CRYPTO CURRENCY: - THE FUTURE OF VIRTUAL CURRENCY

-Himank Diwan & Farzad kapadia

Abstract

No aliens do not exist (as of now or not that we know of), it is the human mind which has evolved over the years and have given us many break-through in life. Many fields have benefitted due to these break-through as some of the technology which have been invented has been used to make life and work easy for humans. For the human to get these thing he used to barter things and give what he had and get what he wanted, slowly and gradually he evolved in that area also and started doing it on a larger front, due to this increased demand he wanted something which was more reliable that the barter system, he wanted something with the help of which he could get whatever he wanted without giving up what he had with him. He came up with an idea which was just basic at the beginning, he invented round metal things which he started calling money (which was later on called coins) with the help of which he started trading and getting things he wanted. Slowly and steadily he made changes to it and made better coins (which were of different size, shape, material) and started numbering it so that it was easy to know the value of the item he had bought. After many years humans came out with the idea of paper based cash which would replace the coins for larger amounts which over the years has developed into digital currency which does not have a physical presence but it is there.

Over the years of development of the internet has seen many changes to it, earlier humans who were not at all familiar with the working of the online banking system used to hire a third party to do their work for them (which was not at all safe), but over the years with the changing of times people have started using the net to look after their money through the services provided by the bank on the internet. The banks have developed a user friendly ways for their customer to keep check of their accounts and to transfer funds to other people, humans have developed application which helps people transfer money without them going to banks and taking out the money and then sending it to the person who they owed the money to, but somewhere or the other there were still many flaws to it.

Around the year 2008 Satashi Nakamoto felt that all this could be avoided, he in his mail to his friend Dustin Trammell said that "He has developed a new way for people to transact which he called Bitcoin which uses a peer-to-peer electronic cash system, ……. which after a decade of failed third party based system (Digicash, etc.) they see it as a lost cause. I trust they can make the refinement, this is the first occasion when I am aware of that we're attempting a non-put stock in based framework"[1]

Introduction, Literature Review and Methodology

Introduction

With the rapidly changing world and society we are seeking new dimensions in technology which are waiting to be discovered. Gradually from paper oriented currency we are transforming to an online world, which shows us the major transformation of money, from barter system to coins and papers to online payments and now to crypto currencies we are facing a new dimension in technology.

During 2009 an idea was published in a paper by Satoshi Nakamoto which talks about bitcoin as a digital crypto currency. It is a form of a virtual currency that is difficult to counterfeit because of its security. Unlike other traditional online payments mechanisms, bitcoin offers low transaction fees. What makes bitcoin so unique is that it provides an electronic based payment system dependent on cryptographic proof instead of trust, it empowers two willing parties to transact directly with each other without the need of a trusted outsider. Bitcoin is operated by a decentralized authority unlike government issued currencies.

The basic way for bitcoin to work is that it defines an electronic coin as a chain of command. It uses long term string of numbers and letters linked through mathematical encryption algorithm which was used to create them. Balance of Bitcoin can be checked by public key which serves as an address to the world and which helps in transaction of bitcoin. The second is the private key which works as an ATM which is only used to authorise bitcoin transaction. Every owner transfers the coin to the next by digitally attaching the hash of previous transaction and the public key of the next owner and adding these to the end of the coin. It utilizes a shared innovation (peer-to-peer) technology which implies that there is an interconnection of hubs which share resources among each other without the utilization of an incorporated managerial framework.

[1]https://blockgeeks.com/guides/what-is-cryptocurrency/

Research Area and Objective

Crypto Currency has had its ups and downs since it was founded. But after the year 2012 it has started gaining importance and has been seen as a replacement for the paper based currency system, but willworld be capable enough of handling a such currency. The objective of this research paper is to provide a wider perspective of this problem and to look into the matter regarding what laws should be made and what should be the positive or the negative impact of Crypto currency.

Research Methodology

The research methodology applied for the completion of this research paper is Doctrinal methodology. Inputs have been taken from various blogs, Websites, articles and books for the purpose of reference.

Literature Review

The main objective is to find out the problems faced if the Crypto Currency was to be the only option of payment. The basic thing which we note from this research paper is that how times have changed. How earlier people used to rely on barter system and from that they moved on to currency based system, which redefined the world view on buying and selling of things. The world as of now has started relying more on online based system as it is much reliable and is an easy method of tracking the money. This research paper deals with what are the positive or the negative impacts of crypto currency and what the government think is correct guidelines to be laid down for them.

Introduction

What is Crypto currency?

During 2009 an idea was published in a paper by Satoshi Nakamoto which talks about bitcoin as a digital crypto currency. It is a form of a virtual currency that is difficult to counterfeit because of its security. Unlike other traditional online payments mechanisms, bitcoin offers low transaction fees. What makes bitcoin so unique is that it provides an electronic based payment system dependent on cryptographic proof instead of trust;it engages two willing gatherings to transactdirectly with each other without the need of a trusted outsider. Bitcoin is operated by a decentralized authority unlike government issued currencies.There is no physical nearness of bitcoin, it is just adjust which is kept on an open record in the cloud.

The most fundamental bit of Satoshi's development was that he made sense of how to gather a decentralized cash system. It was with the birth of bitcoins that cryptocurrency was born. Digital currency comprises of a system of associates and each companion has a background marked by all exchange and adjustments of each record. The people and organizations who claim the overseeing the process and take an interest in bitcoin arrange are known as "Miners" who are roused by rewards. Bitcoin mining is a procedure in which bitcoin is discharged to come into course; it includes understanding computational complex riddles to find another piece which is added to the square chain.

How does it work?

The basic way for bitcoin to work is that it defines an electronic coin as a chain of command. It uses long term string of numbers and letters linked through mathematical encryption algorithm which was used to create them. Balance of Bitcoin can be checked by public key which serves as an address to the world and which helps in transaction of bitcoin. The second is the private key which works as an ATM which is only used to authorise bitcoin transaction. Every owner transfers the coin to the next by digitally attaching the hash of previous transaction and the public key of the next owner and adding these to the end of the coin. It utilizes a shared innovation (peer-to-peer) technology which implies that there is an interconnection of hubs which share resources among each other without the utilization of an incorporated managerial framework.

A cryptocurrency consists of a network of peers. Every peer has a record of complete history of all the transaction and balance of every account. Once a transaction is requested it is almost broadcasted and is immediately known by the whole network, but only a specific amount of time it gets confirmed. Conformation is a critical concept in cryptocurrency, if the transaction is unconfirmed it can be forged but once it get confirmed no one can make changes to it and becomes a part of block chain. The main job for miners is to confirm transaction, and once they stamp them as legit they are spread in the network. After the transaction is confirmed by a miner, every node has to add it to its database and it becomes a part of the block chain

Types of Cryptocurrencies

The concept of Cryptocurrency has grown by a great extent over the last few years; the major reason behind this is that cryptocurrency is an online/virtual/digital currency which can be created by anyone at any point of time. At present there are over 1300 types of cryptocurrencies which can be bought and sold by any individual at any point of time. However, the market value (buying and selling value) of every cryptocurrency is different. As there are no regulations on cryptocurrencies and with the ever increase in the number, it is necessary to ensure that the cryptocurrencies are genuine in nature before the act of purchasing or selling is carried out. The major cryptocurrencies which are actively being traded include the following:

1. **Bitcoin:**

Bitcoin is considered to be one of the first ever cryptocurrencies to ever be launched on an online/virtual/digital platform where people could actually buy and sell cryptocurrencies (bitcoin). Bitcoin is considered today to be the most actively and widely used cryptocurrency and has the highest value (monetary value) compared to any other cryptocurrency in the market. Bitcoin uses a technology called the “Blockchain Technology”. Bitcoin the first ever cryptocurrency was created in the year 2009, by an unknown person or an unknown group of people referred to as “Satoshi Nakamoto”. The identity of Satoshi Nakamoto is still not known and the search is still on even today. The major feature of bitcoin which makes it stand out from any other form of monetary transaction is that it does not involve a third party or a middleman. Cryptocurrencies are unregulated and as bitcoin is a cryptocurrency, there are still no regulations on bitcoin as well. The Government cannot interfere in the functioning of cryptocurrencies (bitcoin) as no laws have yet been passed to govern cryptocurrencies. Bitcoin can be used for a variety of purposes which range from paying a basic hotel fee to even buying a simple game online. Bitcoins has made the process of international payments simple and less expensive as there is no legal fee charged. Further, bitcoins are not owned by any particular country and are not subjected to any regulations.[2] With the ever increase in the value of bitcoins, it has now become more of a currency collection item rather than a form of payment. Bitcoin is now being treated as a form of investment for future, similar to that of the stock market as there has been a boom in the price of bitcoins. There is a trend of getting rich now by buying and selling bitcoins. Bitcoins are collected in a “Digital Wallet” which is stored on either a cloud or an individual user’s computer.

In the year 2017, bitcoin reached an all-time high as it rose from 1,000 $ at the beginning of the year to a record high of over 19,000 $ at the end of the year which means a 1,400% increase in the value of bitcoins. [3] However, it has declined in value from the start of 2018.

2. Bitcoin Cash:

Bitcoin is considered to be the future of monetary transactions and is considered to be the most famous and the most widely used cryptocurrency today. Bitcoin Cash is a category or a sub part of bitcoin, which is considered to be a modern form of peer to peer transfer of funds.[4] Bitcoin Cash is considered to be the future to the bitcoin line of currencies. Bitcoin Cash uses the same form of “Blockchain Technology” which is being used by bitcoin. Bitcoin Cash has a different symbol as compared to that of bitcoin. It is represented with the symbol (BCH). Bitcoin Cash as of 2018 is about 1,240 $. [5]

3. Etherium:

Etherium is a kind of cryptocurrency which uses the “Blockchain technology” to function. Etherium was developed in the year 2013 by Vitalik Buterin. In the year 2017 the value of etherium like any other cryptocurrecncy hit its highest point at a growth of about 13,000 percent. The major development in etherium started in the year 2014, after Vitalik Buterin the inventor of etherium decided to go public. In particular, etherium uses the technology of “smart contracts” that brings about the enforcement/performance of a contract; it compels parties not to withdraw

[2] CNN Tech, http://money.cnn.com/infographic/technology/what-is-bitcoin/
[3] Investopedia, Bitcoin, https://www.investopedia.com/terms/b/bitcoin.asp
[4] NDTV, https://www.ndtv.com/business/bitcoin-vs-bitcoin-cash-five-things-to-know-1808188
[5] Bitcoin Cash, https://www.bitcoincash.org/

from a particular contract. Etherium also provides for the method of refund, if there is a default on the part of any party to the contract.

4. Litecoin:

Litecoin is a cryptocurrency similar to that of bitcoin. Litecoin is another cryptocurrency which uses the "Blockchain Technology" to operate. However, the algorithm, codes and technology used in litecoin is slightly different from that of other cryptocurrencies. Litecoin was released in the year 2011. Litecoin as of 2018 is about 210 $. Litecoin technology was created by Charlie Lee an MIT graduate and former Google engineer. [6]

5. Ripple:

Ripple a cryptocurrency was released in the year 2012. Ripple is considered to be the best suitable alternative to bitcoin as it is considered to be there in large supply in the online market and it has a steady price as compared to that of other cryptocurrencies. Ripple is considered to be one of the best cryptocurrencies as it is considered to be less volatile and a safer form of cryptocurrency. Ripple is represented on the online platforms as (XRP). The main aim of ripple is to facilitate to its customers a safe, instant and nearly free financial transactions. As of 2018, ripple has boomed and it has the third largest market capitalization.

Advantages of Cryptocurrencies

Cryptocurrencies can be created by anyone at any point of time. Technology in the modern times has developed over the years and as a result it brings along with it certain advantages. Cryptocurrencies being the latest form of monetary transaction technology has certain advantages. The advantages of cryptocurrencies, include the following:

1. Easy Access:

[6] Investopedia, https://www.investopedia.com/tech/most-important-cryptocurrencies-other-than-bitcoin/

The information related to the price of various cryptocurrencies can be easily accessed and available at any point of time. There are various online platforms which provide data related to cryptocurrencies. The transactions related to cryptocurrencies can be done by anyone at any point of time. The information available online can be easily accessed.

2. Quick and Easy Payments:

The “Blockchain Technology” which is offered by cryptocurrencies makes the payment procedures extremely quick and easy. There is no form of physical exchange of cash by one person to another, nor is a debit card or a credit card being used for making payments. The monetary transaction takes only a few seconds to make the payments successful. In order to make the payments successful only the wallet details of the person or the enterprise is needed to who the money is to be transferred. The amount will be received by the person or the enterprise in the matter of a few seconds/ minutes.

3. No Third Party:

A cryptocurrency transaction does not need a third party. A third party could either be an individual, an institution, a company or a bank. The cryptocurrency holder has full control over the funds and any transaction can be carried out at any point of time without any help or interference from a third party.

4. No Fixed Jurisdiction/Boundaries:

A cryptocurrency holder who lives in one part of the world can exchange his/her cryptocurrencies with an individual, company or institution living in another part of the world. As the various cryptocurrencies are not owned or controlled by a particular individual or country there cannot be a fixed jurisdiction which can be applied for the carrying out of transactions.

5. Lower Fees:

In order to carry out a cryptocurrency transaction using the “Blockchain Technology” usually no transaction fees are applied/charged. However, a certain fee may be charged if a third party enters into the transaction. Examples include Coin base and Unocoin.

Disadvantages of Cryptocurrencies

Cryptocurrencies can be created by anyone at any point of time. Technology in the modern times has developed over the years and as a result it brings along with it certain disadvantages. Cryptocurrencies being the latest form of monetary transaction technology has certain disadvantages as well. The disadvantages of cryptocurrencies, include the following:

1. **Lack of Government Regulations:**

The major drawback of cryptocurrencies is that it is unregulated. There are no laws or regulations which are enforced by the government in order to control cryptocurrencies. As there are no laws, the government cannot supervise over the monetary activities and transactions carried out online.

2. **Difficult to Understand:**

The use of "Blockchain Technology" and cryptocurrencies can be difficult to understand by some individuals. The technology codes which are being used are sometimes complex in nature and extremely difficult to understand by those who are not used to or familiar with carrying on online transactions.

3. **Lack of Knowledge:**

People are not aware of how cryptocurrencies operate. Further the lack of knowledge related to "Blockchain Technology" adds to the problems of unawareness and an investor needs to be aware before investing. As a result, knowledge is needed before investing.

4. **Loss of Cryptocurrency Wallet:**

There is always a high possibility of an individual losing his/her cryptocurrency wallet. Loss of cryptocurrency wallet indicates the loss of cryptocurrencies altogether. If an individual has stored his or her information related to their cryptocurrencies in their wallet, the password needs to be saved and the data needs to be protected at all times.

5. Potential for Tax Evasion, Financial Loss, Illicit Activities:

It is a general assumption that the money which is invested into cryptocurrencies is black money. However, it is not necessarily true. Further, due to lack of government rules, regulations and control there is no supervision over illegal activities. As there are no laws passed by any country related to cryptocurrencies, there is no tax being charged on the amount of money invested or on the profits earned from selling the cryptocurrencies. The money invested can further be used for illicit activities. As the owner is in complete control of his or her wallet, there is always a high potential of an individual carrying out an illicit activity.

Legality of Cryptocurrencies in India.

- **Government and Reserve Bank of India's View:**

A "currency" is considered to be a legal tender which is approved by the Government of a particular country. A legal currency can easily be used for making necessary payments and for buying and selling of goods and services. A legal tender is governed by the law and it has legal validity in the eyes of the law.

Cryptocurrencies, are considered to be a Virtual Currency. Unlike other legal tender/currencies which are managed and controlled by the government of a particular country, cryptocurrencies are managed and controlled by the developer/ programmer of the cryptocurrency.

Virtual currencies have not yet been recognized by the Government of India and the Reserve Bank of India as "a currency" in India. Virtual currency is not considered to be a recognized payment system. Virtual currencies are of the nature of a "computer programme" which has been defined in the Indian Copyright Act, 1957, as "an arrangement of directions communicated in words, codes, plans or in some other shape, including a machine discernable medium, fit for making a PC play out a specific errand or accomplish a specific outcome. The Securities Exchange Board of India (SEBI) has expressed that if digital currencies are dealt with as a lawful product, all things considered it will be directed by the Securities Exchange Board of India.

The Reserve Bank of India, as of 2018 has still not recognized cryptocurrencies as legal valid currency/tender. The Reserve Bank of India has consistently issued notices with respect to digital currencies not being a lawful delicate and has additionally expressed that if any individual is engaged with the demonstration of purchasing and offering of bitcoins then they are doing it at their own particular hazard and the legislature would not be at risk for the misfortunes caused. The Reserve Bank of India has never issued any license to any institution or company to carry out the activity of buying and selling cryptocurrencies. However, the Reserve Bank of India has never stated cryptocurrencies to ever be an "illegal asset" to own by an individual.

There are various countries in the world such as China, North Korea and Russia have taken strict actions regarding the trading activities in cryptocurrencies.

After repeated cautionary circulars from the apex bank, in April 2017 the government set up an inter-disciplinary committee. The committee was supposed to submit its report within 3 months. The board of trustees was set up to check out the present status of virtual monetary forms both in India and all inclusive, inspects the current worldwide administrative and legitimate structures representing virtual monetary forms; recommend measures for managing such virtual monetary forms including issues identifying with buyer security. In December 2017, finance minister Arun Jaitley told the media that the legislature doesn't consider bitcoin as a lawful delicate and it is dealing with suggestions for such monetary standards.

- **Government Given a Deadline**

The Indian Supreme Court reportedly addressed the matter regarding crypto currency on Feb. 25, 2019. According to Twitter account Crypto Kanoon, a platform for block chain regulatory news and analysis, the court gave the government four weeks to come up with a clear regulatory framework for crypto currencies. After that time, the court will make a decision on the crypto banking ban by the country's central bank, the Reserve Bank of India (RBI). Crypto Kanoon tweeted:

"Supreme Court has granted 4 weeks to Indian government as the final opportunity to bring about a policy (rules and regulations) on crypto currencies."

The last time the Supreme Court addressed the crypto case was on Jan 17, 2019 when it decided to hear the petitions against the RBI ban in the last week of this month. In its circular dated April 6 last year, the central bank banned financial institutions under its control from providing services to crypto businesses.

One of the petitioners, the Internet and Mobile Association of India (IAMAI), requested for the RBI ban to be lifted. The IAMAI is an industry body whose members include a number of local crypto exchanges. The association argued that the ban is unconstitutional. It also pointed out to the court that some crypto businesses have suffered because of this banking restriction. Zebpay, for example, shut down its Indian crypto exchange operations due to the banking problem.[7]

- **Crypto Regulation in India**

The government of India has been working on the regulatory framework for cryptocurrencies. The finance ministry set up a panel, headed by Subhash Chandra Garg, Secretary of Economic Affairs, to draft the regulation. Furthermore, the ministry told Lok Sabha, India’s lower house of parliament, at the end of last year that “It is difficult to state a specific timeline to come up with clear recommendations” as it “is pursuing the matter with due caution.”

Conclusion

The concept of cryptocurrency has developed to a great extent, especially in the year 2017. Cryptocurrencies is considered to be a growing field and is considered to be an exciting concept for young investors. The first ever cryptocurrency, bitcoin hit an all-time high in the year 2017 of 19,200 $ per bitcoin. This indicated that virtual currencies could well be the future of monetary transactions. Cryptocurrencies are present and are being transacted by individuals from each and every country. There are over 1,300 cryptocurrencies in the online market however only a few of them have high value and are traded on day to day basis. Cryptocurrencies are now being looked at as a source of investment rather than a payment mechanism.

[7] https://news.bitcoin.com/indian-supreme-court-government-cryptocurrency-regulation/

WEBLIOGRAPHY

1. https://bitcoin.org/en/
2. https://www.investopedia.com/tech/most-important-cryptocurrencies-other-than-bitcoin/
3. http://money.cnn.com/infographic/technology/what-is-bitcoin/
4. https://www.investopedia.com/terms/b/bitcoin.asp
5. https://www.ndtv.com/business/bitcoin-vs-bitcoin-cash-five-things-to-know-1808188
6. https://blockgeeks.com/guides/what-is-cryptocurrency/

LIST OF STATUTES

1. The Constitution of India
2. Information Technology Act, 2000
3. Competition Act, 2002
4. The general data protection regulation, 2016