

Trading Strategies Summary

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The goal of this document is to outline different trading strategies implemented with the Metaculus data on the VIX, SPY, and their derivatives. Each strategy only trades 1 stock per action and was optimized for the maximal Sharpe Ratio.

Metaculus Momentum

This simple strategy involves opening a position when the Metaculus series increases and closing the position when it decreases. This strategy only allows for one open position at a time.

	VXX	SPY
PnL	\$38.10	\$86.85
Sharpe Ratio	-2.06	-4.89
Percent Underwater	6%	27%

Table 1: Summary of results from 1/1/2020 to 4/1/2022

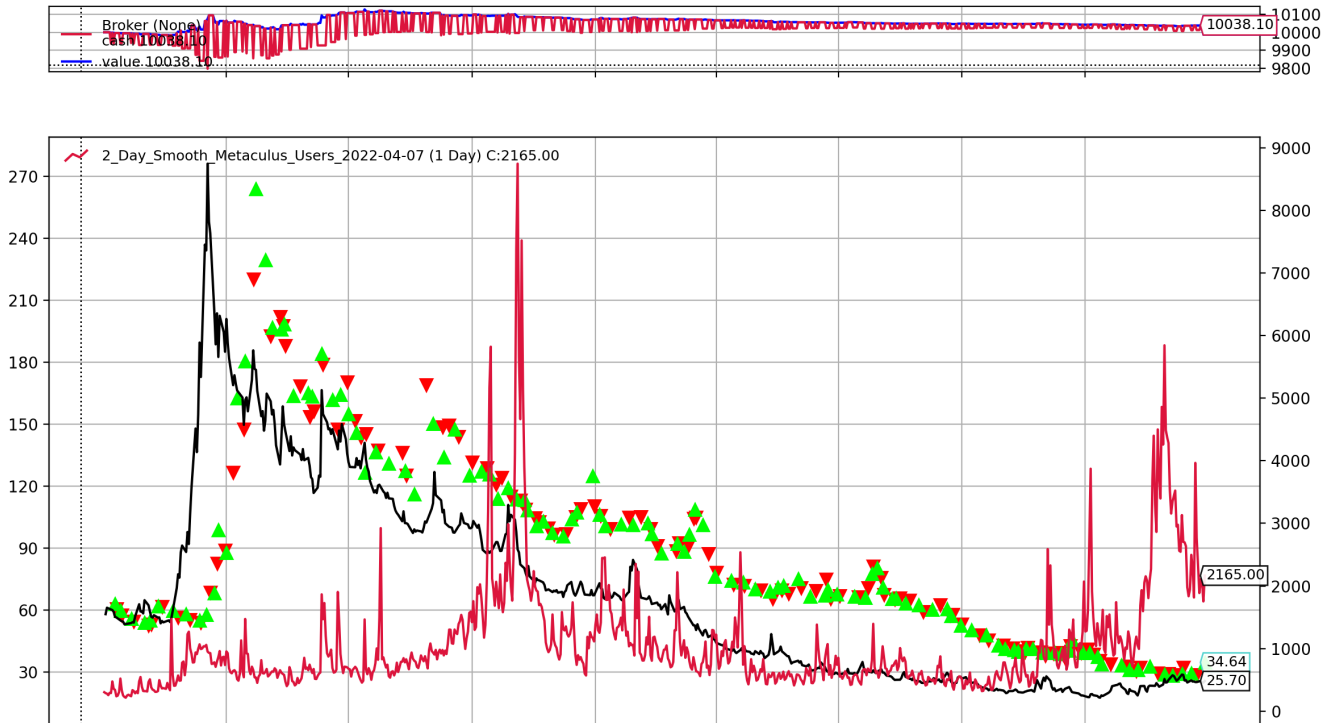


Figure 1: VXX and Metaculus Trading Plot

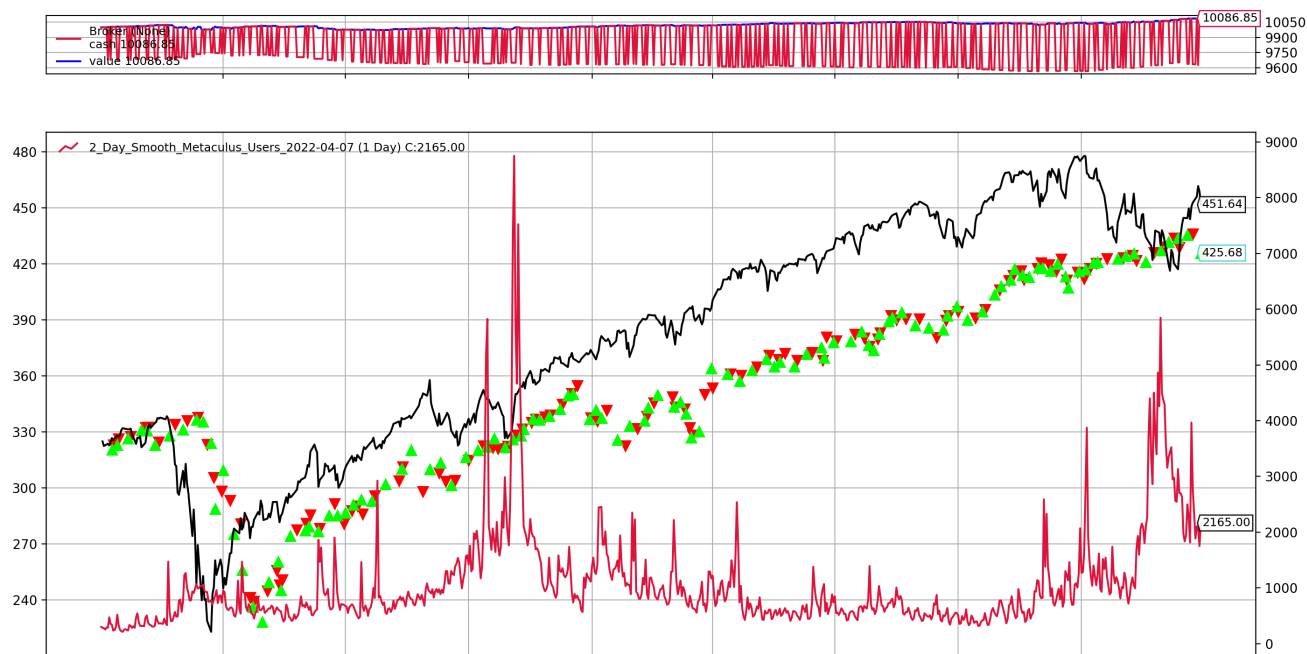


Figure 2: SPY and Metaculus Trading Plot

Metaculus Moving Average

This strategy involves a slow and a fast moving average indicator on the Metaculus series. For the SPY, when the fast moving average passes the slow moving average (indicating populace uncertainty), we short as we expect volatility to increase. We then close our positions when the slow moving average passes the fast one. Similarly, for the VXX, we trade using the opposite strategy. The fast moving average passing the slow one is interpreted as a signal to buy while the slow passing the fast is a signal to close the position. In both cases, if the position is open for a pre-determined hold period, it is immediately closed. We ran optimization on the slow, fast, and hold-periods to find the following results:

	VXX	SPY
Slow Moving Average	66	50
Fast Moving Average	10	16
Hold Period	16	19
PnL	\$132.35	\$96.30
Sharpe Ratio	-1.16	-1.20
Percent Underwater	1%	0%

Table 2: Summary of results from 1/1/2020 to 4/1/2022

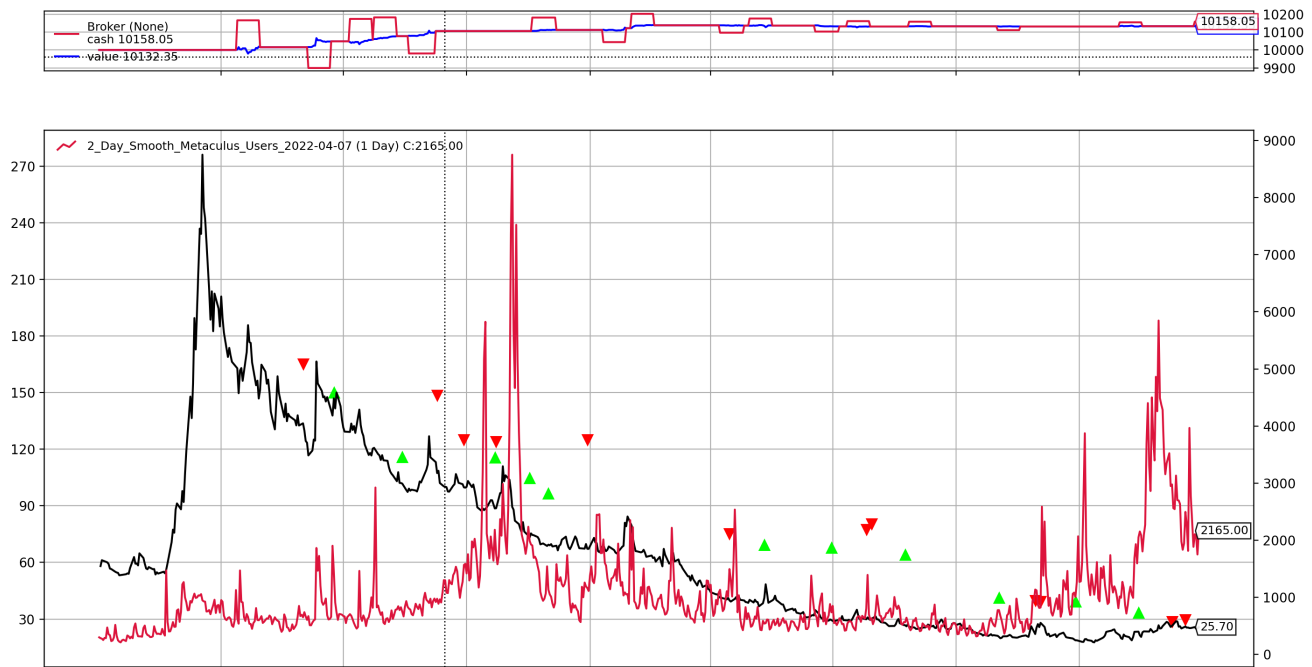


Figure 3: VXX and Metaculus Trading Plot

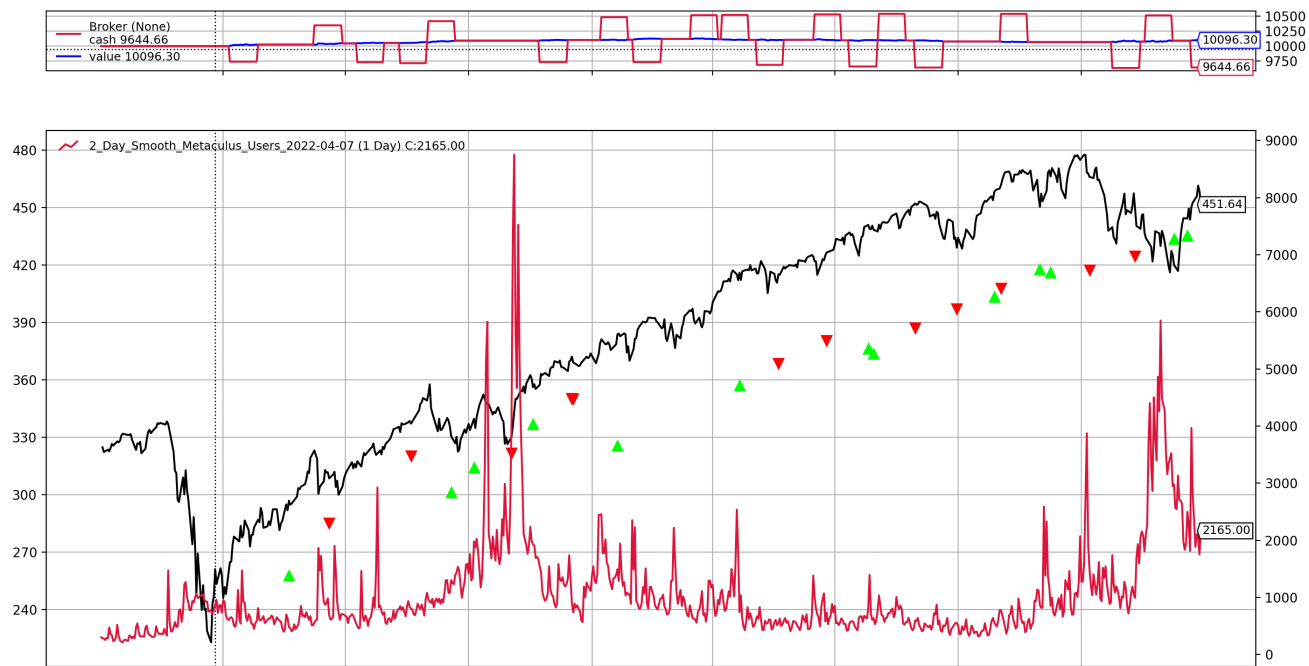


Figure 4: SPY and Metaculus Trading Plot

Metaculus Lead

This strategy involves monitoring the percent change over the course of 5 days in Metaculus user data. If the percent increase of users surpasses a pre-determined threshold, the strategy will opens a position number of days later. This position is then closed once the metaculus user data drops by at least the pre-determined threshold. Optimization tests on the percent change threshold and leading period yielded the following results:

	VXX	SPY
Lag	11	21
Threshold	20%	50%
PnL	\$252.20	\$152.79
Sharpe Ratio	-0.12	-0.77
Percent Underwater	0%	8%

Table 3: Summary of results from 1/1/2020 to 4/1/2022

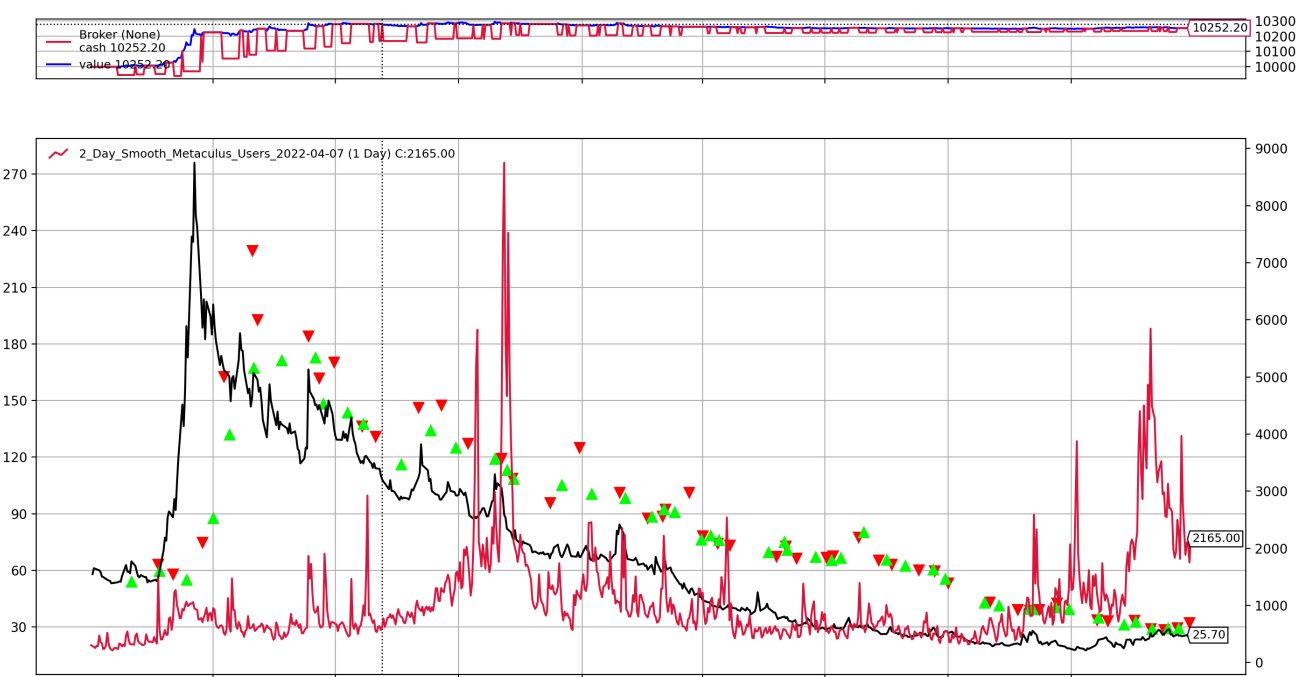


Figure 5: VXX and Metaculus Trading Plot

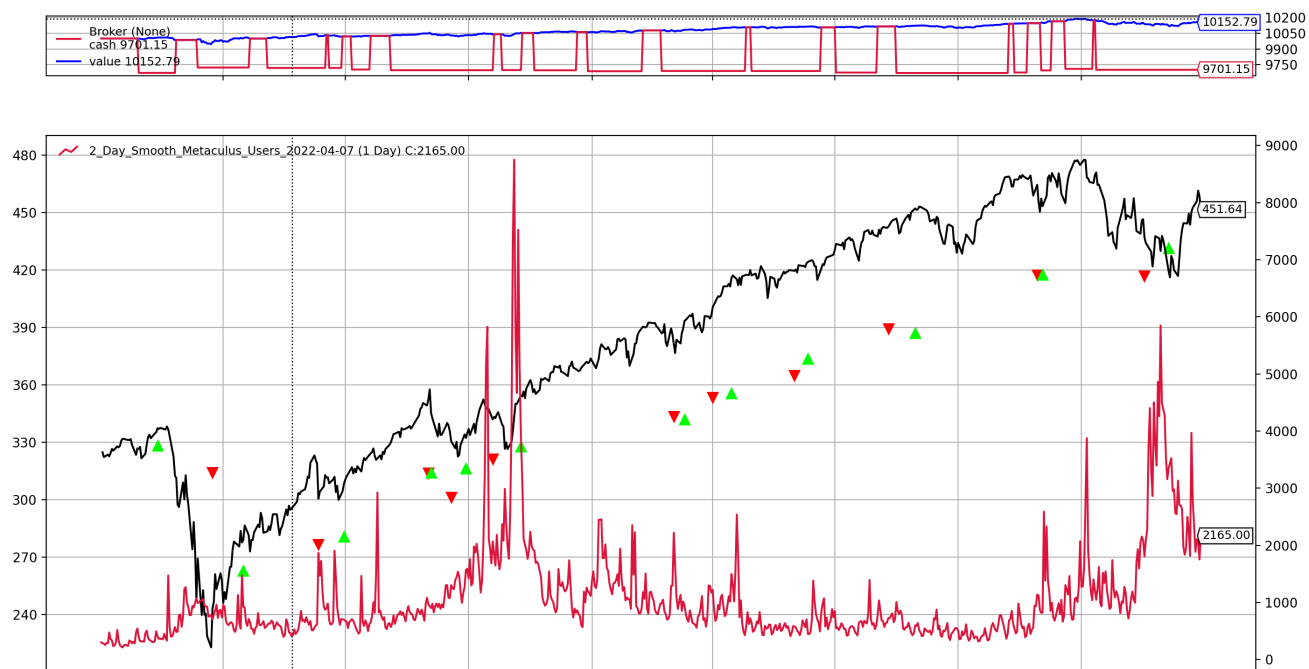


Figure 6: SPY and Metaculus Trading Plot