



**BTCBROS**

# INTRODUCTION TO CRYPTOCURRENCIES





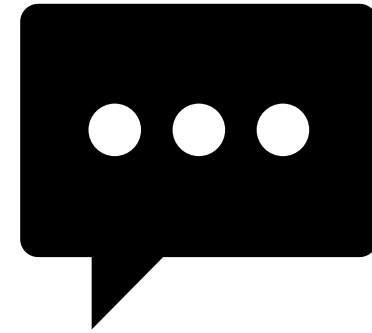
**“I’ve been working on a new electronic cash system that’s fully peer-to-peer, with no trusted third party.”**

- Satoshi Nakamoto

# EDUCATION VS ADVICE



How to/What is



What is 'best'

**Disclaimer:** Nothing set forward in this guide is given as or should be constituted as financial advice. Everything within this guide is presented for educational and research purposes only.

# INTRODUCTION

This guide is intended to be used as a reference point on the basics of Cryptocurrencies, their workings, use and technical capacities. The guide has been constructed for beginners and those with continued interest in Bitcoin and other Cryptocurrencies.

This guide aims to educate in this field by providing a basic understanding. Further questions may be raised via the contact means indicated within this guide.

**Note: This guide is not to be deemed as financial advice. Be aware that ANY type of financial investment carries a risk and you should always consult a professional for financial advice when making large investments. You are solely responsible for any financial investment made on the topics contained wherein.**

# ABOUT US



**BTC Bros Ltd** was formed in late 2016 by **Nathaniel Cole** and **Jonathan Powell**, with the help of **Len Gordon**, as a Blockchain & Cryptocurrency education and research consultancy.

The company also provides a range of **media and marketing** services **specifically aimed** at providing **awareness** for companies within the Blockchain and Cryptocurrency industry.

We have worked with a number of **Blockchain projects, brands, events and businesses**, on everything from concept formation to initial development.

We have helped **100's of individuals** to become aware of and **gain an understanding** of the **technologies, advancements** and **opportunities** within the space.

Our **signature development**, is an educational ecosystem built on Blockchain and Cryptocurrency principals, known as **ACE Economy**.

**BTC Bros Ltd is a company registered in England & Wales.  
Company No. 10759449**



# A BRIEF HISTORY OF BITCOIN & CRYPTOCURRENCY

**Bitcoin** is a cryptocurrency and a payment system invented by an unidentified programmer, or group of programmers, under the pseudonym of **Satoshi Nakamoto**. Bitcoin was introduced on 31 October 2008 to a cryptography mailing list, and released as open-source software in 2009. There have been various claims and speculation concerning the identity of Nakamoto, none of which are confirmed.

The system is **peer-to-peer** and transactions take place between users directly, **without an intermediary**. These transactions are verified by network nodes and recorded in a public distributed ledger called the **Blockchain**, which uses Bitcoin as its unit of account.

Since the system works **without a central repository or single administrator**, the **U.S. Treasury and UK FCA categorises Bitcoin as a decentralized virtual currency**. Bitcoin is often called the first cryptocurrency, although prior systems existed and it is more correctly described as the **first decentralized digital currency**. Bitcoin is the largest of its kind in terms of **total market capitalisation**.

Bitcoins are created as a **reward** in a competition in which users offer their computing power to verify and record bitcoin transactions into the Blockchain. This activity is referred to as **mining** and successful miners are rewarded with transaction fees and newly created bitcoins.

Besides being obtained by mining, **Bitcoins can be exchanged for other currencies, products, and services**. When sending Bitcoins, users can pay an optional transaction fee to the miners. This may expedite the transaction being confirmed.

In **February 2015**, the number of merchants accepting Bitcoin for products and services passed **100,000**.

Despite the fourfold increase in the number of merchants accepting Bitcoin in 2014, the cryptocurrency did not have much momentum in retail transactions.

# A BRIEF HISTORY OF BITCOIN & CRYPTOCURRENCY

Ever since then, the **European Banking Authority** and other sources have warned that bitcoin users are **not protected by refund rights or chargebacks**. The use of bitcoin by criminals has attracted the attention of **financial regulators, legislative bodies, law enforcement, and media**.

Criminal activities are primarily focused on darknet markets and theft, though officials in many countries such as the United States also recognize that **Bitcoin does provide superior legitimate financial applications**.

## Sources:

<https://bitcoin.org>

[https://en.wikipedia.org/wiki/History\\_of\\_bitcoin](https://en.wikipedia.org/wiki/History_of_bitcoin)

Ethereum is another cryptocurrency, referred to and known as the “business” layer of blockchain technologies. This is due to the founders initial idea that Ethereum would handle decentralized contracts, or as they are called Smart Contracts, that could be layered on top of Bitcoin transactions.

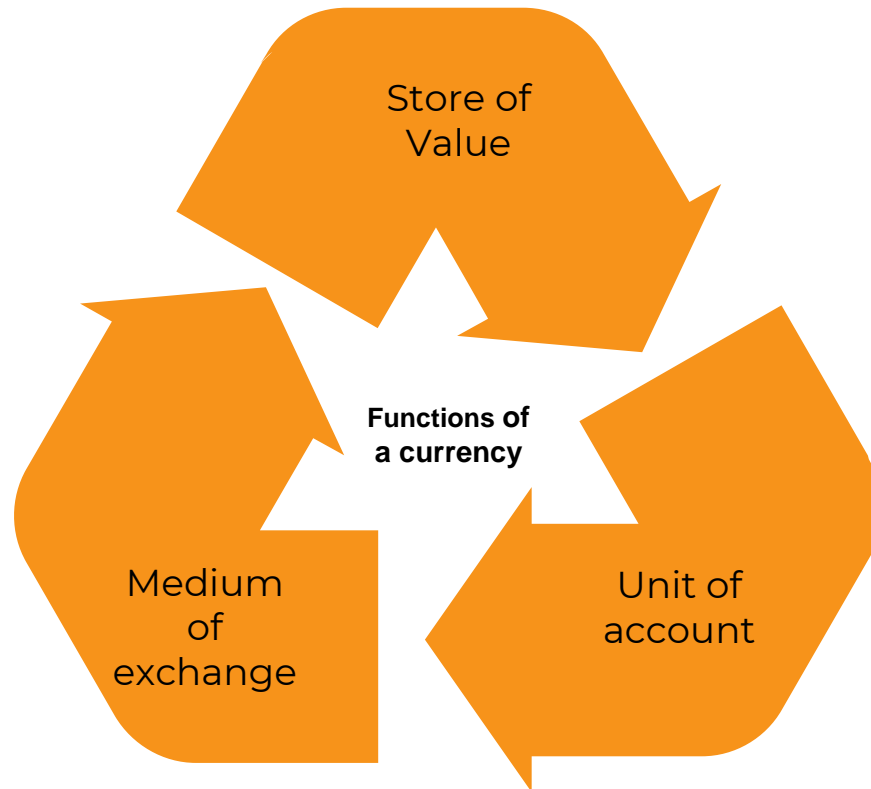
We will touch on Ethereum and its uses briefly in this guide. To learn more about Ethereum check out more of our guides and links on our [website](#).

# BITCOIN & MONEY

When looking at Bitcoin as a currency, we have to first look at **what defines a currency** overall.

The picture to the right depicts the **3 functions of a currency** and the next page defines each function and how they relate.

However, it is also important to note that **no currency can so far perform each function in totality.**



There are also a number of economic attributes that are applied to **modern currencies**, some of which are already applied to Bitcoin.

These attributes, as they are more widely known are called **'Monetary Policy'**.

Things like **inflation/deflation mechanisms, issuance, legality of tender etc...**are just a few of the things that Bitcoin and cryptocurrencies make a **massive improvement** on over traditional currencies as we know them.



# BITCOIN & MONEY cont'd...

**Bitcoin** is divisible by **9 decimal spaces (1.00000000)** and each single smaller unit is called **Satoshi**, after Bitcoins creator.

There are **100 million** Satoshi in 1 Bitcoin, making Bitcoin **extremely** divisible.

The most popular of rumours, second to Bitcoin being illegal, is that you can only acquire whole Bitcoins, when in fact **Bitcoin is divisible to less than 1/100<sup>th</sup>** of a penny/cent in current FIAT currency value.

As far as being **deflationary**, Bitcoin is scarce, as there will only ever be **21 million Bitcoins mined, by the year 2140**.

To find out more about how Bitcoin & FIAT have similarities, but also differ, check out our upcoming [Bitcoin & Money](#) guide on our website!

Unit of Account	
Function/Asset	Can be used to price/value measure
Gold	Yes (Weight)
FIAT (USD, GBP etc...)	Yes
Bitcoin	Yes

Store of Value		
Function/Asset	Predictable future value	Appreciating /Stable value
Gold	High	Yes
FIAT (USD, GBP etc...)	High	Stable, but depreciating rapidly
Bitcoin	Somewhat	Volatile, but year on year appreciation since inception

Medium of Exchange					
Function/Asset	Highly Divisible	Highly Durable	Highly Portable	Highly Fungible	Resistance to Counterfeiting
Gold	Somewhat	Yes	No	Somewhat	Somewhat
FIAT (USD, GBP, etc...)	Divisible to 1/100 (3 decimals)	Coins=Yes Notes=No	Dependant on jurisdiction and amount	Yes	Extremely little
Bitcoin	Divisible to 1/100,000,000 (9 Decimals)	Digital, so yes.	Extremely	Yes	Very

# TYPES OF CRYPTOCURRENCY

Not all cryptocurrencies are the same, so to break them down into groups we will use a very useful tool, the [Blockchain Research Institute Taxonomy of Cryptoassets](#) which groups types as follows:

## Cryptocurrencies

Are the native assets of a blockchain protocol. These are intended to be a 'store of value' or 'medium of exchange' and are cryptographic.

## Utility Token

Utility tokens are designed to give access to certain platforms or features of a platform. Most notably these are used for things such as voting rights.

## Platform Tokens

Are, by design, currencies to be used in Dapps (decentralized applications) or blockchain based platforms.

## Security Tokens

Similar to stocks & shares, security tokens are used to act as a security against something of value, such as fractional shares in a company.

## Stablecoins

Are cryptocurrencies designed to protect their holders against market volatility and normally have their value pegged to the price of another currency, normally FIAT currencies. Hence the 'Stable' part of their name.

## NFT's

Non-Fungible tokens are designed for things such as proof of ownership and therefore cannot be spent as a medium of exchange. However, NFT's are extremely useful and popular for collectibles

## CBDC's

Are a type of DIGITAL currency, or eCash, and are NOT cryptocurrencies. They are currently being researched by traditional financial institutions as a replacement/companion to FIAT currencies.

## NAT Tokens (Natural Asset)

Natural asset tokens are representative of tangible natural assets, such as natural gas, precious and base metals etc.... Similarly these can also be applied to water or carbon.

# TYPES OF BLOCKCHAIN

There are a number of different types of Blockchain, each having its own characteristics. However certain core characteristics enable them to be attributed to the following types of Blockchain:

## **Open, Public, Permissionless**

Open to anyone to join or leave, validate transactions or mine new coins.

A user only needs the software to access.

Any user can download, maintain and run as a Full Node.

Transactions can be explored and verified by user.

Users do not need to know each other personally.

Pseudo-anonymous, no ID needed to join.

## **Open, Public, Permissioned**

Open to anyone, to read.

Permission is only given to selected identifiable users to join.

Adds a level of security by relying on identifiable parties, rather than the consensus decentralized nodes.

Generally users are known to each other as trusted parties.

Permissioned blockchains may also define user roles and levels of administration.

Permissioned blockchains, may also be private.

## **Consortium**

Operated by a number of entities, usually businesses or organisations.

Permissions are only given to selected identifiable users to join.

Transactions are intended to be private.

Generally users are known to each other as trusted parties.

Permissioned blockchains may also define user roles and levels of administration.

## **Hybrid**

A combination of other blockchain types

Can have a mixture of rules from each type of chain used.

Can benefit from both Decentralized and Centralized services built on top of it.

Users can be known, or unknown, according to chain.

May incorporate a number of different algorithms (e.g. Digibyte)

# HOW DO YOU OBTAIN CRYPTOCURRENCIES



## Buying

Either from a service, exchange or another person. You can decide to buy from many places.



## Earning

Many online sites and applications allow you to earn cryptocurrencies for free. You can also get a job paying salaries in crypto.



## Mining

A process which helps to secure and solidify the Blockchain, in turn providing rewards in said cryptocurrency



## Exchanging

You can exchange just about anything that is accepted for crypto. Time, money, services...old socks, ha! It's totally up to the other party what they decide to accept in exchange.



# BUT, WHERE DO I PUT IT?



Before obtaining some crypto for the first time, the question of where you will store it is most certainly something we're sure you'd want to know.

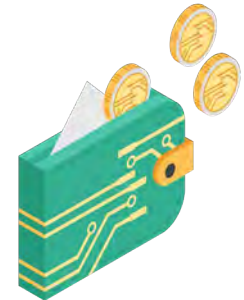
The **primary** way of storing, accessing, sending and receiving cryptocurrencies, is to use a **Wallet**.

No, we're not talking about a piece of fine leather, with slots for your cards, cash and receipts. We're talking about a cryptocurrency wallet!

A cryptocurrency wallet is a secure means of storing your cryptocurrencies and at a basic level incorporates similar functions to a traditional account, allowing you to send/receive cryptocurrencies, view your account balance, transaction history and more...

Much like an account number, a wallets **Public Key** (also known as a **Wallet Address**), can be used to identify and receive payments to the wallet. However, to send payments, access wallet funds, or sign transactions, a **Private Key** is needed.

The private key is very much akin to having a **PIN** or **password**, which is **only known to you**, so should be protected by all means! We explain more about wallets in our [Setting Up A Wallet](#) guide.



# BUT, WHERE DO I PUT IT?

There are many types of cryptocurrency wallets, but at the core they normally fall into one of two categories, dependent on features and functionality. We've listed the functions below.



## COLD STORAGE WALLET

- Offline Wallet
- Secured Using Private Key/Seed Phrase
- Not owned or managed by any central authority

**Examples: Decentralized Crypto Exchanges, Hardware Wallet (Ledger, SafePal etc...), specific desktop/phone applications**

## HOT WALLET

- Online Wallet
- No private key management
- Owned or managed by a central authority



**Examples: Centralised Crypto Exchanges, Crypto Banks, a majority of both android and iPhone apps**

# WHERE CAN I USE IT?

**EVERYWHERE!** There are many companies, traders and people that accept Bitcoin all over the globe...remember it's borderless!



Hit the information button to the left and run a quick search for yourself...

# CRYPTO PLATFORMS & SERVICES



## Exchanges

Similar to the traditional currency and stock markets, cryptocurrencies have their own specialized exchanges, on which cryptocurrencies are traded.

## Mining Pools

Mining pools are used by miners to 'pool' their network resources for their mining efforts. Pools normally charge a small fee for this.

## Banking

People said it wouldn't happen, but 'Crypto banks' are a reality and many now come with even or better financial protections than most traditional banks do!

## Payments

Crypto payments providers have been around for sometime, handling everything from buying on your favorite websites to in store point-of-sale systems.

## Telecoms

Including some Broadband and WiFi providers, there are an increasing number of Blockchain telecoms companies building ahead of current telco technology.

## Gaming

From in-game payments to rewards, betting and NFT in-game items, cryptocurrencies and gaming have always gone hand in hand. In 2021 this has exploded like never before!

## Education

Much like our very own ACE Economy project, there are many institutions and startups researching and leveraging the power of blockchain technology for the good of education.

## Marketplaces

There are so many retailers and trades people who accept cryptocurrencies, just Google "Accepts Bitcoin" We're sure you'll find many marketplaces where you'll be able to buy tons of stuff!





# HOW CAN YOU EARN CRYPTOCURRENCIES?

## Airdrops

Get free crypto for supporting your favorite projects or being an early investor.

## Staking

Stake your share and help the network to earn crypto rewards.

## Saving

Accrue interest on your crypto savings through various crypto finance dApps and services.

## Mining

Help to power and secure the network. Mine cryptocurrency rewards.



## Affiliates/ Referral

Join affiliate or referral programs of your favorite projects and applications and receive rewards for sharing them with others.

## Liquidity Pools

Help to provide exchange liquidity to others with your assets and receive annual yields.

## Building

Build your own project, or node to help the adoption of cryptocurrencies or help existing chains by setting up a node.

## Get a Job

Careers in the blockchain industry are becoming increasingly available, with many positions in the space also being non-technical. Get paid in BTC? Hell yeah!



# THE FUTURE OF CRYPTOCURRENCIES

Cryptocurrencies themselves, are in short an 'upgrade' of the current Finance, Currencies, Digital transactions and trading systems we use daily.

## How is this so?

Using Blockchain technology, transactions are able to happen much faster, stay secure, apply anonymity and more, without a 'middleman'. Transactions are P2P (peer to peer) and value is agreed on transfer confirmation each end. Blockchain transactions can even be linked to 'smart contracts', making business, trade and many types of contracts, defined, detailed and 'true', so to speak. The Blockchain is a decentralised ledger, showing all transactions and confirming each transaction publicly.

## How does this affect me?

**Excerpt from our 2016 'Introduction to Cryptocurrencies' guide** - In the near and not so distant future we are heading towards a cashless society. Everything is done on the internet, or the majority of money is spent 'digitally' anyway. Did you know that as of December 2015 Digital interactions influenced retail sales to the tune of \$2.2 trillion?! Just let that sink in, before even thinking of the fact that the endeavour of most Cryptocurrencies and the Blockchain itself, is to even out the distribution of wealth across the globe!

It may be hard to believe that this was only written 5 years before the guide that you are reading today, but let's take a look at where we are now...

- Cashless Society – <https://www.weforum.org/agenda/2020/01/benefits-cashless-society-mobile-payments/>
- Cashless spending – <https://www.marketwatch.com/press-release/cashless-payments-market---global-share-and-business-growth-2021-opportunities-trends-regional-overview-emerging-technologies-and-size-forecast-to-2026-2021-04-26>
- YOY value of Bitcoin (Dollar Cost Average USD) 2016 – 2021 – <https://www.blockchaincenter.net/dollar-cost-averaging/>
- Number of **active** Cryptocurrencies available 2016 – 2021 – <https://www.coinmarketcap.com>



# CONCLUSION

By reading this guide you have learned a number of things about **Blockchain & Cryptocurrencies**. You should now have a basic knowledge of:

- **What Bitcoin is**
- **How/Why Bitcoin was created**
- **The difference between types of cryptocurrency**
- **The difference between types of blockchain**
- **Places that it is possible to acquire cryptocurrencies**
- **Where it is possible to store cryptocurrencies**
- **A few places that accept cryptocurrencies**
- **Different types of crypto/blockchain based platforms/services**
- **Some methods of how to earn cryptocurrencies**
- **A glimpse of what is to come for cryptocurrencies in the short/medium/long-term**

This introductory guide can be followed up by any one of the guides on our [website](#) and is aimed at beginners. We encourage our users to **DYOR (Do Your Own Research)** and find out as much as possible, before deciding to have any involvement in the crypto markets.

**THANKS FOR READING!**



**WE ARE @BTCBROS ACROSS ALL SOCIAL MEDIA!**



**BTCBROS**

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