

## Strategy Description

Bull Cipher is a long/neutral strategy that invests in the S&P 500 and Nasdaq 100. The strategy focuses on mean-reversion based setups. Signals are generated on a daily basis and tend to be short-term in nature. Bull Cipher is an absolute return model that seeks a positive rate of return over the course of a calendar year regardless of market conditions. The strategy may be positioned in cash or money market funds for extended periods of time, waiting for high probability opportunities.

Bull Cipher has evolved to include three distinct algorithms, each complimentary to the next. No individual signal will make up more than 50% of the total allocation - meaning that in order to be fully invested, at least two of the three signals must trigger. The first algorithm monitors the S&P 500 and Nasdaq 100 over a trailing 10-day period. As a result, trades are less frequent with expected exposure at 22%. The second algorithm looks for setups over a trailing 3-day time frame and focuses on the S&P 500. This signal is expected to be invested roughly 40% of the time. Finally, the third and most active algorithm looks at the Nasdaq 100 on a 1-day time frame. Trades last just over 2 days on average, and the signal is expected to be invested roughly 45% of the time.

## Q3 Risk Gauge



The Q3 Risk Gauge is a proprietary measure which incorporates downside risk, volatility and drawdown of an investment.

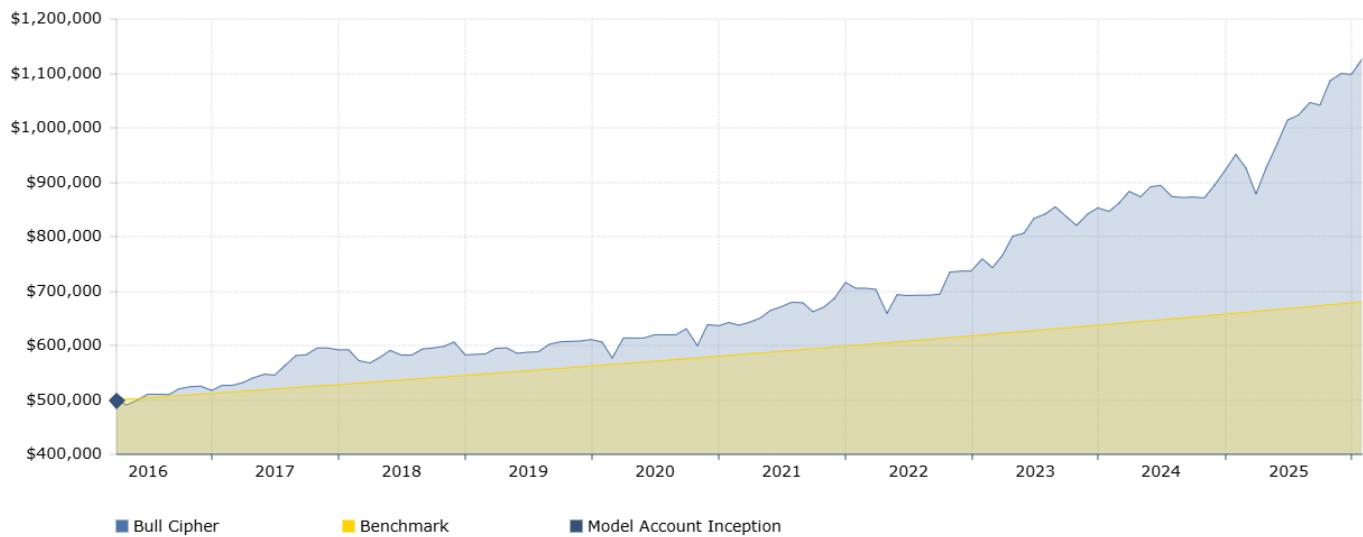
## Strategy Highlights

- Bull Cipher enters the market on mean-reversion setups which occur during pullbacks
- The strategy offers a high degree of noncorrelation, which makes it a suitable complement to trend following models
- Signals are generated on a daily basis and may be short-term in nature. The strategy is expected to be 50% or 100% invested in equities roughly 60% of the time
- When the model is invested, it holds Nasdaq 100 and/or S&P 500 index funds

## Strategy Details

Start Date:	04-01-2016
End Date:	01-31-2026
Model Account Inception:	April 2016
Evaluation Frequency:	Daily
Invests In:	Mutual Funds
Starting Capital:	\$500,000
Fee Rate:	1.2%

## Hypothetical Growth of \$500,000



## Annualized Performance

Strategy	Q3 Style	1 Yr.	3 Yr.	5 Yr.	10 Yr.	Incept.	Incept. Date
Bull Cipher	Tactical	18.6%	14.1%	11.9%	N/A	8.6%	2016-04-01

## Performance Target

Each Q3 Strategy seeks a risk-adjusted return that meets or exceeds a corresponding risk-adjusted return of the S&P 500. We define this value as our Benchmark. In order to calculate the Benchmark, a Target Ratio must be defined.

The Target Ratio is a multiplier that uses Q3's proprietary Risk Score in order to determine a strategy's level of risk relative to the S&P 500. For example, a strategy with a Target Ratio of 60% attempts to achieve an average annual return of greater than 60% of the S&P 500's long-term annualized rate of return, and do so with less risk.

$$\text{S&P 500 Return}^* \times \text{Target Ratio} = \text{Benchmark}$$

10.2%                    x                    31.0%                    =                    3.2%

PLEASE REVIEW IMPORTANT DISCLOSURES INCLUDED IN THIS RESEARCH REPORT. PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

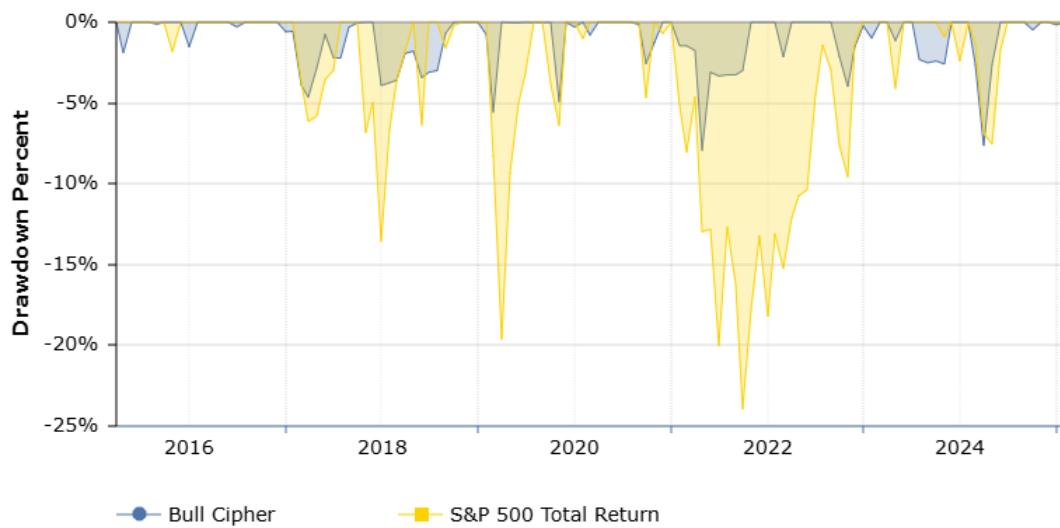
**Reward Statistics**

Bull Cipher	
Return (Ann)	8.6%
% Winning Periods	69.5%
Average Gain	1.7%
Upside Deviation	5.7%
Alpha	5.6%
Upside Capture	37.1%
Downside Capture	15.3%

**Risk Statistics**

	Total Bond	Bull Cipher	S&P 500
Standard Deviation	5.1%	7.8%	14.9%
Downside Deviation	0.0%	5.7%	10.5%
Max Drawdown	-17.6%	-7.9%	-24.0%
Average Loss	-4.2%	-1.6%	-1.1%
Sharpe Ratio*	-0.10	0.80	0.90
Beta	N/A	0.20	1.00

Computations all based on monthly data. Ratios assume 2% as a risk-free rate.

**Drawdown Chart**

**Monthly Performance Table**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Yr. Ret
2016				-1.9%	2.0%	2.0%	0.0%	-0.1%	2.1%	0.7%	0.2%	-1.5%	3.5%
2017	1.8%	0.0%	1.0%	1.6%	1.2%	-0.3%	3.1%	3.4%	0.2%	2.2%	0.0%	-0.6%	14.4%
2018	0.0%	-3.4%	-0.8%	1.9%	2.2%	-1.4%	0.0%	2.0%	0.3%	0.6%	1.3%	-3.9%	-1.6%
2019	0.2%	0.2%	1.7%	0.2%	-1.7%	0.3%	0.1%	2.4%	0.7%	0.2%	0.1%	0.5%	4.9%
2020	-0.8%	-4.8%	6.4%	0.0%	0.0%	1.0%	0.0%	0.0%	1.8%	-4.9%	6.4%	-0.3%	4.1%
2021	0.9%	-0.8%	0.8%	1.3%	2.1%	1.1%	1.2%	-0.1%	-2.4%	1.4%	2.3%	4.3%	12.5%
2022	-1.5%	0.0%	-0.3%	-6.3%	5.2%	-0.2%	0.1%	0.0%	0.3%	5.8%	0.3%	0.0%	3.0%
2023	3.1%	-2.1%	3.1%	4.6%	0.7%	3.4%	1.0%	1.6%	-2.1%	-1.9%	2.6%	1.3%	15.7%
2024	-0.8%	1.8%	2.5%	-1.1%	2.1%	0.3%	-2.3%	-0.2%	0.1%	-0.2%	2.7%	2.9%	7.9%
2025	3.3%	-2.6%	-5.2%	5.4%	4.8%	4.4%	1.0%	2.2%	-0.5%	4.3%	1.2%	-0.2%	19.3%
2026													2.7%

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## Disclosures

Performance results are net of advisory fees. As various platforms have different fees, results may vary depending on where the account is custodied. To the extent that a model account holds any of Q3's proprietary funds, the full management fee of the fund(s) is credited back to the account. On any platform for which fee credits do not occur, actual performance results may be slightly lower than what is illustrated in this report. Fees of anything less than Q3's maximum rate may not reflect the impact that fees have on the compounding effect of returns. Additional fees may apply on certain platforms and may impact performance negatively. 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.

All calculations are based on time-weighted geometrically linked returns. Data for strategies is derived from "model account performance." The selection of "model accounts" is based on the longevity of the account along with identifying those accounts with minimal additions and withdrawals. It is possible that a model account will change based on a number of factors including the termination of the original model account, withdrawals, or a strategy change. For most strategies, model accounts are representative of an account held by a principal of Q3 and custodied at Axos Advisor Services. Q3 may have had a minimal portion of total assets in a particular strategy over certain time periods. Factors that may negatively impact performance expectations include the size of the account, commissions charged and where the account is held. Performance for taxable accounts would be negatively affected had taxes been deducted. As individual account types and tax rates vary, taxes are not considered in the results shown. Multi-Strategy research reports should be reviewed in conjunction with the individual strategy reports for those programs referenced. For illustration purposes, fees are deducted from each quarter end month, while actual advisory fees are deducted approximately two weeks after each quarter end month. Depending on the performance of the model between these two dates, it's possible that the model account achieves a slightly better or worse rate of return, however, such differences are expected to be negligible.

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## Definitions

**Alpha:** Measures the difference between the investment's returns and expected performance given its level of risk (as measured by beta). A positive alpha indicates the investment has performed better than its beta would predict. A negative alpha indicates the investment has underperformed.

**Q3 Risk Score:** Proprietary measure:  $(\text{Std Dev} + \text{Drawdown}) + (2 \times \text{Downside Deviation})$ . Data for the S&P 500 and Total Bond goes back to 1989 in order to represent multiple market environments. The risk gauge is capped at 100.

**Standard Deviation:** Measures the volatility associated with an investment. The higher the figure, the more volatility. If an investment has an annual return of 10% and a standard deviation of 15%, one might conclude the "average range" of the return would be -5% to 25% (10% +/- 15%).

**Upside/Downside Deviation:** Measures the Standard Deviation of only the up/down periods.

**Max Drawdown:** Measures the largest negative change in value of an investment, from its highest peak to its lowest valley.

**Sharpe Ratio:** Also referred to as "risk-adjusted return." It is calculated by subtracting a "risk-free" rate (2%) from the annualized rate of return (of the investment), and then dividing this figure by the standard deviation. The higher the number, the better.

**Beta:** Measures volatility of an investment in comparison to a benchmark. It can be thought of as the tendency of the investment's returns to respond to swings in the benchmark. A beta of 1 indicates that it should move similar to the benchmark. A positive number less than 1 means it should be less volatile than the benchmark. Greater than 1 means it should be more volatile than the benchmark. A negative beta means that there could be inverse correlation between the investment and the benchmark.

**Up/Down Capture Ratio:** Measures the relative performance of an investment in up/down periods. For example, an upside ratio of 120% means that the investment returned 120% of the benchmark's return during up periods. Up Ratios of over 100% are desirable, as Down Ratios under 100% are.

**Model Account Inception:** The date that a model account was first used to generate performance data. In all cases, model account data is reflective of an account held at Axos Advisor Services. For Multi-Strategy Reports, refer to individual strategy reports for Model Account Inception dates.