What Is Bitcoin?

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A beginner's guide to the basics of Bitcoin and how it works.

What Are Cryptocurrencies?

A cryptocurrency is a digital or virtual currency relying on cryptographic standards to prevent double-spending and counterfeiting. Almost all cryptocurrencies achieve decentralization through blockchain technology, which serves as a distributed digital ledger maintained and enforced by a global network of computers. In addition, unlike traditional money, cryptocurrencies are not issued by a government or other central authority, making them censorship-resistant.

How Does Cryptocurrency Work?

Cryptocurrencies are not the same as digital currencies. A digital currency is a digital representation of fiat money issued by a central authority. It is sometimes termed CBDCs — central bank digital currency. That authority — often a central bank or government — fully controls it, whereas cryptocurrencies reside on a blockchain no one exerts control over.

The "crypto" part of cryptocurrencies refers to cryptography and depicts an ability to guarantee

transaction security and keeping the participants pseudonymous. Moreover, it provides independence of operations from a central authority and protection from double-spending. Cryptography serves multiple other purposes, including controlling the generation of new currency and verification of transfers of digital assets and tokens.

The blockchain serves as a payment system for Bitcoin, Ethereum and other cryptocurrencies. Users can send value to anyone in the world without requiring external, centralized permission, a process known as peer-to-peer (P2P) transaction. Moreover, various providers offer a payment system for merchants to accept cryptocurrency payments, including BitPay, Coinpayments and others.

What Is Bitcoin?

Bitcoin is the first cryptocurrency created in 2009 by the pseudonymous programmer, or group of programmers, known as Satoshi Nakamoto. The idea behind Bitcoin was to create a decentralized distributed ledger called a blockchain where all transactions would be recorded in an immutable fashion — completely separate from traditional finance. All transactions would be performed in the blockchain's native token, called Bitcoin, with the idea that transaction fees would be lower than that of traditional online payment systems.

Since its inception, Bitcoin has grown in popularity and adoption and is now viewed as a viable legal tender in some countries. The adoption of cryptocurrency by more institutional investors has also fueled more public interest in digital assets.

Bitcoin still has a long way to go before it's accepted globally, but it has made a lot of headway since the genesis block was mined more than 10 years ago.

To see a visual explanation, check out this video:

How Many Bitcoins Are There?

The maximum supply of Bitcoin is 21 million BTC, as determined by Satoshi Nakamoto. However, every BTC can be spit into 100 million sub-units, or Satoshis (SATS). A Satoshi is the smaller unit of a Bitcoin and represents 0.00000001 BTC.

How Does Bitcoin Work?

Bitcoin serves as a cryptocurrency utilizing a decentralized system to record transactions on the blockchain. The Bitcoin network consists of miners — users solving complex puzzles to confirm transactions through the proof-of-work (PoW) algorithm — and a network of nodes — who help add transactions waiting to be processed on the public network.

The miners who validate transactions receive a block reward, which is currently 6.25 BTC, after Bitcoin's halving in 2020. That block reward halves every four years, as outlined by Satoshi Nakamoto in the Bitcoin whitepaper.

Every Bitcoin wallet — an address used to store BTC assets — has a private key. That private key confirms ownership of the BTC balance in the Bitcoin address and allows the private key owner to spend the funds.

The Lightning Network is a second-layer technology introducing micropayments to the Bitcoin network. That approach makes transactions more efficient and facilitates other transaction types, including off-chain exchanges between cryptocurrencies.

What Is Bitcoin Mining?

Bitcoin miners help process transactions on the network by using computational power to solve complex cryptographic puzzles. Transactions waiting to be processed are distributed to miners

worldwide via the thousands of network nodes, which all maintain a copy of the Bitcoin blockchain and its previous transactions.

In exchange for doing so, the miners receive a block reward. That block reward is distributed to all miners who successfully helped solve the network block to process outstanding transactions. Miners will often combine their computational power in a pool to improve their efficiency at finding network blocks.

What Are the Benefits of Bitcoin?

The Bitcoin network does not require a central authority yet provides users with features that are similar to a bank account, such as sending and receiving money. Bitcoin's technology and code are open source and can be viewed by anyone. Moreover, anyone with coding knowledge can submit proposals to enhance or improve the code.

All transactions on the Bitcoin blockchain occur in a peer-to-peer manner, removing the need for intermediaries. It is very different from dealing with a central bank, as the bank directly controls the monetary supply and who can access it. With Bitcoin, anyone can become part of the network, acquire the cryptocurrency, and use it how they see fit.

Moreover, whereas fiat currencies controlled by central banks suffer from inflation due to ongoing increases in the available supply, Bitcoin does not. It has a fixed supply of only 21 million BTC. Over 80% of that supply is in circulation, and the remainder will be mined over the next 100+ years. As such, Bitcoin does not suffer from inflation.

What Are the Use Cases of Bitcoin?

To many people, Bitcoin serves as a store of value with the potential to appreciate. Moreover, some have likened it to digital gold, as it serves the same purpose as bullion: to maintain its value in US

Dollars and potentially go through a price increase. Therefore, especially during times of inflation, which devalues the US Dollar, Bitcoin and precious metals tend to become more appealing to mainstream users due to their store-of-value nature.

However, this narrative has come under intense scrutiny in recent times as the U.S. reports high inflation rate of 7.5% in January 2022. The value of Bitcoin has not held up as strongly as one would expect from an inflation hedge.

Where Can You Buy Bitcoin?

Before buying Bitcoin, it is crucial to set up a digital wallet or Bitcoin wallet. Most cryptocurrency exchanges provide a way to buy BTC and offer a wallet service. Such as BTCC and many others.

It is advised to move the funds from an exchange to a Bitcoin wallet of which you control the private key. Keeping funds in a personal wallet will give you complete control over the funds rather than only having the exchange know the private key.