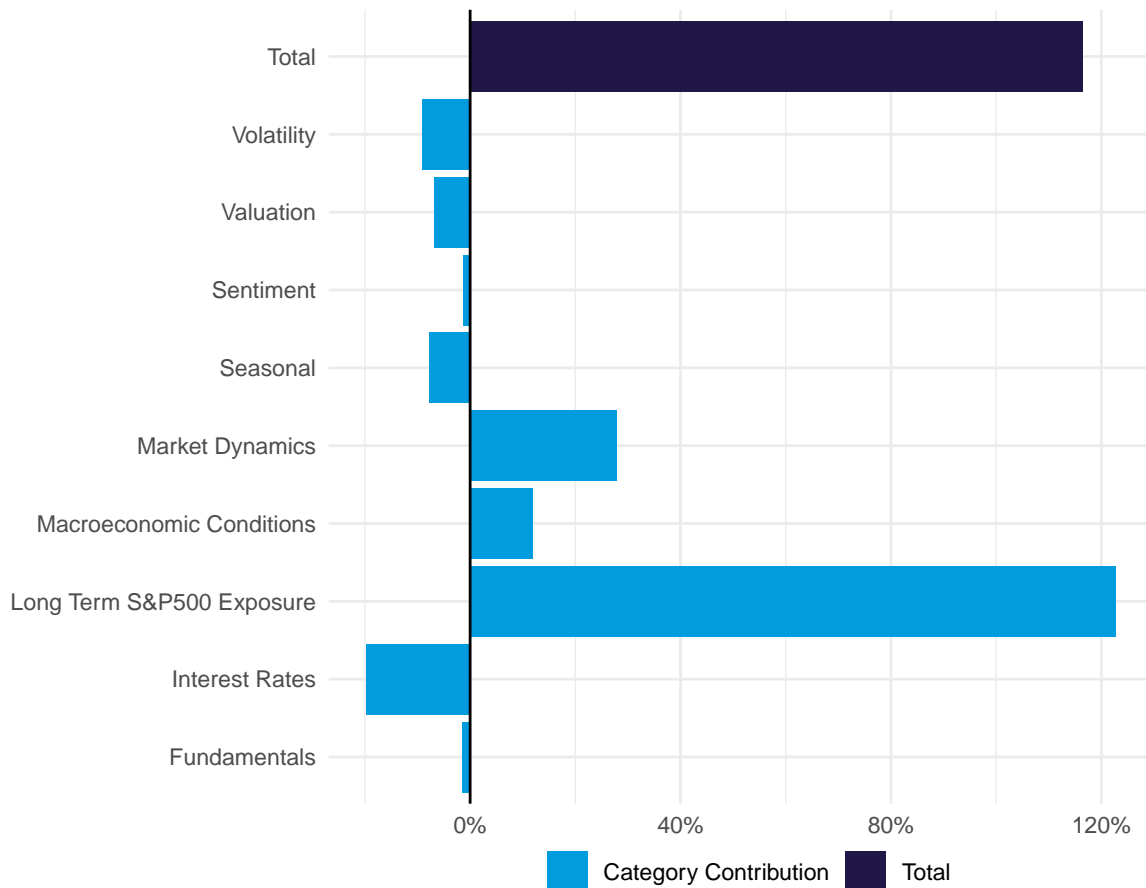


Market Exposure: 116%

2023-10-20

The table below shows how we arrive at our daily stock market exposure. We base this on an amalgamation of signals from several models that contain over 40 individual inputs. Model conclusions are interpreted in the 9 broad categories shown below. A negative category contributes to a bearish view of the U.S. market, whereas a positive contribution suggests that returns will be above their historical average. Category contribution values are summed to arrive at our daily market exposure.



Glossary

- **Fundamentals** - An aggregate of U.S. market fundamental indicators. These may include earnings yields, sales, R&D spending, and others.
- **Interest Rates** - Signals derived from various interest rates recorded in the market (BAA yield, AAA yield, Treasury Rates).
- **Long Term S&P500 Exposure** - The core S&P 500 exposure of our market-timing models. The target is to match or reduce the long-term volatility of the market, and the long-term exposure might change if the models and the strategy's realized volatility call for increases or decreases of our core allocation to the market.
- **Macroeconomic Conditions** - We consider a variety of macroeconomic indicators, including lending conditions, delinquency rates, inflation, unemployment rates, shipping and commercial activity, consumption levels, industrial production, commodity markets, housing starts, and many others.
- **Market Dynamics** - A composite recommendation derived from momentum, volatility, implied correlation, and higher moments or return distribution.
- **Seasonal** - Seasonal anomalies such as Turn of the month, FOMC, Sell-in-May.
- **Sentiment** - We consider a variety of sentiment indicators from multiple sources. These include sentiment measures from a variety of surveys as well as market-implied sentiment measures.
- **Valuation** - A measure of over or undervaluation of the aggregate U.S. market. We consider Price to Earnings, Price to Total Yield (Dividends & Buybacks), and Price To Book ratios in our analysis.
- **Volatility** - Indicators derived from the implied and realized volatility levels and their higher moments observed in the U.S. markets.

Today's positions

Based on the model recommendation, we are allocating our capital in the following positions.

	Weight
SPY ETF	106%
UVXY ETF	0%
SPX Options	10%
Total	116%

Strategy Summary

Hull Tactical aims to provide long-term capital appreciation and income generation for its clients. This is achieved through an ensemble of quantitative models that attempt to forecast market returns on horizons between one day and six months. Our approach is rooted in identifying and combining an array of signals spanning statistical, behavioral/sentiment, technical, fundamental, event-based and economic data sources. Through the use of quantitative modeling that utilizes statistical techniques ranging from ordinary least squares and k-nearest neighbors, the portfolio managers continually investigate and evaluate the evolving complex relationships between these factors and the market.

The market-timing model recommendation can be realized by taking positions in the S&P 500-related ETFs, futures, or volatility products. The income generation portion of the strategy is provided through an options overlay which aims to capitalize on mispricing in the options market that occurs due to varying utility preferences of different market participants. Strategy exposure to the U.S. stock market can range from short 100% to long 200%. Volatility scaling was introduced in June 2017 to target no greater than 100% of the long-term volatility of S&P500.

Hull Tactical's strategy has evolved over time. At launch, we utilized the output from a single six-month equity risk premium (ERP) model. In the present day, we now also incorporate the output of numerous shorter-term models. Below are links to academic articles that delve deeper into our methodologies and thinking of the market.

["A Practitioner's Defense of Return Predictability" \(2015\)](#)

["Return Predictability and Market-Timing: A One-Month Model" \(2017\)](#)

["Seasonal Effects and Other Anomalies" \(2018\)](#)

["The Risk Reversal Premium" \(2021\)](#)

["Option Pricing Via Breakeven Volatility" \(2021\)](#)



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