

Ember Fund

Bitcoin Price Action:

Bitcoin remained relatively stable in the month of June if looking at the closing price for the day with just a few moves beyond 3% in a single day with only one move beyond 5% on June 10th. At the beginning of the month, it broke the \$10,000 barrier but failed to hold the level and went back down to \$9400-\$9600 range where it remained for the rest of the month with one-day dipping below the \$9000 mark to \$8800 levels

Quant:

Balancing emotions and expectations

Many users have expressed concerns regarding the quant strategy and we want quickly recap the fundamentals of the strategy. The strategy was created as a longer-term investment. Since 2017, the average holding period between trades has been roughly 10 days, 9.99 to be exact. Which means it's less than 3 trades a month. As with any trading strategy or algorithm, we are always trying to balance efficiency with absolute performance. In the case of decentralized trading, frictions can add up, so limiting trades becomes more important than timing every local low or local high. True to form, the algorithm made only three trades in June. On June 12th the quant model exited a 14-day holding period trade from May which resulted in a -1.36% loss. 11 days later it entered a trade and exited two days later resulting in a -4.85% loss. Historically, the model is known to have a trade success rate of just 38%, however, the long term strategy works because on average winning trades make approximately 21.9% and losing trades average around -2.8%. Quantitative investing works because it methodically limits losses while keeping investors "in the game" for the big moves. Unfortunately, it is often difficult to "trust the model" during the range-bound periods. I often refer to these periods as "death by a thousand papercuts" as the model struggles to find direction, buying, or selling only to watch a trend fizzle out and reverse course. Similar to April and May, June was a range-bound market for bitcoin as most of the action took place in a side-ways manner. For Quant to work, it needs meaningful trends to develop.

Zooming Out

If capital was deployed in the quant model starting in 2017, the returns would be approximately 165% versus bitcoin at 88.67%. The model would have delivered those returns with slightly more than half of the volatility of Bitcoin, delivering a Sharpe ratio of 2.88 compared to Bitcoin's 1.03. These kinds of returns are very hard to achieve, and as they say in investing, there is no free lunch. As my friend Corey Hoffstein often points out, "no pain no premium." To earn superior returns, you have to be willing to suffer some form of pain. In the case of Quant, the "pain" is a sideways market.

Checking the model

Oftentimes the backtesting hucksters and novice model builders datamine for the "best" model historically. Understanding how to "break a backtest" is critical for any quant. First, consider the

outliers, did the model just get lucky. Those stats I mentioned above about an average win of 21% could easily be just the result of a single lucky trade. We built this model to withstand even the harshest scrutiny. As I have mentioned in previous letters, this strategy could not run hundreds of millions of dollars, but it is well suited for the individual investor who is nimble and can enter and exit positions quickly. So, let's eliminate the "luck" from the model, first let's chop off the 20% outliers for both sides of the spectrum. Of all the trades, let's remove the 20% of the trades that were best, and 20% of the worst trades. The stats are not much different. Average winning trade returned of 15.8% and an average losing trade was about 2.8%.

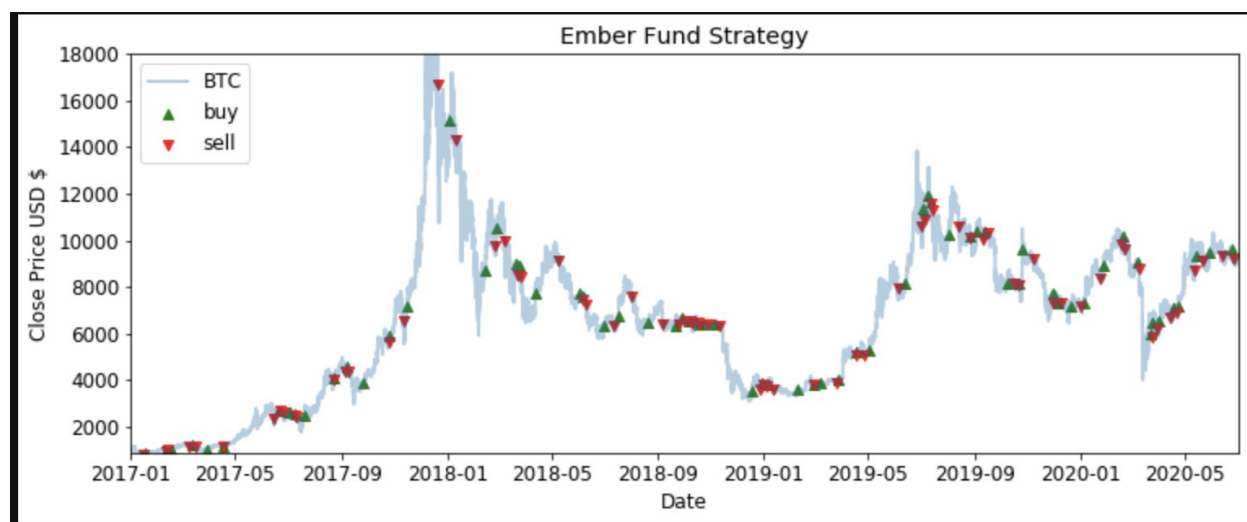
The model is not "broken" periods like May-June are perfectly normal for a model such as Quant. However, although the model has performed exactly as expected. We'd like to remind you that it is a defensive strategy and we ask that you allocate accordingly. Consider this as an addition to your portfolio, not your entire portfolio.

A Little Historical Analysis

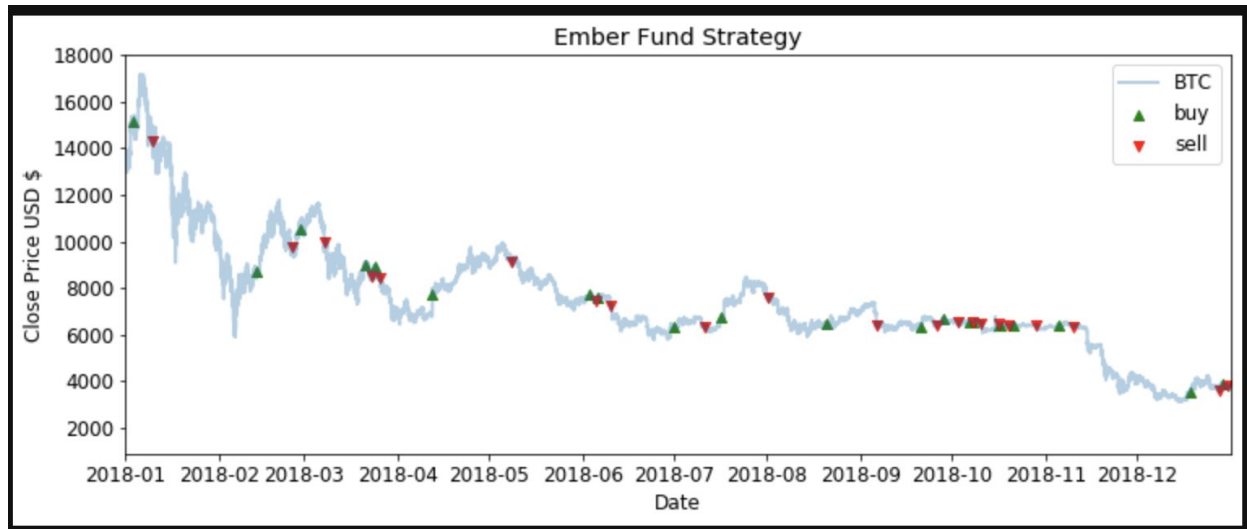
In the charts below, you will see many, many trades which either amount to small gains or losses, then some very significant trades that make up for all the pain and suffering as you wait.

Quant investing works if you let it work. Just like statistics, you can't experience a full distribution of wins and losses to get the average unless you sit through a full distribution of wins AND losses to get the average. It is painful, but with the pain, comes the premium. Thank you as always for your confidence. Please feel free to reach out to the team with questions.

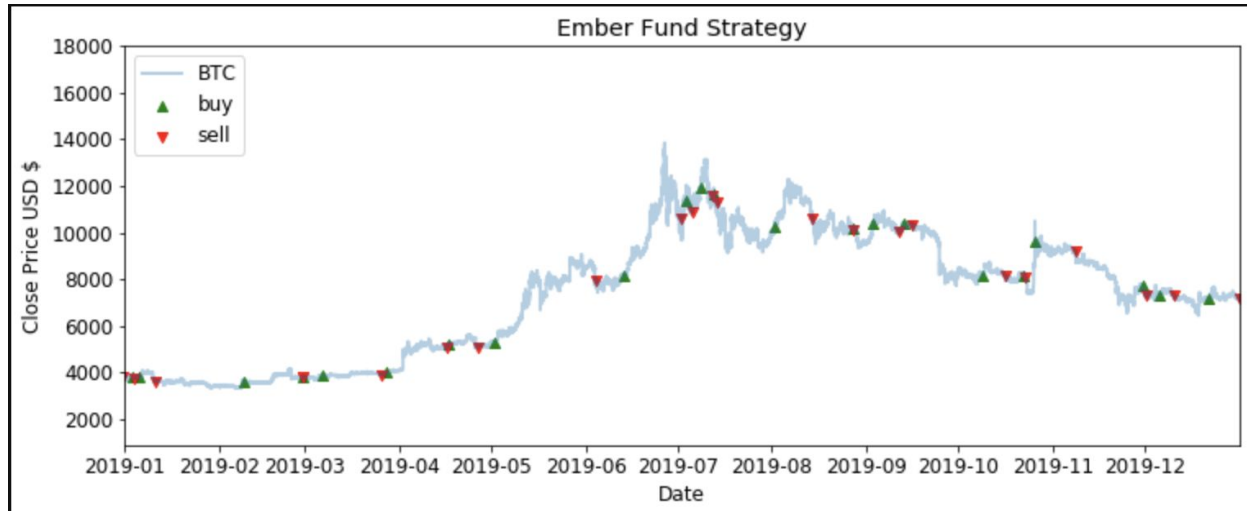
2017-Now



2018 Entire Year



2019 Entire Year



2020 June Trades

