# Bitcoin Starter Guide **Bitcoin Basics** and Benefits





## Introduction

In this guide, we examine the humble origins of digital currencies, teach you the fundamentals of bitcoin and highlight bitcoin's key advantages over traditional fiat currencies.

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## **Introduction to Digital Currency**

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## What is Digital Currency?

Digital currencies are decentralized mediums of exchange that represent a position on a ledger system that are created and stored electronically. This is in contrast to traditional currencies, such as paper dollars or metal coins, which can be physically held and are issued and backed by specific governments.



## **Digital Currency Origins**

Though digital currencies are gaining widespread recognition (due in large part to the popularity of bitcoins), the idea of digital monetary systems date back to the early 1990s. At that time, the Internet was still a new phenomenon that the public was attempting to wrap its head around (similar to Bitcoin today).

Several companies and programmers tried creating money meant to be exchanged electronically in the 1990s and early-2000s such as DigiCash and Flooz. Many of these early currencies struggled to gain acceptance due to insufficient technology, poor security features, funding shortfalls and a slew of other issues. However, pieces of their technologies and innovative ideas live on in today's digital currencies.



## **Digital Currency Timeline**

## **Bitcoin Basics**

## **Bitcoin Origins**

Though Bitcoin's recent growth has made the currency a household name, the idea and technology behind the currency has existed since 2009. Bitcoin was created by a programmer, or group of programmers, calling themselves Satoshi Nakamoto. No individual or group has ever come forward to claim ownership for creating Bitcoin's code, or identified themselves as Nakamoto. In the original paper explaining the currency, Bitcoin: A Peer-To-Peer Electronic Payment System, Nakamoto described the digital currency system as:



A purely peer-to-peer version of electronic cash that would allow online payments to be sent directly from one party to another without going through a financial institution.
-Satoshi Nakamoto

## How Does Bitcoin Work?

Individuals can use bitcoins to make payments to other individuals or merchants without involving a third-party, like a bank or financial institution, for the purpose of validation. Instead, transactions are cleared and validated within the system through the blockchain.



## What is the Blockchain?

The blockchain is a public ledger that records and publicly displays all bitcoin transactions that have been executed within the Bitcoin system. A block is a permanent record of recent transactions. The blocks of recorded data build upon each other to form the blockchain which dates all the way back to the first bitcoin transaction.



The transparency established by the blockchain is essential in securing the validation process as it allows the community to monitor and self-police transaction activity. It also allows for verification of both the spender and the recipient and ensures that double-spending a bitcoin is impossible. We will discuss the blockchain in greater detail in future guides.



## How Do I Get Bitcoins?

Obtaining bitcoins and learning to use the Bitcoin system is a relatively simple process. The four fundamental ways to obtain bitcoins include:



#### Transactions

Individuals and merchants can elect to receive bitcoins as payment for goods and services rendered or for peer-to-peer payment transfers.



#### **Digital Currency Exchanges**

A digital currency exchange operates in a similar fashion to traditional fiat currency exchanges, allowing individuals to buy and sell bitcoins at the prevailing market rate. The exchange rate of bitcoins fluctuates based on demand, liquidity and various other market conditions.



#### Mining

Miners are the backbone of the Bitcoin ecosystem. They receive monetary rewards in bitcoin for the services they provide for the network. This includes solving the algorithms necessary to process transactions, which helps to secure the network and keep it running smoothly.

#### **Bitcoin ATMs**

Bitcoin ATMs are an increasingly popular solution for buying the digital currency because of their convenience and simplicity. Making a transaction at a bitcoin ATM is pretty straightforward. ATM users first verify their bitcoin wallet by scanning a QR code on their smartphone. They then insert cash into the ATM and submit to complete the transaction. The appropriate amount of bitcoins are then transferred to their wallet based on the current exchange rate.

## How Do I Store Bitcoins and Make Transactions?

In order to safely store, send and receive bitcoins, individuals must setup a digital wallet. A wallet is a file that houses all the unique keys (passwords) attributed to an owner's bitcoins and where their value will be recorded and synchronized when sending or receiving payments within the system.



Wallets typically come in two forms: hot and cold. Hot wallets are connected to the internet and allow for instantaneous transfers online through the blockchain. Cold wallets are offline wallets that live on a user's computer. Cold wallets offer a greater level of security but the transaction process is longer and more cumbersome compared to a hot wallet.

## 3J98t1WpEZ73CN

In order to receive bitcoins, you simply provide the sender with your address. An address is a long sequence of numbers and letters that starts with a "1" or "3" and is the unique identifier used to send payments to you, and only you. New addresses can be generated for each transaction to maintain greater financial privacy.

## How Can I Use Bitcoins?

Bitcoins can be used for a multitude of transactions including, but not limited to:



Bitcoin technology is a significant improvement over other traditional payment systems when it comes to the ability to utilize the currency for both micro and large-scale payments. Micropayments can be made in increments as small as a fraction of a cent (0.0000001). Conversely, the system can also be used to make large-scale payments without the worry of daily transaction limits or slow deposit process that are common at many traditional financial institutions.

## Bitcoin Benefits: Bitcoin vs Fiat Currency



## What is Fiat Currency?

The origins of fiat currency, like much of our traditional financial system, date back to the 11th century and the rise of the earliest "nation-states" in China and Europe. Fiat money is currency issued as legal tender by a country's government which, arguably, has no intrinsic value since the value of the money is not tied to a specific commodity (like silver or gold). Its value is instead determined by supply and demand economics, the faith of a nation's citizens in the government, the payment of taxes in that currency and, by extension, the government's commitment to back the currency. The vast majority of official currency currently in use around the world can be defined as fiat currency.



## **Five Benefits of Bitcoin**



#### **Faster, Cheaper Payment Solution**

Bitcoin transactions can occur at any time, are fast and have lower fees. The average bitcoin transaction is executed in 10 minutes with fees for simple P2P transfers to remittances coming in at under 1%. This is due in large part to the fact that traditional thirdparty financial institutions like banks are removed from the transaction process. Merchants and individuals using bitcoins are not restrained by set banking hours, withdrawal limits or long transaction execution periods before funds become available.





#### Safeguards Against Currency Manipulation

Bitcoin is not owned or controlled by a country or governing body. Additionally, unlike many other forms of currency, the number of bitcoins that will be issued is finite, exactly 21 million. The benefit of this lack of ownership and finite amount is that the bitcoin supply cannot be artificially manipulated.

When it comes to fiat currency, governments can easily print additional paper or mint coins, devaluing existing money in circulation and causing inflation. The decentralized nature of bitcoin decreases monetary concerns and largely leaves fluctuations in value up to natural supply and demand economics.

#### **Greater Consumer Protections**

The use of bitcoin as an alternative to fiat currency provides protection against the downside that can occur with traditional bank accounts. This includes the threat of bank failure or skimming. In the event of a bank failure, a customer can face frozen bank accounts while liquidation plans or bailouts are hashed out. In some countries, traditional bank customers may even find that banks will skim money off of customer's accounts in order to to remain solvent. This occurred during the banking crisis faced by Cyprus in 2013. With bitcoin, individuals remain in full control of when and how their assets are retrieved, transferred and spent. Essentially, digital currency users become their own bank.





#### **Greater Transparency**

Because all bitcoin transactions are permanently recorded on the blockchain, all transactions are public and traceable. The balance associated with each address is also part of the public record. The blockchain makes bitcoin much more transparent than many other monetary systems.

#### **Private and Secure**

Although all bitcoin transaction details are stored publicly on the blockchain, the identities of the users involved remain relatively anonymous. Because payments can be made without including personal identification information, Bitcoin provides inherent security against identity theft. Additionally, there is no risk of being charged twice or of fraudulent charges being assessed to your wallet thanks to the blockchain, which monitors unique coin addresses and eliminates the possibility of paying multiple people with the same bitcoin. Bitcoin doesn't offer the complete anonymity of cash, but is certainly a far more private experience than making online payments or transactions using debit or credit cards.



## **Final Thoughts**

Bitcoin is currently the most valuable and widely adopted digital currency. A growing number of businesses, charities and other organizations are accepting bitcoin payments ranging from e-retailers to law firms to sports franchises. Further, recent inflationary and banking crises across the globe have highlighted some of the key threats inherent to fiat currency. This creates additional opportunities for decentralized digital currencies.

Education will be critical to increasing Bitcoin's acceptance and usage by merchants, institutions and individuals. The system will also need to address common criticisms around illicit use of bitcoin and work diligently to build regulatory and legal frameworks around the world.





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