

What are Cryptocurrencies?

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Our society has been moving towards an electronic cashless payment system for many years. Most people don't carry much physical cash with them anymore due to convenience, security, and efficiency. Online banking, PayPal, and credit cards have been the dominate players in this area. Cryptocurrency is a medium of exchange created and stored electronically in the cloud (virtual) using encryption techniques to control the creation of monetary units and to verify the transfer of funds. They are called 'crypto' currencies because the synchronization of transactions between senders and receivers of cash is secured by strong cryptography and mathematical code. Everyone has a replica of the same database and the decentralized system is difficult to hack. Bitcoin and Ethereum are the leading cryptocurrencies in the marketplace. Some companies are already accepting Bitcoin or other cryptocurrencies as payments such as Microsoft, Dish Network, Expedia, and Whole Foods.¹

History

Bitcoin emerged as a side product of another invention, a peer-to-peer electronic cash system. The inventor of bitcoin, Satoshi Nakamoto, didn't intend to invent a 'currency', but rather, a decentralized digital cash network that would solve the problem of double spending whereby digital currency could be counterfeited.^{2,3} Today, almost all transaction systems are conducted through a medium of centralized databases owned and operated by large trusted institutions such as banks and governments. Cryptocurrency transactions however rely on a decentralized system with the information residing on a database in the cloud which is called the blockchain.

Blockchain technology is groundbreaking because transactions can be processed without oversight by a central authority cutting out the cost of the middlemen and removing single points of failure. A blockchain is a digital ledger that is kept and validated simultaneously by a network of computers. It acts like a shared Microsoft Excel document that no one person can change without the agreement of the others and it allows dealings without the approval of an intermediary, such as a clearinghouse.⁴ While bitcoin transactions now provide varying levels of anonymity, blockchains can be designed to be transparent so every transaction is easily linked to a person or corporation, but secure enough to operate in the heavily regulated world of finance.

Bitcoin is blamed for fueling drug sales and for helping hackers blackmail businesses and governments because it is anonymous enough to serve as a means of payment for black markets and illegal economic activity. On some days the bitcoin price swings 20% up or down, often on a whim or a rumor. New cryptocurrencies are coming online to challenge bitcoin all the time, but few will survive the first months. Most are pushed by speculators and live on as "zombie" coins with little to no value.²

Cost

Cryptocurrencies change in value throughout the day similar to equities and currencies. You can visit sites such as www.coindesk.com to check on the price in U.S. Dollars or other major foreign currencies. The price of bitcoin has risen from \$5 less than five years ago to \$2,300 today. It had dropped precipitously in the last few weeks due in part to a dispute about a software upgrade on July 31st where developers are threatening to stop recognizing transactions by users who haven't adopted the new version.⁵ Still, as of the end of June, bitcoin and the cryptocurrencies are now worth \$107 billion, six times their value at the beginning of 2017.⁶

Cryptocurrencies are traded from one party to another and are stored in a digital “wallet”. A wallet is your personal database that proves ownership and can be saved on your computer, smartphone, or laptop. You can buy cryptocurrencies by downloading and installing software on your computer. Then you can transfer funds from your bank account to pay for the cryptocurrency and store it in your wallet to be exchanged or sold at a later date.

A second way to obtain cryptocurrencies is to “mine” for them. Miners are the network of people who contribute their computing power to maintaining the integrity of the network and they earn coins (currency) for doing this. If miners offer more computing power they can earn more coins.

Key Features

The key features of cryptocurrencies such as Bitcoin and Ethereum include the following:

- A transaction can't be reversed. If you send money, it's gone and there is no safety net to correct mistakes or retribution from scammers. There is no depositor insurance coverage.
- Transactions can be processed without connecting accounts to real world identities.
- Transactions in the network are transmitted around the world nearly instantly.
- Anyone can use cryptocurrency. It's a software that everybody can download for free. After you install it, you can receive and send bitcoins or other cryptocurrencies.
- Most cryptocurrencies limit the supply of the tokens by a schedule written in the code. For example, new bitcoin is introduced at regular intervals and the total amount of bitcoin that can be created is capped. There are no surprises as to the amount of money in circulation.
- There is no central bank involved. Our government hasn't even settled on what bitcoin is. The Internal Revenue Service considers it an asset; the Commodity Futures Trading Commission says it's a commodity; and Treasury Department regulators have described it as a “virtual currency.”⁴

Investing

You don't need to mine bitcoin to invest in it. You can buy fractions of the currency online through an intermediary. There is also a security now that tracks bitcoin called Bitcoin Investment Trust and trades under the ticker 'GBTC'. It trades at a substantial premium to the price of bitcoin and has a 2% expense fee.

We do not recommend buying bitcoin or any other cryptocurrencies at this time as we believe it is a highly speculative investment. There is no underlying value behind the currency and its only value is what the next buyer is willing to pay for it. In addition, they don't pay interest or dividends. If your digital wallet is stolen or your hard drive compromised there is no recourse.

The Future

Going forward we believe that some type of cryptocurrency will continue to exist, however, of greater importance is how the future application of blockchain technology may improve day to day operations and company performance. Companies such as Visa, Capital One, NASDAQ and the New York Stock Exchange have invested in the underlying blockchain technology.^{7,8} JPMorgan Chase and Bank of America could save billions by standardizing and by making their record-keeping more efficient for all sorts of financial processes.⁹ Goldman Sachs has recently added pages to its website describing blockchain technology calling it ‘the new technology of trust.’ It describes how businesses can integrate this technology and how developers can help make it more enticing for business applications. Advanced Micro Devices and Nvidia are making chips to make it easier for miners to operate faster and longer.⁵ The blockchain technology also shows potential in other areas, from insurance to medical record-keeping to energy trading.⁴ We will no doubt see an increase in the use of this technology going forward changing the way information is stored and how transactions are processed.

Footnotes

1 advisorperspectives.com, “What Advisors Need to Know About Cryptocurrencies” 7/3/2017

2 blockgeeks.com, “What is Cryptocurrency: Everything You Need to Know [Ultimate Guide]”

3 bitcoin.com, “What is Double Spending” 6/23/2017

4 Barron's, “Beyond Bitcoin: How Blockchain is Changing Banking” 7/7/2017

5 cnbc.com, “Dispute Could Mean Financial Panic In Bitcoin” 7/14/2017

6 Fortune, “Can Bitcoin's First Felon Help Make Cryptocurrency a Trillion-Dollar Market?” 7/1/2017

7 Financial Times, “Finance Heavyweights Invest In Blockchain Start-up” 9/9/2015

8 hbr.org, “How Blockchain Is Changing Finance” 3/1/2017

9 Barron's, “How to Invest In Bitcoin” 7/1/2017