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The predictive power of two different trading strategies on intraday Bitcoin data

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Abstract

In this study, we investigated the predictive power of technical analysis involving a candlestick pattern strategy and an advanced strategy incorporating multiple indicators on intraday Bitcoin price movements from 2021 to 2023. Our analysis delved into assessing forecasting capabilities focusing on trend reversals, and assessing their profitability, aiming to discern potential market inefficiencies. Results showed that basic candlestick patterns did not have strong predictive power but were slightly profitable, although with unsatisfactory metrics. In stark contrast, the advanced strategy had strong predictive power with results ranging from 3.30 to 4.18 standard deviations away from the null hypothesis and presented a notable 79.2% portfolio return over 901 days, significantly outperforming the 0.19% portfolio return of the buy-and-hold benchmark. Given the vast difference in predictive power between the two strategies, this study highlights the potential for more sophisticated methodologies in exploiting shortterm market inefficiencies, specifically in Bitcoin trading.

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