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Evaluation by the Aumann and Serrano performance index and Sharpe ratio: Bitcoin performance

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ABSTRACT

We compare Bitcoin performance based on the Aumann and Serrano performance index and Sharpe ratio assuming that asset returns follow the class of discrete normal mixture distributions. The Aumann and Serrano performance index can take into account higher moments of the underlying distribution of assets and is relevant for risk-averse investors. We evaluate Bitcoin performance based on the Aumann and Serrano index relative to the performance of other assets. Our evaluation shows that Bitcoin is rated highly by the Sharpe ratio but rated very poorly by the Aumann and Serrano index. We also find some stock assets can beat Bitcoin by the Sharpe ratio when an investment horizon is monthly.

KEYWORDS:

Performance evaluation | Aumann and Serrano index | Sharpe ratio | Bitcoin

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