

A large, semi-transparent Bitcoin logo is positioned on the left side of the page. The background is a dark blue grid with a candlestick chart overlaid, featuring various colored bars (yellow, red, green, blue) and dots. The overall aesthetic is digital and financial.

# BITCOIN

Our definitive guide to Bitcoin

**COIN RIVET**

*Independent British blockchain and crypto news*

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# WHAT IS BITCOIN?

Bitcoin is the **original cryptocurrency**. A cryptocurrency is a digital currency that uses cryptography to secure and verify its transactions. These transactions are recorded on a decentralised and unchangeable ledger known as blockchain.

Bitcoin is a decentralised digital protocol, allowing participants to transfer value directly to one another. This eliminates the need for third parties or central intermediaries to come between or govern transactions.

Bitcoin, often abbreviated to BTC, refers to the network, as well as the token itself. Each bitcoin can be divided by up to 8 decimal places, allowing you to send even 0.00000001 BTC.

## A brief history of Bitcoin

The Bitcoin protocol is an open source software project that was started by the anonymous founder, Satoshi Nakamoto, who published the idea in a cryptography mailing list back in 2009. By early 2010, the network was up and running with a group of established miners. Satoshi and a number of volunteers also began writing the software for digital wallets that allow cryptocurrency transactions to take place.

Satoshi's identity remains anonymous to this day and is still the **centre of much speculation**. We have a lot to thank Satoshi for, as the development of Bitcoin has led to the creation of an entire industry that continues to grow through altcoins and stablecoins.





### How many Bitcoins are there?

In total, there will only be 21 million bitcoins created. Around 18 million have already entered circulation, with supply increasing by 12.5 Bitcoins every 10 minutes. The future will see this rate-of-supply continually decrease. The remaining three million Bitcoins will be mined between now and 2140.

### What is mining and how do you do it?

Mining is the process of verifying and adding transactional records to a public, decentralised ledger. These records are kept on Bitcoin's underlying technology, blockchain. Successful mining is rewarded with transaction fees, as well as the newly released Bitcoins.

Anyone in the world can become a Bitcoin **miner**. To do so, you will need to buy a specialist mining processor and connect it to the Bitcoin network. The hardware you use will consume electricity to solve difficult maths problems by using a trial and error approach. As a miner you will partially share in the new Bitcoins created every 10 minutes — proportional to your contribution to solving the problem.

Mining, and the electricity consumption involved with it, can become quite costly when mining individually.

To minimise this expense, you can join a mining pool. A mining pool is a community of miners who share their processing power over a network and split the rewards according to the amount of work contributed by each miner.

### How is the price determined?

Like all other markets, the **price is determined through supply and demand** of buyers and sellers. Around \$4 billion worth of Bitcoin is traded every day and traders help find an equilibrium price for the day. One thing to note is that, depending on where you buy from, there may be a premium or discount added. For example, if you want to buy from an ATM the price may be higher than an online exchange quote due to the cost of initially buying and maintaining a physical terminal versus a website.

### What does it mean when they say Bitcoin is decentralised?

Bitcoin has decentralised control. Built on distributed ledger technology that serves as a public financial transaction database, there is no central governing body.

Bitcoin is far more decentralised than any other open blockchain out there, meaning it's more resistant to forms of attacks on its key attributes (like being secure, reliable, and censorship-resistant).

This highly decentralised property has emerged from a complex game theory incentive structure that's in place between five key network participants:

- ◆ Developers
- ◆ Miners
- ◆ Node operators
- ◆ Exchanges
- ◆ Users

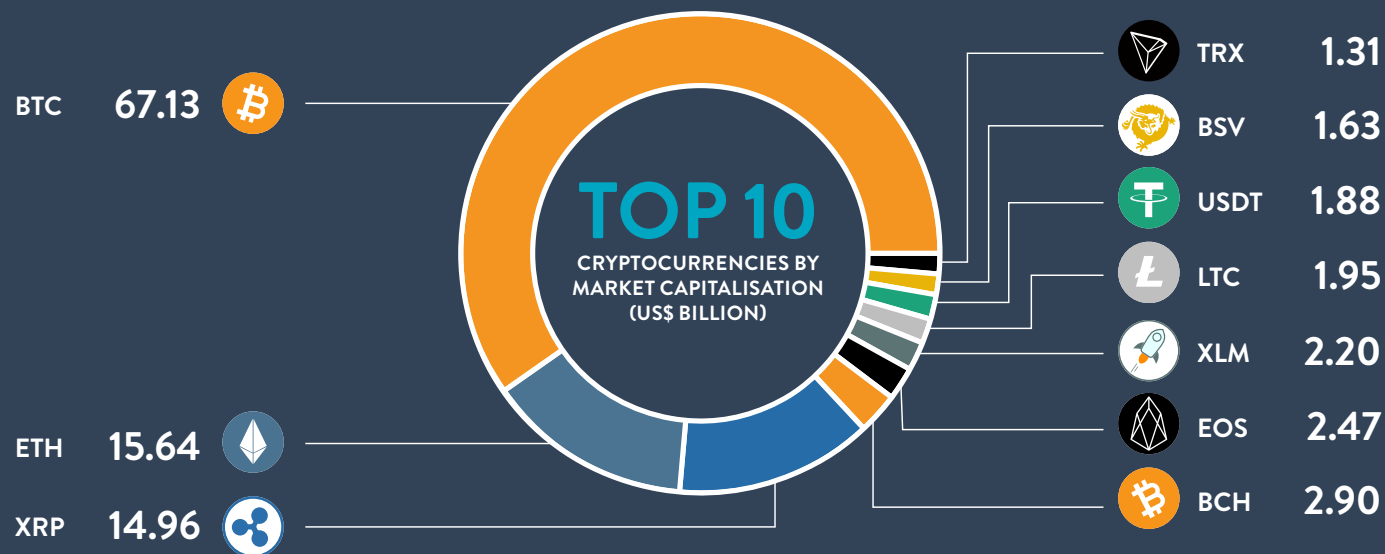
Each participant is heavily incentivised to play by the rules of the network and stay in consensus with each other. If they try and cheat, it's going to cost them financially.

# THE TOP 10 CRYPTOCURRENCIES

There are approximately 2,535 cryptocurrencies being traded with a total market capitalisation of \$133.07bn. The crypto market is extremely top heavy though. The total value of the top 10 cryptocurrencies is \$112.07bn.

BITCOIN IS THE FIRST, BIGGEST, AND MOST VALUABLE CRYPTOCURRENCY.

## TOP 10 CRYPTOCURRENCIES AND THEIR MARKET CAPITALISATION (US\$ BILLION)



investing.com website January 2nd 2019 11:30. All values US\$ billion

The top 10 cryptocurrencies represent 84% of the total market value.

Of the top 10, Bitcoin represents 60% of the total.

# WHAT HAPPENED TO THE VALUE OF BITCOIN IN 2018?

The price of Bitcoin fluctuates every week. While a Bitcoin is far more valuable today than it was five years ago, this growth is not always maintained. During 2018, the value of a single Bitcoin dropped by 73%.

## 2018 MONTHLY BTC PRICE AND MONTHLY CHANGE

DATE	OPEN	CLOSE	MONTHLY CHANGE	ANNUAL CHANGE	DATE	OPEN	CLOSE	MONTHLY CHANGE	ANNUAL CHANGE
JAN	13,850.50	10,265.40	-25.88%	-25.88%	JUL-18	6,398.50	7,729.40	20.80%	-44.19%
FEB	10,266.20	10,333.90	0.66%	-25.39%	AUG-18	7,728.50	7,033.80	-8.99%	-49.22%
MAR	10,335.10	6,938.20	-32.87%	-49.91%	SEP-18	7,032.40	6,635.20	-5.65%	-52.09%
APR	6,939.10	9,245.10	33.23%	-33.25%	OCT-18	6,635.20	6,365.90	-4.06%	-54.04%
MAY	9,245.10	7,502.60	-18.85%	-45.83%	NOV-18	6,365.90	4,039.70	-36.54%	-70.83%
JUN	7,502.50	6,398.90	-14.71%	-53.80%	DEC-18	4,038.70	3,709.50	-8.15%	-73.22%

# HOW CAN YOU BUY BITCOIN?

Just like trying to buy other currencies such as euros or dollars, you can buy Bitcoins through an exchange. There are various types of exchanges available in the cryptocurrency community.

Types of exchanges include:

- ◆ Online exchanges hosted on websites and apps
- ◆ Physical exchanges including shops and ATMS
- ◆ Peer-to-peer (P2P) exchanges, such as trading Bitcoins in person at a local meet-up

## What is a cryptocurrency exchange?

A cryptocurrency exchange, or digital currency exchange (DCE), is an online platform that allows you to **buy and trade cryptocurrency or digital currency**. Once bought or traded, the exchange allows you to sell your currency and convert it back to fiat money. Fiat money is traditional currency like dollars, pounds, and euros. Exchanges, more often than not, take a commission or simply charge usage fees for their service.

## How an exchange works

Cryptocurrency exchanges don't work in exactly the same way as stock exchanges and foreign currency exchanges.

A cryptocurrency exchange is usually programmed to accept your digital buy and sell orders (along with price and quantity), waits for your order to be triggered (met by a buyer or seller on the other end), completes the trade, and then updates your on-exchange holdings. This is all achieved without human brokers.

One of the interesting aspects of cryptocurrency exchanges is the ability to exchange one cryptocurrency directly with another. This isn't achievable with normal stocks, as these require you to liquidate shares to fiat money before using those funds to buy new stock shares.

## How many exchanges are there?

With nearly 200 cryptocurrency exchanges available on the market, choosing the right one for you will require research. Each exchange has its own unique style, benefits, and services. The easiest place for beginners to start is with established exchanges like Coinbase, Bitfinex, or Gemini. These options offer a gateway for users to exchange Bitcoin.



# HOW DO YOU HOLD BITCOIN?

As the cryptocurrency market faces volatility, many users choose not to buy or sell their Bitcoin. Many choose to HODL instead – hold on for dear life. So how can you hold your Bitcoin?

## How do you store Bitcoins and make transactions?

Bitcoins are stored in **wallets**. Different types of cryptocurrency wallets exist including:

- ♦ Mobile wallets
- ♦ Website wallets
- ♦ Paper wallets
- ♦ Hardware wallets

All of these wallets can store and send Bitcoins to each other but they each offer different levels of security, functionality, and ease of use. Your wallet allows and facilitates the sending and receiving of coins, acting as a personal ledger of transactions.

## Public and private keys in a cryptocurrency wallet

All cryptocurrency wallets rely on cryptography for security and public and private keys. Public key cryptography is any cryptographic system that uses pairs of “keys”. A key is a piece of information that unlocks or decodes a cryptographic algorithm.

There are two types of keys:

- ♦ Public keys which can be spread widely and known to many people
- ♦ Private keys which are only known to the key owner

The use of public and private keys accomplishes two functions – authentication and encryption. Authentication is where the public key verifies that the message was sent by the holder of the paired private key. Encryption is where the paired private key holder (and them alone) can decrypt a message encrypted with the public key.

## What are Private Keys?

There is no actual cryptocurrency stored in the electronic wallet. Rather, the cryptocurrency is stored and maintained in a publicly available ledger. Every piece of cryptocurrency has a private key. With the private key, it is possible to write in the public ledger, effectively spending the associated cryptocurrency.

Private keys are secret passwords that are required to make Bitcoin transactions from a wallet. They look like this:

```
5JiPnCbT3ywe9WNJdNvhFq4P2U6rC3pr6yJ83ooDLLuk2o76Vf9
```

Or they can also be shown pictorially as a QR code.



If someone gains access to your private keys, your Bitcoin will be left vulnerable to theft. There is no way to reverse this transaction once it occurs. Additionally, if you lose your private keys, you will also lose the ability to send any Bitcoins you have in your wallet.



# WHERE CAN YOU SPEND BITCOINS?

Bitcoins can be sent via your wallet to anyone else who also has a wallet. There are over 100,000 merchants accepting Bitcoin as a form of payment and there are many websites that track and compare merchants – [spendbitcoins.com](https://spendbitcoins.com) or [coinmap.org](https://coinmap.org) are just a few examples.

## Cryptocurrency payment is becoming increasingly acceptable

Cryptocurrency is a fast-growing technology with many large companies now accepting it as a legitimate payment. Companies such as Subway, Virgin, Whole Foods, and KFC Canada accept Bitcoin. Smaller companies are joining in on the change too.

A report from the Cambridge Centre for Alternative Finance revealed that only **2.9 to 5.8 million people actively use cryptocurrency**, with millennials being far more likely to invest. The report also stated that men are twice as likely to invest in cryptocurrency than women.

Companies who target millennials are going to benefit from accepting crypto payments, with payments resulting in huge revenue growth.

## Gift Cards

Not all offline and online stores accept cryptocurrencies. However, **eGifter allows people to buy gift cards with Bitcoin**. These gift cards can then be used in retail stores such as Sephora, Amazon, Kohls, and many more.



### For the extremely wealthy

Some of the headline grabbing uses of Bitcoin have revolved around very expensive property. Take a look at some of the highlights below.

#### Luxury in Tenerife for 525 Bitcoins

A five-bedroom luxury villa in Tenerife was put on the market for 525 Bitcoins, equating to €3m in property costs. Nestled in the exclusive hillsides of La Caleta in the south west of the island, 'The Palms' boasts a 2,645 square metre plot with the main residence, large outdoor pool, barbecue area and extensive gardens with more than 60 palm trees.



#### Mansions in Malta

A mansion was put on the market in Malta for 550 BTC. The 860sqm historic building in the heart of the Mediterranean island's vibrant capital – Valletta – comes with permission to be transformed into a hotel or even office space.

Uniquely, the imposing building comes with a three-million-euro price tag but can only be purchased in Bitcoin, giving its investor the opportunity to make the first cryptocurrency property purchase on Malta.

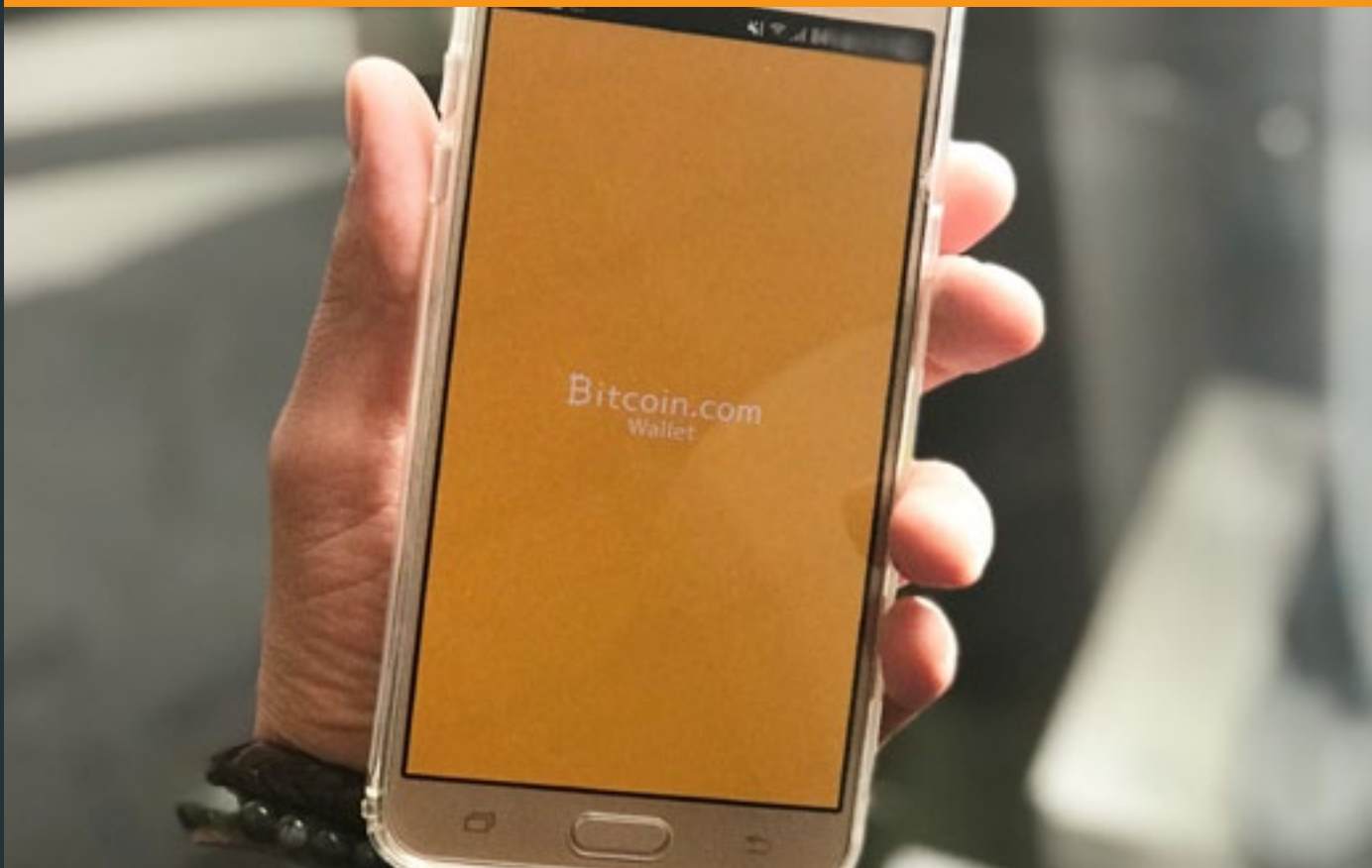
#### Buy your next Ferrari with Bitcoin

If you have Bitcoin to spend and are looking for a new motor or even a scooter, you can visit the Buy Sell Car With Bitcoin website. This was the first of its kind when it launched in December 2017. Back then, it posted only four vehicles and today boasts over 80 autos and bikes. The website allows auto dealers or individuals to upload their car sales ads and post the price in Bitcoin and dollars.



# CONCLUSION

The creation of Bitcoin has paved the way for a whole new industry. Cryptocurrencies are changing the way we pay for things, who governs transactions, and challenges the traditions that have been laid by banks and other financial institutions.



Although the cryptocurrency market often shows signs of volatility, Bitcoin still maintains the largest share of the market. As a beginner, Bitcoin is a trusted cryptocurrency that can offer you a pathway into a new world – one that will continue to evolve as the world goes by.

It's underlying technology, blockchain, could transform the way many industries operate – from healthcare through to education. It's an exciting time to get involved! To advance your knowledge around Bitcoin, and many other cryptocurrencies, [visit our website](#). We offer the latest knowledge, industry insights, and cryptocurrency news that will help you to stay one step ahead.



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