.7%	12.1%	1.46	-15.7%
S&P 500 Index	8.4%	15.8%	0.54	-51.0%
Aggregate Bond Index	3.5%	4.2%	0.84	-17.6%

Data from Jan 1998-Apr 2024. Returns annualized using monthly data points. Aggregate Bond: VBMFX, S&P 500: VFINX.

While there is no “one size fits all” solution for all clients, generally we find that a 20% allocation is appropriate since it will not significantly alter the existing risk profile and may, in fact, enhance return potential as demonstrated by the hypothetical results.

Correlation with Other Assets

We can observe how Bull Cipher correlates with different asset classes such as stocks, bonds and market neutral strategies using backtested data going back over 25 years. Remarkably, Bull Cipher exhibits a slight negative correlation to *all* three asset classes. At first glance this might not seem overly compelling, it does imply that adding Bull Cipher to a portfolio of stocks and bonds should reduce overall risk.

	Agg Bond	S&P 500	Market Neutral	Bull Cipher
Agg Bond	1.00			
S&P 500	0.09	1.00		
Market Neutral	-0.09	0.04	1.00	
Bull Cipher	-0.04	-0.02	-0.18	1.00

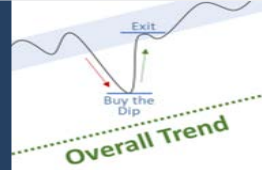
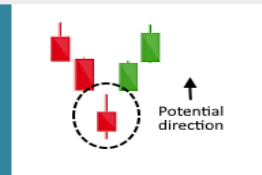

Data from Jan 1999-Apr 2024. Agg Bond: VBMFX, S&P 500: VFINX, Market Neutral: VMNFX.

ENHANCEMENTS

In April of 2023, meaningful enhancements were made to Bull Cipher to provide more trading opportunities for the model. Prior to the change, Bull Cipher evaluated a single 10-day time window for measuring the range and evaluating trading opportunities. While this approach was extensively tested and had performed admirably, it spends long periods of time out of the market. In fact, this 10-day signal results in market exposure for less than 25% of a calendar year on average. Time out of the market is a form of risk control, but too much time also has an opportunity cost of missing profitable opportunities. The model also would only be long a one index at a time – either the NASDAQ 100 or S&P 500.

To investigate enhancements, we looked at incorporating additional mean-reversion indicators that focused on shorter time frames. As the result of extensive research, we found two shorter time windows that looked very promising; a 3-day measure, and a 1-day measure. We apply the 3-day signal to the S&P 500 and the 1-day to the NASDAQ 100.

Investment Process

Signal	Index Monitored	Analysis Period
 <p>SPX/NDX 10-Day</p>	S&P 500 / NASDAQ 100	10-Days
 <p>SPX 3-Day</p>	S&P 500	3-Days
 <p>NDX 1-Day</p>	NASDAQ 100	1-Day

The signal first determines the market environment. If bullish, it waits for a short-term pullback. If bearish, it needs a similar drop but for an extended period of time.

Short-term signal evaluating the S&P 500 over the course of three market days. Index needs to exhibit a multi-day pullback for a signal to activate.

Ultrashort-term signal evaluating the NASDAQ 100 for a one-day reversal. Index needs to close in the lower end of its range for a signal to activate.

All sell signals are generated after the market recovers to a predetermined level. Most trades last 1-7 days.

Adding these two new signals to the mix not only improved performance from a risk and return standpoint it also diversified holdings from one to two possible positions (NASDAQ 100 and S&P 500). The time in the market increased (fully exposed 30% of the time, half-exposed 30%) without increasing risk metrics.

DEFENSIVE MECHANISMS

Bull Cipher, even with the enhancements described above, still spends extended periods of time partially invested or fully invested in stable-value or similar “cash equivalents.” As such, the algorithm has an inherent measure of patience - standing ready to enter only when high probability opportunities appear present. When Bull Cipher is long the equity indexes; it tends to be only for a few days at a time. The model will often take profits quickly after a bounce of significant magnitude.

“ *ready to enter only when high probability opportunities appear present.* ”

Adverse conditions for the strategy would be present if the market were to continue closing near the lower end of its trading range for an extended period without any reversion back to the recent range. As a result, Bull Cipher would experience a losing trade.

This possibility often leads to questions about considerations for stop-loss mechanisms in the model. Various types of stop-loss indicators were researched extensively. Results were that often, a trade would be exited at a low point just before a market bounce. Hence the tension held in a rubber band, emotions may be strong, and present for longer than expected. Though in most cases, when the crowd is panicking, it is a good time to be buying.

AVAILABILITY

Bull Cipher, as a Separately Managed Account is available on the following platforms:



The Mutual Fund counterpart, Q3 All-Season Systematic Opportunities (QASOX) can be purchased at the following custodians:



If you do not see a platform or custodian listed that you have questions about, please reach out to us and we will look into the availability of Bull Cipher.

DISCLOSURES

All data is considered hypothetical unless otherwise noted. Hypothetical performance results are derived from the benefit of hindsight and therefore have certain inherent limitations. Unlike an actual performance record, simulated trades do not represent actual trading. Also, since the trades have not actually been executed, the results may have over or under compensated for the impact, if any, of certain market factors such as lack of liquidity. Strategies were not necessarily available to invest in for the periods presented. Hypothetical testing does not involve financial risk and therefore may not necessarily depict an investor's ability to tolerate such risks.

These results do NOT necessarily represent actual trading or client experience, and do not necessarily reflect the impact of decision making or economic or market factors experienced during the actual management of funds. The actual return may be lower or higher than the performance quoted. Annual returns are compounded monthly. Performance between selected dates may be misleading and may not be able to be achieved in the future based upon changing market conditions. Benchmark data is obtained through Morningstar and reflects the reinvestment of dividends. Results do not predict the performance of the investment strategy. Performance for taxable accounts would be negatively affected had taxes been deducted. As individual tax rates vary, taxes are not considered in the results shown.

Historical data used in testing is provided by Commodity Systems, Inc. (CSI) and Morningstar, and is believed to be reliable but cannot be guaranteed. Such data may include indexes which are not directly investable and are not reflective of trading costs that an actual fund would incur. Data vendors may adjust their historical data (splits, capital gains, dividends) after the initial publishing of such data. This may result in returns which may differ from those included herein.

Current and prospective clients should not assume that future performance will be similar. No representation is being made that any client will or is likely to achieve results similar to those presented herein. Q3 reserves the right to make enhancements to the strategy's methodology, which could negatively impact future performance. Review Q3's Form ADV 2 for additional information. This presentation is provided for informational purposes only and there is no assurance objectives will be realized. While research reports may provide general investment information from sources deemed reliable it is in no way a solicitation to buy or sell any security. Past performance is not indicative of future results. There is risk of loss with all of Q3's investment strategies and such strategies may not be suitable for all investors. No graph, chart, formula or other device can, in and of itself, be used to determine which securities to buy or sell, or when to buy or sell such securities, or can assist persons in making those decisions.

ABOUT Q3 ASSET MANAGEMENT

Established in 2006, Q3 Asset Management is an independent Registered Investment Advisory firm offering a diverse blend of quantitative investment strategies. Our mission is to provide financial advisors and their clientele with an investment approach that maintains the ability to adapt to changing market conditions. We are firm believers that true diversification lies in combining a strategic blend of non-correlated investment programs.

Through the elimination of fear and greed, we employ a non-emotional approach towards investing. Our objective is not necessarily to outperform the market each year, but instead to construct a portfolio that maintains the ability to add value in both positive and negative market environments. We expect longer-term performance to maintain a level of non-correlation relative to the broader equity markets.

Q3 Asset Management is located in Birmingham, Michigan. Our investment advisory services are offered through a variety of providers including Axos Advisor Services, Pershing, and Schwab. Additional information on Q3 Asset Management can be found at www.q3tactical.com.

