



BTCBROS

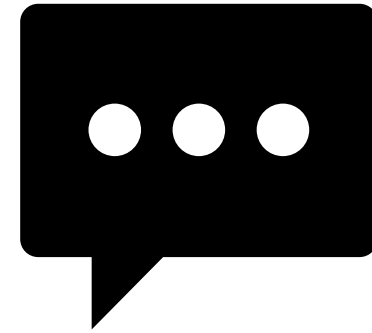
INTRODUCTION TO DEFI PART 1



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 Decentralized Finance (DeFI). It's origin, workings, use and technical capacities. The guide has been constructed for beginners and those with continued interest in Cryptocurrencies and Blockchain technology.

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



THE ORIGINS OF DECENTRALIZED FINANCE (DEFI)

Decentralized Finance doesn't have an exact date of origin, but there are a number of major events that shaped its evolution. Today, in 2021 however, **DeFi** has no doubt become permanent part of the **cryptocurrencies ecosystem**.

Bitcoin has clearly redefined **payments** and the concept of **store of value** from the **traditional fiat payment system** over time. However, it only slightly impacted the main functions of **the traditional financial services industry**, like **exchange, borrowing, lending, insurance, prediction markets, etc...**but, as itself never really directly addressed any of these, until...

The birth of **smart contracts** by **Ethereum** set the foundations for such areas to be **disrupted** by blockchain. The precursors to DeFi were projects like The **DAO** and **Etherdelta (2016-2018)**.

Over time both of these projects were **hacked and eventually discontinued**, but not before they paved the way for the subsequent innovation of Smart Contracts on an industry wide level.

Etherdelta, was one of the first decentralized exchanges (DEX). The exchange was based on order books, like centralized exchanges, which is a system used for aggregating user trades. This system was proven to be **'inefficient'** for a DEX.

This was an issue with the platform which left it vulnerable for hackers to steal over \$800,000. Not too long after the fact, Etherdelta's founder was charged by the U.S. SEC (Securities and Exchange Commission) for "operating an unregistered national securities exchange"

The odd thing about this, is that no public cryptocurrencies are tied to any actual nationality.

It is assumed that the exchange had been facilitating the exchange of tokens which fall under the category of **'Security Token'**, and that this is what led to the SEC's decision.

EARLY DEFI PROJECTS

There is a wide discussion on what project was the beginning of Defi, with Ethereum being the underlying catalyst to build out DeFi ecosystems.

Implemented in 2017 **Maker** is considered by many to be the “Godfather” of DeFi.

Created earlier in 2014, Maker is deployed as a smart contract, built on Ethereum. The Maker contract allows any participant to use their cryptocurrency as loan collateral, via an Ethereum built stablecoin, named **DAI**.

However, early **Decentralized Exchanges (DEX's)**, such as **EtherDelta** and early stablecoins, such as **USDT**, have also been noted as making the first steps towards creating the Ethereum based finance infrastructure

From 2018 through to 2020, many projects emerged that played an important role in the construction of the early DeFi ecosystem. Some of the most notable projects include **Ox, Synthetix, Compound, Aave, Chainlink, Uniswap** and **Yearn Finance (YFI)**.

The short hand **DeFi** term, that represents **Decentralized Finance** was coined in 2019-2020 during the height of new breakthroughs creating the sub-industry.

Compound & Aave are noted to have created the switch from the **user-to-user** transaction model, to **user-to-contract** models, enabling borrowing and lending of crypto assets.

Automated Market Makers (AMM's) and liquidity provision platforms such as **Uniswap, Bancor** and **1inch** were also introduced during this period.



FOUNDATIONS OF THE DEFI ECOSYSTEM

The concept of DeFi is the implementation of **services found within the traditional financial system**, using cryptocurrencies.

The aim is to deliver such services in a way that is conceptualized as more efficient and via a decentralized architecture.

Again, the terms DeFi and the **DeFi ecosystem** are used in reference to these currencies and projects, either based on or incorporating such services.

DeFi can be conceptualized as an **interconnected, interoperable ecosystem**, connecting any number of different service types or providers together.

Most of these services or providers **share a relationship with the same or similar protocols**, which are able to be followed from one to the next. In the traditional finance world **'Open Banking'** may be thought of as similar to one of these protocols.

The DeFi space has expanded and advanced rapidly, due to the realization of **project collaboration**. DeFi projects collaborating has enabled the space to build on even further concepts not previously afforded to users within the cryptocurrency space.

When speaking about DeFi and Traditional Finance the term **TradFi** is also used as a short hand moniker for the current and traditional finance architecture.

The DeFi ecosystem encompasses so much of the TradFi system and more, that major TradFi companies like **Visa** and **Mastercard** have already started to operate within the Ethereum network and overall DeFi ecosystem.

The DeFi concept is also not limited to Ethereum based projects, as other notable projects such as **Algorand** and **Waves** have taken on similar principles and are actively partnering with DeFi projects.

As a sidenote, our CEO believes that projects like **Waves**, which were launched prior to the rise of DeFi, also were part of the early innovations around such services. Waves have recently titled their ecosystem as **DeFo (Decentralized Foreign Exchange)**, which is something we'll talk about in a future guide.

THE DEFI STACK

The infrastructure of the DeFi ecosystem is known as the **DeFi Stack**, which is pictured on the previous page. Please be aware that although this infographic shows a majority of the current stack, things are always changing within the space and this is likely to change over time.

Another notable implementation of DeFi can be found with **Binance's own smart contract ecosystem (BSC)**.

The DeFi infrastructure is made from many "Pillars" and layers. Although these pillars are not officially categorized we can effectively look at the layers within the DeFi stack from its core, which in our infographic begins from **Bitcoin at Layer 0**, with **Layer 1** protocols and applications being built on top of Layer 0 and so on.

Layer 2 innovations are normally attributed to applications, rather than protocols, built on and to interact with Layer 1 protocols.

Examples of Layer 1 projects would be: Ethereum, BSC, Solana, Algorand, Polkadot and others...

Examples of Layer 2 would be: Wallets, Exchanges, Lending Platforms, Games (Decentraland, Axie Infinity)

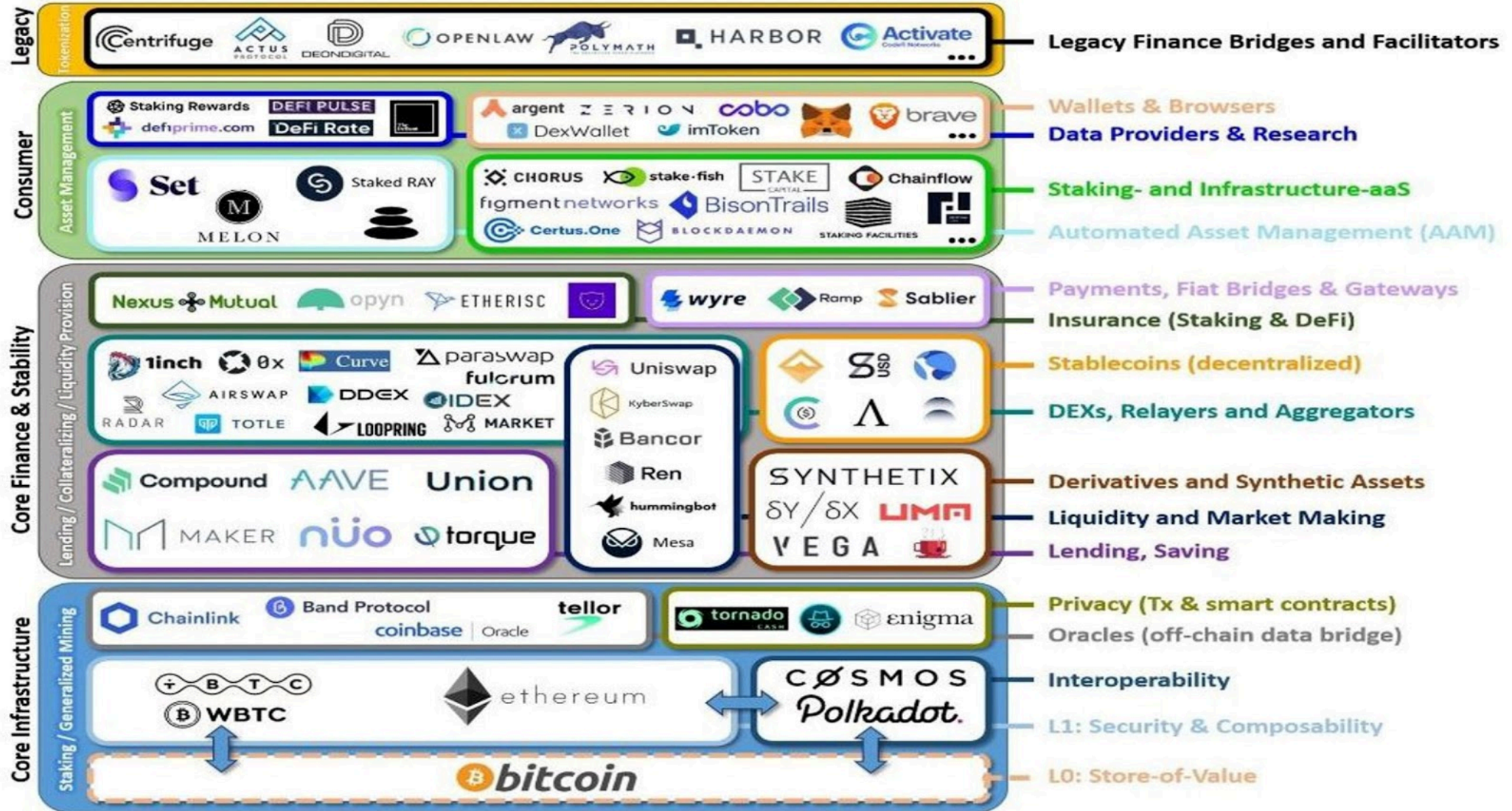
Although we won't go in depth on these within this guide, it is important to understand the infrastructure of the DeFi system when thinking about getting involved from any point in the space.

As **Blockchain, Crypto and DeFi** continues to evolve, it is believed that this will lead to the eventual 'replacement' of many **TradFi** services with smart contracts, which really is the driver behind cryptocurrency in the first place.

This 'replacement' has already started to **become a displacement to TradFi** and it is normally this which pushes regulators and TradFi giants to attempt to apply regulatory pressure, control and manipulation over what is essentially the end of the financial system as they know it.

One question, why would your government be so concerned about stifling **the fair distribution of wealth, freedom and privacy**? Why also would they shy away from making a **more trusted, incorruptible and unmanipulated governance** of such a system?

Decentralized Finance (DeFi) Stack: Product & Application View



Source: StakingRewards

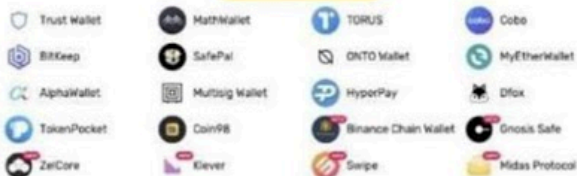
An example of the DeFi ecosystem and its layers, courtesy of stakingrewards.com

Overview of BSC Ecosystem

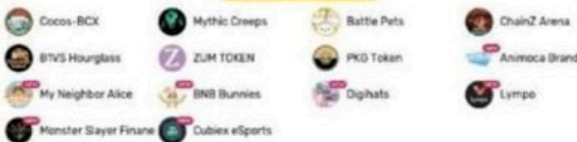
V 2021.03 (2)

Created by @BscProjectOrg

Wallet



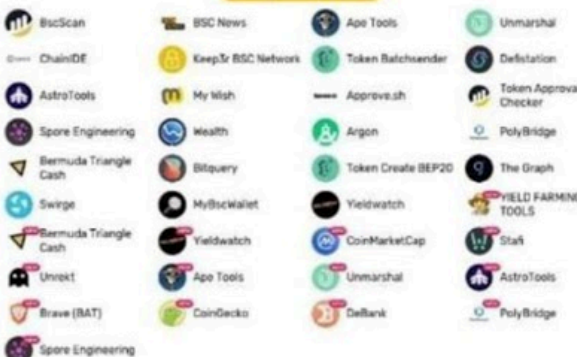
Game



Community



Tooling



Exchange



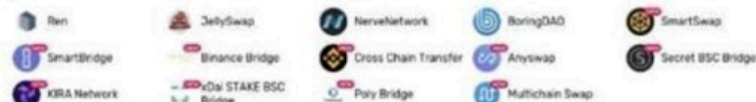
Stablecoin



Derivative

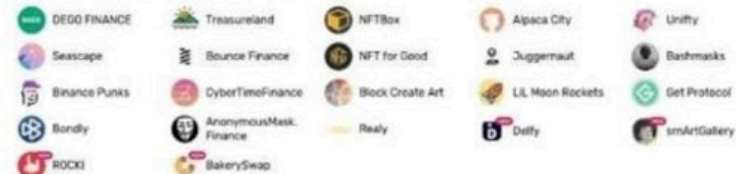


Cross-chain



DeFi

NFT



Insurance



Lending



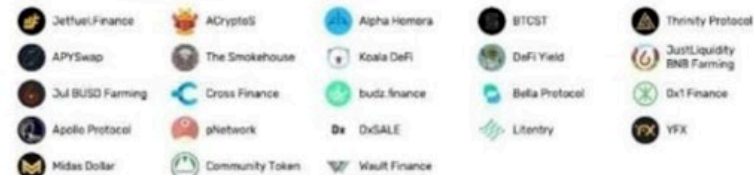
Yield Farming



Oracle



Other



DECENTRALIZED EXCHANGES (DEX'S)

Decentralized Exchanges work, in principal, the same as Centralized Exchanges (CEX's) do, at least in terms of providing a platform for **exchange (buy/sell)**, **liquidity aggregation (supply/demand)** and **representative price movement (charts)**.

However, the fundamental difference in the two is that Decentralized exchanges are built on **smart contracts, operating peer-to-peer transactions (p2p)** and **do not require traditional identification methods** to make use of the service.

All a participant needs to join a Decentralized Exchange is often just a **wallet address**, however it must be noted that many DEX's also require an **email**, mainly on the premise of **account security**.

Due to the nature of p2p transactions, there **is no central authority controlling the exchange**. Thus no requirement to complete KYC checks when using a DEX. This creates **an added amount of risk**, as users are anonymous parties and there is only usually a minimum level of admin support. **We've listed some of the most popular DEX's below:**



Uniswap



Balancer



dydx



1Inch



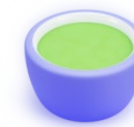
Sushi Swap



Compound



Binance DEX



Matcha

Disclaimer: The services mentioned above are all 3rd party services. BTC Bros Ltd cannot be held responsible for any decision to use such services, including any loss that may arise in use of these services.

DEFI WALLETS

We've included some of the most popular and trusted DeFi wallets currently in use (2021), below. Today, many of the ['Hardware Wallets'](#) also support DeFi products, services and protocols. Hardware wallets are generally deemed more secure than other wallet types.

You can learn about different types of cryptocurrency wallets, including how to setup and use a wallet in the ['Tips & Tricks'](#) section of our website.

Metamask



Argent



SafePal Wallet



MyEtherWallet (MEW)



Math Wallet



Math Wallet

Trustwallet



Formatic



WalletConnect



Binance Chain Wallet



Coinbase Wallet



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THE BENEFITS OF DEFI

The first thing to recognise about DeFi, is that the space brings with it some of the **pros & cons** of the already present crypto space.

Therefore, **there is much more innovation to come in respect of completely replacing the TradFi system.** However to date, there has been **no better candidate or solutions coming from the TradFi world.**

Here are some of the benefits, with some of the downsides on the following page:

- **Transparency** – DeFi transactions, as with other crypto transactions are recorded on a public ledger, viewable to all.
- **Permissionless** – You do not need anything except a wallet to participate. Current TradFi systems, only give access/exposure to the already wealthy for investment.
- **Lending/Borrowing** – Autonomous lending, borrowing and collateralization based on your crypto balance/trade ability, rather than the current broken credit system, which uses outdated and centrally controlled data.
- **Savings** – Maturity and automated compounding, via on-chain staking rewards.
- **Immutability** – Double spending and corruption DISABLED!
- **Tokenization** – Provides Digital Asset influence and trade. Place a value on anything, with no borders or barriers around international trade!

We will not go too deep into this list within this guide, as these things mean a HUGE deal to ensuring a safe, secure and decentralized system. However, there is plenty of research available online, although for a newcomer it can be highly confusing.

Be sure to stay-up-to date with our [website](#), to see when we post further guides, explainers and articles in this area.

THE DEFI DOWNSIDE

Although there are many sides of DeFi that are totally **beneficial to the future of finance**, there are also some things to be aware of. Bear in mind that DeFi is very much in its infancy, it's growth is rapid and development is constantly happening.

Here are some of the challenges faced by the current DeFi economy:

- **Uncertainty** – Although the advent of DeFi has brought about all types of financial applications and inclusion, the structures of DeFi are still young. Most projects are built on Ethereum, which is currently reshaping its scalability issues with Ethereum 2.0
- **Low Liquidity** – Compared to traditional markets, DeFi still has a low total market value \$85Bn, meaning less liquidity for buyers/sellers than traditional markets. However, remember anyone can provide liquidity in DeFi and this will increase with adoption.
- **Scalability** – As DeFi covers so many financial applications, it is suspected that sudden worldwide adoption may do to things;
 - i) Slow transactions, due high to network throughput,**
 - ii) Make transactions extremely expensive, this is known to be a problem with Ethereum particularly, but has recently been reduced by major Ethereum upgrade EIP-1559.**
- **Dodgy Smart Contracts** – Because **anyone can launch a DeFi project**, sometimes Smart Contract code can be poorly written, leaving entry points for hacks to the projects websites or holdings. The Smart Contract author could also have written a scam contract. Less tech savvy investors may fall victim.
- **Responsibility** – Because of their decentralized nature, most DeFi platforms bear little responsibility for user error, loss, or investments through their platforms. A certain degree of technical knowledge is needed to navigate services safely. **Remember, DeFi does away with intermediaries, but this leaves your assets totally YOUR responsibility.**
- **Technical Barrier** – Due to the reasons above, it is highly recommended that people learn or have the minimum technical skills to use DeFi services. That being said Dapps are becoming increasingly popular and easier to use.

If you're interested in DeFi, but worried about some of these downsides, it's best to get used to using Cryptocurrencies such as Bitcoin first, whilst building up your knowledge of other cryptocurrencies, blockchain and smart contracts, before attempting to use a DeFi platform.

CONCLUSION

By reading this guide you have learned a number of things about **Decentralized Finance (DeFi)**. You should now have a basic knowledge of:

- **What DeFi is**
- **The origins and history of DeFi**
- **Some of the key players in the foundation of DeFi**
- **How the “DeFi Stack” is formed**
- **A look at the Binance DeFi ecosystem (BSC)**
- **What a Decentralized Exchange is (DEX)**
- **Popular Decentralized Exchanges**
- **Popular DeFi enabled/compatible wallets**
- **Some of the major benefits of DeFi**
- **Some of the flaws associated with the current DeFi space**

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!



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