Bitcoin: The first major cryptocurrency, Bitcoin is the #1 largest cryptocurrency and most popular cryptocurrency. It focus is on creating a fully digital currency that will be used for anonymously transferring money between two users. This has no association with banks or the government, however as the popularity of cryptocurrency grows, banks and the government may try to take control and add regulations to Bitcoin and other cryptocurrency.

Advantages:

* Personal data protection
* Lower Transaction Fees
* Speed of transfers protects the merchants from chargeback fraud.
* Immune to inflation

Disadvantages:

* Lack of solid anonymity
* Bitcoin prone to scams
* Trust: some people may be reluctant to adopt a virtual wallet due to uncertainty of Bitcoin’s future.

Ethereum: Ethereum, first implemented in 2015, is the 2nd largest cryptocurrency on the market. It largely gained popularity due to its smart contracts and its wide usability. The goal of Ethereum is to develop dapps rather than be a currency. Ethereum is well established and supported by the Enterprise Ethereum Alliance. The future of Ethereum shows expansions into proof of stake and shard chains, a concept similar to sidechaining.

Advantages:

* Wide usability
* Popular
* EVM(Ethereum Virtual Machine)
* Well implemented smart contracts
* Open source
* Bright future

Disadvantages:

* Slow transactions and block mining
* Not scalable in current form
* Several hard forks have splintered the community
* Does not yet officially support sidechaining

Cardano: Cardano is a crypto that has been running for 5 years and advertises itself as a 3rd generation cryptocurrency. Created by Ethereum co-founder, Charles Hoskinson, Cardano is a proof of stake cryptocurrency and is currently the 10th biggest cryptocurrency by market cap. Proof of stake means miners or pools with more currency are rewarded with more currency. Therefore, there is minimal work needed to be done for a block to be mined, so transactions can occur much faster. A problem with proof of stake is pools of miners are encouraged to get bigger. This leads to centralized systems as inevitably efforts move to a single super pool. Cardano implements many strategies to encourage dispersal of pools to ensure decentralization is upheld. One method is to create a limit to rewards given to pools of a certain stake size. This strategy encourages larger stakeholders to separate into their own pools to ensure their reward is maximized. Cardano utilizes a sidechain to enable interoperability within the blockchain platform. Data can be stored in side chains to allow the transferral of assets between parallel blockchains with different rules, mechanisms, or languages.

Advantages:

* Fast: thousands of transactions per second
* Sidechains: allow interoperability
* Miners do not have to “work” for a reward
* Open source
* Potentially scalable

Disadvantages:

* Proof of Stake has more risk
* Many features are yet to be implemented
* Future of currency is still uncertain
* Not as popular

Libra: Libra is an interesting case as it has not been implemented yet. The goal of Libra is to create a stable crypto by backing it with govt bonds. It was set to be released Q1 2020, but government bodies shot the idea down. This led to nearly every major backer, Paypal, eBay, Mastercard, Stripe, Visa, and Mercado Pago, to bail in early October 2019. The project is still in development, but has been significantly scaled-down.

Advantages:

* Stable: big advantage
* Easy to understand
* Features meant to mitigate crypto learning curve

Disadvantages:

* Centralized
* Likely will not be open source
* Not yet Implemented, likely won’t be for a long time
* Very ambitious, currently with little support

Tezos:

The main idea of Tezos is to allow companies to make accounting books based on its chain. Tezos is based on the OCaml Language. Tezos has its own advanced blockchain with a unique feature of an on-chain governance model that allows stakeholders to reach an agreement on proposed protocol amendments. It also auto-regulates its transactions. Other features of Tezos includes self-amendment, proof of stake, and delegation. With self-amendment, Tezos is able to update itself without having to fork or split the blockchain into two different chains. Proof of stake and delegation are used to help the blockchain as a whole reach consensus on the state of the blockchain.

Advantages:

* fast transactions
* cheap fees
* Tezos ICO (Initial Coin Offering) was one of the biggest ever performed, indicating that there are several strong believers/supporters backing up Tezos.

Disadvantages:

* Might scare programmers/users away due to an uncertain future
* There is also uncertainty about Tezos algorithm, and the future plans of the founders. Therefore Tezos is harder to trust than more established cryptocurrencies like Bitcoin and Ethereum.