

Dear Analysts,

After your continued success, we are excited to introduce your next task—one that ventures into the dynamic realm of cryptocurrencies, with a special focus on Bitcoin. The idea is to go long the Bitcoin and short futures on it. In an efficient market, the return of this strategy should be the risk-free rate. However, we want to challenge this hypothesis and see if there is an investment opportunity. Please do the following 4 tasks:

1. Review how Futures work. Futures can be confusing, so start by reviewing how they work and how they are priced.
2. Evaluate a carry trade strategy that goes long a Bitcoin ETF (e.g. IBIT) and short Bitcoin futures traded on CME (use the micro one MBT). We did this one already and want you to check our work. We will provide you with most of the required data. Try to find a time series with the rule-based ratio of Bitcoin per ETF share to correctly set up the hedge.
Also please account for the margin that is required for the futures.
3. Building on this initial exploration, refine the carry trade strategy by incorporating a timing element based on the **implied rate extracted from the spread** between the Bitcoin future and the spot price. The idea is to enter the trade when the implied rate is high and exit when the implied rate gets low. Your analysis should address: Does conditioning the trade on the implied rate enhance performance? What thresholds could be used? Would this be implementable? – we cannot have someone track this 24/7 and automation is probably also not possible.
4. Finally, investigate the interplay between Bitcoin and MicroStrategy (MSTR), given MSTR's notable exposure to Bitcoin. The idea would be to use MSTR as a leveraged instrument to buy exposure to Bitcoin. I.e. go long MSTR and short the BTC future. In your study, please explore: The correlation and potential co-movement between bitcoin and MSTR stock, the practical implications of leveraging an equity instrument (MSTR) as a proxy or complement to direct bitcoin exposure.

A useful article to better understand the MSTR is here:

<https://newsletterhunt.com/emails/126483>. The article doesn't relate to this strategy, but it may be a good read to better understand the drivers of the stock price.

Please present the performance metrics for each strategy, such as Sharpe ratios and average returns. Discuss what aspects of your approach worked well, any limitations you encountered, and how these outcomes can be interpreted in a broader context.

Based on your analyses, offer direct, data-driven suggestions. Is any of these strategies worth pursuing? We would like your recommendations to be clearly linked to your findings.

Wishing you the best of luck!

PMP Managers