ISSN:0975-9646

Bitcoin in India

Akshaya Tamradaman[#1], Sangeeta Nagpure[*2]

[#1]*MTECH Information Technology*

K.J. Somaiya College of Engineering, Vidyavihar, Mumbai-77

[*2] *Professor, Dept. Information Technology*

K.J. Somaiya College of Engineering, Vidyavihar, Mumbai-77

***Abstract*— Nowadays, there is a vast and fast development in cryptocurrincies. Bitcoin is one of them which is most popular and known as first decentralized currency.**

The legal status of Bitcoin varies substantially from country to country and is still undefined or changing in many of them. This paper mainly covers working with Bitcoin in India. Bitcoin transactions are anonymous and most secure but on the other hand they fail to protect consumers because of lack of regulations. Also the use of cryptocurrencies is very less because of lack of its awareness and vendors. This paper also coveres the legality and regulatory framework with respect to Bitcoins in India.

As a virtual currency and peer-to-peer payment system, Bitcoin may signal future challenges to state oversight and financial powers.

***Keywords*— Bitcoin, Virtual Currencies, Blockchain**

I. INTRODUCTION

At present most of the currencies in the world including reserve currencies are fiat currencies. The fiat currencies are issued by a government and if needed, the government promises to pay the holder of such currencies an equivalent amount in gold. Therefore, these currencies usually have a central regulatory body which issues them, and thus called 'centralized'.

A cryptocurrency is a medium of exchange that uses cryptography to manage the creation of new units as well as secure the transactions. One of the most striking features of cryptocurrency is that it weeds out the need for a trusted third party such as a governmental agency, bank etc. The cryptocurrency system collectively creates the units. The rate at which such units are created is defined beforehand and is publicly known unlike the traditional currencies where the government or the authorized banks control the supply. The fundamental system on which most cryptocurrencies are based today was created by Satoshi Nakamoto.[1]

According to Nakamoto, the major problem with conventional currency today was that trust was required to make the system work. While looking at the history of fiat currencies, one can see that it is full of breaches of such trust. He also state that banks use the currency entrusted to them to lend it out in 'waves of credit bubbles', with hardly anything left in reserve. Thus he introduced Bitcoin as cryptocurrency. Bitcoin software would allow its users to send money over the internet directly to each other without an intermediary, and no outside party could create Bitcoin, entirely cutting out the role of central banks and governments in online transactions. As Nakamoto said, 'everything is based on crypto proof instead of trust'. Furthermore, unlike banks and governments which can print more money whenever they deem fit, the bots that are currently creating Bitcoin are supposed to stop doing so in or around the year 2140 according to their programming itself. And unlike fiat currencies, whose value is derived through regulation or law and underwritten by the state, Bitcoin derive their value through the simple principles of supply and demand – they have no intrinsic value and no backing, and their value depends entirely on what people are willing to trade for them. Hence, no faith or trust towards the financers or politicians was required in case of Bitcoin, but only in Nakamoto's well-designed algorithms.

II. WHAT IS BITCOIN?

Bitcoin is a decentralized cryptocurrency, a form of payment that uses cryptography to control its creation and management, without need of any central authorities such as bank. It is an open source software based online payment system introduced in 2009 by Satoshi Nakamoto. It is also known as electronic cash system based on peer-to-peer virtual data. It is world's first decentralized currency. Each Bitcoin is subdivided down to eight decimal places, forming 100,000,000 smaller units called satoshis. Bitcoins can be transferred through a computer or smartphone without an intermediate financial institution. The processing of Bitcoin transactions is secured by servers called Bitcoin "miners". These servers communicate over an internet-based network and confirm transactions by adding them to a ledger which is updated and archived periodically using peer-to-peer filesharing technology, also known as the "blockchain. Bitcoin miners keep the blockchain consistent, complete and unalterable by continuously and repeatedly verifying and collecting newly broadcast transactions into a new group of transactions called 'Block'. Each block contains a cryptographic hash of previous block using SHA-256 hashing algorithm.[2]

Currently, over 12 million Bitcoins are in circulation. Bitcoin algorithm was set in such a way that the difficulty of mining every next Bitcoin is greater than the previous one. expanding complexity will continue until around 2140, when minting will hit 21 million Bitcoins.

There are three primary ways to obtain Bitcoin:
i. mining new ones.
ii. buying on an exchange; and
ii. accepting them for goods and services.

Each user of Bitcoin gets a digital wallet and a Bitcoin address which is the address from and to which Bitcoins can be transferred once this address is given to another party for the transfer. A transaction or transfer of Bitcoins is simply a transfer of value between Bitcoin addresses that gets included in the block chain or the system log, which ensures that each transaction is valid and that nobody can use his or her Bitcoins more than once i.e. it avoids double spending.. Bitcoin wallets keep a secret piece of data called a "private key" for each Bitcoin address. Private keys are used to sign transactions, providing a mathematical proof that they have come from the owner of the addresses. The "signature" also prevents the transaction from being altered by anybody once it has been issued.[4]

III. BITCOIN IN INDIA

Bitcoin demand is growing day by day in India. People in India are now understanding the power and advantages that these virtual currencies can offer. If we consider Bitcoin in India then all the rules and regulations which are presently applicable to Indian currency will become applicable to Bitcoin also. This rules and regulations for Indian currencies are controlled by RBI.

As per Indian constitution, article 246 gives the list of all activities that are legislate by central and state government. Entry 36 and 46 of List I of the Seventh Schedule of the Constitution states that the Central Government is allowed to legislate in respect of currency, coinage, legal tender, foreign exchange and bills of exchange, cheques, promissory notes and other like instruments respectively. If Bitcoin falls any of this categories the central government would have exclusive power to legislate.
The principal laws concerning Indian currency are:
I. The Constitution of India, 1950;
II. The Foreign Exchange Management Act, 1999 ("FEMA");
III. The Reserve Bank of India Act, 1934 ("RBI Act");
IV. The Coinage Act, 1906 ("Coinage Act");
V. The Securities Contracts (Regulation) Act, 1956 ("SCRA");
VI. The Sale of Goods Act, 1930 ("Sale of Goods Act");
VII. The Payment and Settlement Systems Act, 2007 ("Payment Act").
VIII. Indian Contract Act, 1872 ("Contract Act")

These laws will become applicable to Bitcoin if RBI wants to treat it as a currency.
As Bitcoin is decentralized digital currency, the creation, trading or usage of Bitcoin as a medium for payment is not controlled by RBI or any other trusted authority unlike fiat currency. Therefore using Bitcoin as a payment system may create following issues:

1. Bitcoins are stored in digital wallets. Thus they are liable to suffer from hacking, loss of password, malware attack etc. and as they are not created or traded through any authorized central agency, the loss of e-wallet could result in the permanent loss of Bitcoins held in them.
2. As Bitcoin transactions are peer-to-peer without central authority which monitors the payment, there is no system for customer problems/disputes/charge back etc.
3. No on is responsible for malfunctioning.
4. Being an anonymous currency system it leads to unintentional breaches of money laundering and combating the financing of terrorism laws.[12]

IV. LEGAL ASPECTS OF BITCOIN

1. KYC norms

In India, KYC (Know Your Customer) norms are set by RBI that requires banks to monitor their customers transactions, keep up-to-date record of their identity. This is not in the case with Bitcoins as its transactions are anonymous in nature. Thus bringing Bitcoin under the current Indian laws can be difficult.

2. *Cross border transfer of Bitcoin*

FEMA regulates all inbound and outbound foreign exchange related transactions. Section 3 of FEMA states that no person shall:

'deal in or transfer any foreign exchange or foreign security to any person not being an authorized person ;

a. make any payment to or for the credit of any person resident outside India in any manner;

b. receive otherwise through an authorized person, any payment by order or on behalf of any person resident outside India in any manner; and

c. enter into any financial transaction in India as consideration for or in association with acquisition or creation or transfer of a right to acquire, any asset outside India by any person.'

From the above, it could be argued that purchasing of Bitcoin by a resident Indian from a person resident outside India (where money for purchase of Bitcoin is transmitted through legitimate banking channels) will not be in violation of FEMA. Further, Bitcoin transaction between two residents should also not trigger FEMA and should not therefore be in violation of the same. However, the sale of Bitcoin to a non-resident person (i.e. to a person outside India) by a resident Indian will be in violation of the provisions of FEMA. Further, it can also be regulated by RBI in this condition.[4]

3. *Taxation*

In India the taxation is most complicated thing for common peoples. Tax may be applicable to income or expenditure. If we apply tax to Bitcoin then first thing is to differentiate between expenditure and income related to Bitcoin.
If tax are levied on Bitcoin then those are applicable to mining of Bitcoin as well as transfer of Bitcoin and with that we need to differentiate whether the Bitcoins are capital or income.

V. BUY OR SELL BITCOIN IN INDIA

There are many Bitcoin Excahnges in India where you can buy or sell and even store your Bitcoins. Unocoin, Buycoin, Zebpay, Coinsecure, LocalBitcoins, Bitxoxo are some of them. As Bitcoin is a digital asset and is very volatile in nature, it is always advisable not to buy them in large quanitities to avoid volatility risk. Currently, most of the exachnges are not accepting new users registration due to uncertainty in Bitcoins in India.

Most popular Bitcoin Exchanges in India are as follows:

1. Unocoin[6]:

Unocoin is India's leading Bitcoin company. It enables Indians to buy, sell, store, use and accepts Bitcoin. Here one can buy Bitcoins with any bank account through RTGS, NEFT or online banking. But this exchange requires ID verifications and thus not private.

2. Zebpay[7]:

Zebpay is a Bitcoin platform and broker based in India. It has Android and iPhone apps that make it easy to buy Bitcoins with a connected Indian bank account. It offers additional services, such as purchase of mobile airtime and gift vouchers for Bitcoin. Also Zebpay has multiple security features. But similar to Unocoin it also requires ID verification.

3. Coinsecure[8]:

Coinsecure is an Indian Bitcoin exchange and trading platform. It offers very low fees at just 0.3% per buy and a number of deposit options; including NEFT, RTGS, IMPS and cash deposit. Is is also not private.

4. LocalBitcoins[9]:

It is an escrow service which also helps to match Bitcoin buyers and sellers. The most common method of payment for purchase is cash deposit. However, users may advertise trades for whichever payment method they prefer. LocalBitcoin is a most private and one of the fast and easy exchange for buying Bitcoins.

5. CoinMama[10]:

CoinMama allows customers in almost every country to buy Bitcoin with a credit or debit card. They charge an ~8% fee on each purchase. If buying less than $150 worth of Bitcoins, you won't need to verify your identity. This convenience makes small purchases quick and easy.

VI. FUTURE OF BITCOIN IN INDIA

India has been looked as one of the nations that would shape Bitcoin's future in the coming years.[11] According to economic report, weekly volume of Bitcoin trading has doubled after the demonetization of Indian currency. This drastic change has increased the value of digital currency in India.

India is home to a billion people, still around 167 million people are unbanked even after launch of Jan Dhan Yojna. If all this unbanked people could have a Bitcoin address, they could be banked easily and quickly through Bitcoin. With the proper awareness and training about the digital currencies, Bitcoin can help bring developing India into the global economy frame. Also Bitcoin can be merged with the most recent and popular payment systems like BHIM and Aadhar Pay. This will reduce the transaction fees drastically as payment with Bitcoin requires lesser fees. Bitcoin can also be a good way of investing your money like shares.

VII. CONCLUSION

Bitcoin will do to the banking industry what email did to the postal service. The email did not make postal service irrelevant however forced the post office to concentrate on their strengths like their reach to remote rural areas, providing banking to low income population etc. and less on their weaknesses. That's the technology part of it, as per economics, perfect currency should have limited supply, easily recognizable, durable, as well as portable and that's exactly what Bitcoin is.

The problem that we can foresee is the pace of change in regulations; change in regulation usually takes a route of develop, propose and adopt which generally takes a period. Regulations or regulatory changes typically evolve at a slower pace than innovation thereby killing it by declaring it illegitimate. Also as its not been governed by a central authority Bitcoin tends to fluctuate widely and to be used globally its volatility needs to settle down.[11]

REFERENCES

[1] S.Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System", available at https://Bitcoin.org/Bitcoin.pdf,2008.

[2] George F. Hurlburt, Irena Bojanova, "Bitcoin:Benefit or Curse?", IEEE Computer Security, IT Pro May/June 2014.

[3] Jeremiah Bohr,Masooda Bashir,"Who Uses Bitcoin?", 2014 IEEE, 2014 Twelfth Annual Conference on Privacy,Security and Trust(PST).

[4] Nishith Desai , "Bitcoins- A Global Perspective Indian Legal and Tax Considerations", March 2015, available at http://www.indiabitcoin.com/wp-content/uploads/2015/03/NDA-IndianLegalConsiderations-Bitcoins.pdf.

[5] "Is Bitcoin Legal?",14th Sep 2014, at http://www.coindesk.com/information/is-Bitcoin-legal/

[6] https://www.unocoin.com/

[7] https://www.zebpay.com/

[8] http://www.coinsecure.com/

[9] https://localBitcoins.com/

[10] https://www.coinmama.com/

[11] Shree Sule, "Bitcoin - Growth and Future of the Industry in India", 17th May 2017, available at http://bwdisrupt.businessworld.in/article/Bitcoin-Growth-and-Future-of-the-Industry-in-India/17-05-2017-117932/

[12] See, http://rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=30247