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SUMMER SESSIONS

Refresh your knowledge of essential topics in investing

Introduction to Blockchain and Cryptocurrencies

Presented by Antionette Schoar

Key Points

- Blockchain is intended to be pseudo-anonymous, but there are ways we can learn more about the transactions and counterparties, in turn helping us understand the primary uses of Bitcoin.
- The majority of bitcoin transactions on the blockchain are from trading activity, which suggests that one of Bitcoin's main drivers of value is currently still speculative.
- Bitcoin investors should be aware that significant concentration of Bitcoin holders and miners poses potential risks.
- Price moves in Bitcoin tend to be correlated with market downturns, decreasing its appeal as a diversifier.

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In this session on blockchain and cryptocurrencies, Antionette Schoar addresses what we can learn from the blockchain in terms of participants, transactions, and the uses and risks of cryptocurrencies.

Although blockchain is intended to be pseudo-anonymous, there are ways to learn more about the transactions and counterparties. Some participants and miners make their addresses public, while other OTC brokers and large holders can be identified based on case patterns. The vast majority of transactions on blockchain are for trading activities, while illegal activity accounts for only a small share of transactions.

Currently, Bitcoin's main driver of value is related to trading or, more specifically, as a speculative asset. The statistical properties of Bitcoin returns also support this assessment: Despite its market cap rise, order flow continues to have a significant price impact. For example, from Makarov and Schoar (2020), a net buy order of 3000 BTC can lead to a 1% price increase. Also, volatility has not subsided despite Bitcoin's increased market size. In terms of providing diversification, Czaronis et al (2021) show that historically, Bitcoin's correlation with risky assets is positive during market downturns, which reduces its diversification potential.

There are several investment risks associated with Bitcoin. Ownership is concentrated, which can cause unwanted price impacts. Mining is also concentrated across a relatively small number of miners and physical geographic locations, which can pose further risks. Approximately 100,000 owners hold about 8.5 million BTC, which represents about half of the available holdings. Roughly 100 miners control about 50% of

the mining capacity. Moreover, as Bitcoin's price decreases, the number of miners generally decreases, which increases concentration risk. In terms of geographic risk, over 50% of miners are located in China.


Other risks include potential increases in regulation, which may affect Bitcoin values moving forward. Concentration of miners and large Bitcoin holders poses a systemic risk to the broader economy. And finally, the anonymity of the blockchain allows for a shadow economy that facilitates illegal activity, including tax evasion and manipulation.

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