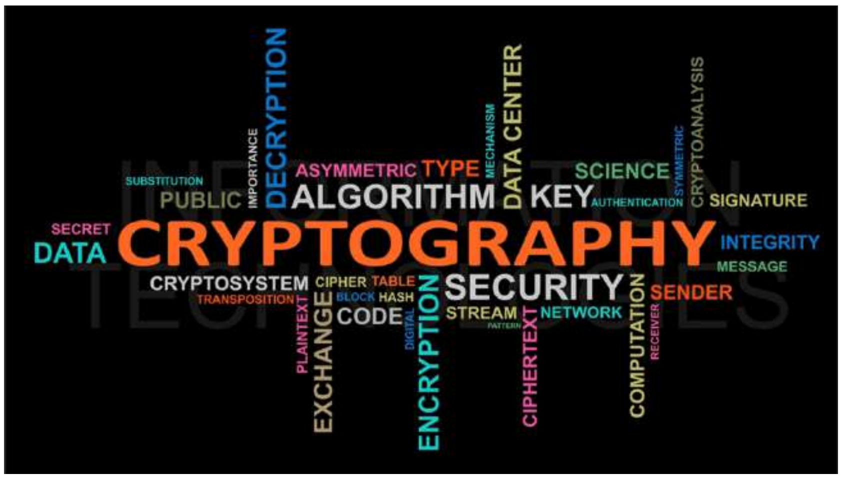
1 INTRODUCTION TO CRYPTOCURRENCIES

Cryptocurrency derives its name from two words, namely, cryptography and currency, a digital currency controlled by cryptography. A cryptocurrency has no inherent value however, its value comes from the people's belief in it.



cryptography

Considering cryptocurrency has no central or regulating authority and its value is defined by consensus from people believing in it. A conventional currency such as a U.S. dollar is governed by a central bank that defines its value represented by printable bills, coins, drafts, cheques, or other similar banking instruments. The value of cryptocurrency comes from an encrypted code that is difficult to reproduce, making it scarce and limiting its numbers, unless the creator of cryptocurrency decides to change the underlying algorithm to create more units.

Being a bank-free or border-free currency, cryptocurrency offers an alternative to conventional currencies. The basic unit of a cryptocurrency is called a coin that is an encrypted code consisting of a string of characters. A coin is merely an entry in a database available publicly via a blockchain that can be called as a *distributed ledger*.

A ***blockchain*** validates the coins of cryptocurrency. A blockchain is certainly a revolution that is here how we are going to see the world in the coming decades. The blockchain is already in the process of making its place as something much bigger than the Internet itself.

Development of Crypto:

It's a digital asset designed to work as a medium of exchange and this cryptocurrency plays a vital role in this emerging market of crypto world. There were a number of cryptocurrencies that reached some level of popularity. It all started back in the year 1980 when cryptographer *David Chaum* first developed the idea of a currency backed by a proof-of-work computer algorithm as opposed to a central bank.

In August 2008, *Neal Kin, Vladimir Oksman* and *Charles Bry* filed a patent application for an encryption technology.

There are still debates about whether bitcoin and other cryptocurrencies are alternative currencies. From 1 April 2017, bitcoin has become a legal payment system in Japan with a potential retail base of

260,000 merchants. On the other hand, the Chinese regulator has stopped all cryptocurrency trading by unregulated exchanges at the end of September 2017.

The general arguments for a successfully distributed cryptocurrency are:

a. *Open source software:* A core group of trusted developers to verify the code and possible changes for adoption by the network.

b. *Decentralised:* Even if it is not entirely distributed, it is essential that there is no single point of attack.

c. *P2P:* There should be no intermediaries with pools of subnetwork forming.

d. *Global:* It is easily available to global talents and users with ease.

e. *Fast:* It should be able to handle high transactions per second.

f. *Reliability:* It should be non-repudiable with almost instant settlement.

g. *Secure:* It should have a good architecture for proof of identity with encryption and yet anonymous transactions.

h. *Sophisticated and cross-chain flexible:* The system will be able to communicate with another network for exchange of and support for all types of assets, financial instruments and markets.

i. *Automated:* It is designed to execute algorithm for payments and contracts with ease.

j. *Scalable:* The system can handle a large number of users and transactions.

k. *Platform for integration and interoperability:* It can be designed to integrate digital finance and digital law with an ecosystem to support smart contract with financial transactions. Customised agreements between multiple parties, containing user-defined scripted clauses, hooks and variable and

l. *Appropriate economic incentive:* The interest of all participants are taken care of with the inbuilt balance of interest among parties.

Importance to Know about Cryptocurrency

Cryptocurrencies have seen a significant growth in 2017. There have been wild swings in their value, making these very risky and volatile, due to which these get labelled as a bubble as well. It is very unpredictable when the price continues to rise and then falls suddenly, only to come back with a newer peak and so on.

People look at cryptocurrencies with various perspectives. Some look at it to perform actual monetary transactions. Some look at it as miners to get rewarded. Some look at it as an investment where retail and institutional investors continue to increase with time. Lot new interest from various other perspectives make cryptocurrency a very interesting digital asset.

Legal Status of Cryptocurrencies

The legal status of cryptocurrencies is under radar by most of the countries. The stand varies from country to country. Though, their usage may not be illegal and can be used as a medium of exchange in some countries, some countries have taken a hard step to ban or restrict.

Countries such as Bolivia, Ecuador, India, Nigeria have declared public statements declaring such restrictions. Bitcoin being the most popular one, the U.S. Treasury classified it as a convertible virtual currency and taxed it as a property. Governments worldwide are taking steps to include the transactions using cryptocurrencies into their taxation system.

The dark side of cryptocurrencies is related to the common idea that these are used for illegal activities, especially on the Dark Web. This leads to continuous rise in the price of the coins. It is unfortunate that more than a quarter of bitcoin usage is linked with criminal activities due to its anonymity.

It is important to understand that, just because cryptocurrencies are used by criminals, it should not lead to the conclusion of making cryptocurrency illegal. With the technological advances and appropriate legislations and controls, it can be better used as a valid and reliable form of currency, making it the future of the money.

Emerging Motives behind the Raise of Cryptocurrency

A policy dubbed quantitative easing was once implemented in the USA and later even spread to Europe and Japan. Due to this phenomenon, the amount of money in the world has greatly increased, while the purchasing power of the dollar has decreased over the past 100 years by 95%. This trend is ongoing. The more money exists, the cheaper it becomes.

It is important to keep in mind that each kind of currency experiences inflation, which indicates the depreciation of currency over some time. In other words, inflation is the speed of money circulation. The country's economy has its own cycles as people take on loans and then pay them back.

For example, in the USA, the loan interest rates are at an average of 1%. They remained at zero level for a long time in the past. The central banks issued money and bought up financial assets and accordingly, the poor people remained poor and those people who had financial assets, stocks or real estate made a constant profit. That is why each crisis makes the poor even poorer and the rich even richer. These processes result in a very powerful stratification of the population. However, unfortunately, the economy works in this way and we approach a kind of dead end, as many financial analysts state. All of this to demonstrate that the central banks do not cope very well with their function.

So, people started to look for an alternative way to preserve the value of money. If not to multiply, at least not to lose. That's why many people invest in gold, fixed income instruments, shares, etc. At the same time, the economy began to develop swiftly after the Internet appeared, so people realized they do not need to hold money in physical form now. Thus, the concept of electronic money emerged.

The idea of creating a digital currency like Bitcoin is not entirely new. Still, there is a difference between Bitcoin and other types of digital money. If you use such electronic money systems as PayPal, Western Union or Skrill, your finances are stored in the same companies. In this case, we deal with centralized money management, i.e. the fate of your money depends on decisions of specific people in these companies. You have no power to influence these decisions.