

Understanding Bitcoin

DEMYSTIFYING CRYPTOCURRENCY AND BLOCKCHAIN

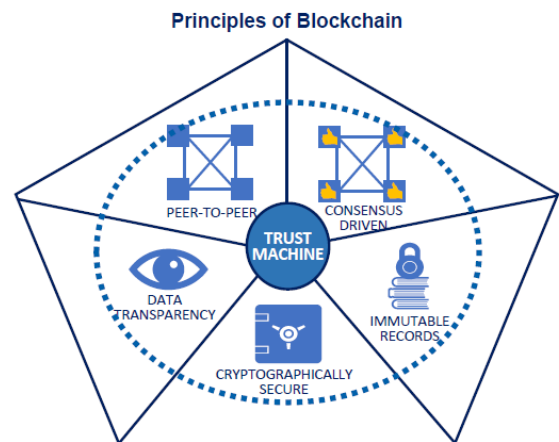
The recent volatile swings of the cryptocurrency market have brought bitcoin and other digital currencies, namely Litecoin and ether, to the forefront of investment news coverage. Below is a brief primer about this highly speculative asset class and the technology behind it.

WHAT IS BITCOIN?

Bitcoin is a digital currency created in 2009 as a way to bypass the traditional banking system. Its purpose allows people to perform transactions without the presence of a bank. Instead of depending on the financial entities to verify and facilitate transactions, Bitcoin operates using a decentralized digital ledger called a blockchain.

Transaction Process

1. All bitcoin transactions are recorded on a blockchain, which is decentralized across thousands of computers.
2. Records are entered into the digital ledger and verified by a network of "miners." Consensus among miners prevents fabrication or falsification of transactions.
3. Mining is the only way to add more bitcoin into circulation. Miners set up specific computers dedicated to verifying transactions on the blockchain and solving complex mathematical puzzles. For their efforts, they are rewarded with a predetermined amount of bitcoin.
4. Bitcoins, among other cryptocurrencies, are stored in digital wallets and have both a public key that is recorded on the blockchain and a private key for the owner.



Source: RBC Analysis

IS BITCOIN MONEY?

Bitcoin, currently the largest cryptocurrency by market cap, remains relatively illiquid and cannot be used at all vendors or locations. Bitcoin's volatility preempts it from being a reliable store of value or unit of account. In the last six years, bitcoin experienced 12 corrections greater than 22% and four corrections greater than 50%. By comparison, the S&P 500 has only gone through three corrections greater than 50% in the past 90 years.¹

Three Properties of Money
 Medium of Exchange
 Unit of Account
 Store of Value

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RISKS AND LIMITATIONS

There are further risks associated with bitcoin and cryptocurrencies, including their volume capacity and fee-based structure. In its current state, Bitcoin has a transaction capacity maximum of seven transactions per second.² Comparatively, Visa has the potential to process 24,000 transactions every second.³ Moreover, the algorithm for miners provides incentives to pick up and process larger transactions, meaning small purchases can take extended periods of time to be verified and accepted onto the blockchain.

Bitcoin arose to avoid the traditional finance system, but as it has grown in popularity, it has received mounting scrutiny from regulators. In the height of its 2017 rally, several countries considered fully banning bitcoin exchanges, and China ultimately outlawed the cryptocurrency. U.S. regulators are still debating how to approach this relatively new asset class; any decision they make will likely have a profound impact on its value.



INITIAL COIN OFFERINGS

Initial Coin Offerings (ICOs) are similar to Initial Public Offerings (IPOs) in that both seek to raise capital. IPOs do that by selling equity in a publicly traded company, but ICOs sell a new cryptocurrency or token instead. These tokens are often purchased using bitcoin or one of the larger cryptocurrencies. In turn, the new cryptocurrency is typically tied to the business operations of the firm conducting the ICO.

2017 saw more than 200 ICOs, which raised a total of more than \$3 billion.⁴ These digital coins are nearly effortless to create and often fall short of compliance standards. Regulators have spoken out against investing through ICOs, but the fervor has not dissipated, with nearly \$18 billion raised by August 2018.⁵

CITY NATIONAL ROCHDALE'S VIEW

Although some investors may feel that they missed out on last year's cryptocurrency rally, there are significant risks and downsides currently associated with the digital currency. Bitcoin is not part of City National Rochdale's asset allocation, as we do not consider it a stable asset class.

Sources:

1. French, S. (2018, February 09). Here's proof that this bitcoin crash is far from the worst the cryptocurrency has seen. Retrieved from <https://www.marketwatch.com/story/heres-proof-that-this-bitcoin-crash-is-far-from-the-worst-the-cryptocurrency-has-seen-2018-02-09>
2. Bitcoin scalability problem. (2018, September 15). Retrieved from https://en.wikipedia.org/wiki/Bitcoin_scalability_problem
3. Small Business Retail | Visa. (n.d.). Retrieved from <https://usa.visa.com/run-your-business/small-business-tools/retail.html>
4. Vigna, P. (2017, November 09). SEC Chief Fires Warning Shot Against Coin Offerings. Retrieved from <https://www.wsj.com/articles/sec-chief-fires-warning-shot-against-coin-offerings-1510247148?mod=searchresults&page=3&pos=17>
5. What to make of cryptocurrencies and blockchains. (2018, August 30). Retrieved from <https://www.economist.com/technology-quarterly/2018/08/30/what-to-make-of-cryptocurrencies-and-blockchains>

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