

A STUDY ON CRYPTOCURRENCY IN INDIA

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ABSTRACT

“Due to the rapid development of information and communication technologies, many activities in our daily life have been merged online and they become more flexible and more effective. A huge growth in number of online users has activated virtual word concepts and created a new business phenomenon which is cryptocurrency to facilitate the financial activities such as buying, selling and trading. The use of virtual currency has become widespread in many different systems in recent years. Virtual money is not fully controlled and regulated hence most of the countries have not admitted this currency in their economic activities. This paper investigates about cryptocurrency present legality as well as future government moves impact on these currencies. The paper also analyses investment risks in both Bitcoin and Gold countries have responded in terms of regulations & legislations towards crypto currencies to develop a clear picture of its impact on various laws in India in order to regulate it”.

Keywords: Bitcoin, Cryptocurrency, Challenges In Cryptocurrency, Government Future Move On Cryptocurrency, Uses Of Cryptocurrency, Gold, Legality, RBI.

I. INTRODUCTION

Today's economies are all money economies, because all economies have accepted certain currencies (money) as medium of exchange. The money supply causes inflation as well as deflation in economies by its excess supply and contraction in money supply, hence currencies of different countries regulated by government in order to combat inflation or deflation situations. Now a day's many countries in the world have focusing towards digital currency and transactions. Even some one doesn't want to regulate their currencies and transactions. this brought greater innovation in new currency that is crypto currency, One of the most advanced, ambiguities, regulation free currency. In this article I made an attempt to study regarding crypto currency and its development and transactions in India.

Bitcoin is a cryptocurrency. It is a decentralized digital currency without a central bank or single administrator that can be sent from user to user on the peer-to-peer Bitcoin network without the need for intermediaries.

Transactions are verified by network nodes through cryptography and recorded in a public distributed ledger called a block chain. Bitcoin was invented in 2008 by an unknown person or group of people using the name Satoshi Nakamoto and started in 2009 when its source code was released as open-source software. Bitcoins are created as a reward for a process known as mining. They can be exchanged for other currencies, products, and services. Research produced by University of Cambridge estimates that in 2017, there were 2.9 to 5.8 million unique users using a cryptocurrency wallet, most of them using Bitcoin.

II. STATEMENT OF THE PROBLEM

World has transforming in to cash less transactions through innovating and making transactions by digital money. One of the tremendous innovation in money that is crypto currency it is digital money, not regulated by any authority and central bank, universal currency, at the same time there are some problems associated with this new currency hence many countries step back from its implementation among those India is one of the country prohibited using and mining Bitcoins. But as per the order of supreme court now trading through

Bitcoin is no more illegal in India from That's why it is an important need to understand about Bitcoin trading in India, how its operates, how it was evolved in India, players who are involving in this transactions.

OBJECTIVES OF THE STUDY

1. To understand the concept of Bitcoin and it's functioning in regular trading.
2. To know legality and trading of Bitcoin in India.
3. To compare investment risk in between Bitcoin and gold.

III. RESEARCH METHODOLOGY

Researcher have been selected analytical research methodology for the this study. To satisfy the objectives of the research, researcher used secondary data from various publications by financial websites, government of India, journals, news papers, books and magazines etc...

SOURCES OF DATA COLLECTION

Secondary data

The secondary data necessary for completing the investigation will be collecting from the published sources in the academic libraries, web sites, books, journals, magazines, etc.

Period of the study

The study period covers Bitcoin monthly value from march-2018 to Jan 2021 and gold monthly value from March-2018 to Jan 2021.

Hypothesis

Ho: There is no significant difference in the volatility of values of gold and bit coins in India.

H₁: There is a significant difference in the volatility of values of gold and bit coins in India.

BITCOIN MEANING AND HOW IT WORKING

Digital Currency

Digital currency is nothing but the digital representation of the physical currency of a country. Digital currency can be used for transactions and all other utilities that normally would be carried out using physical currency. They are regulated by the government and can be used through debit/credit cards or online payments.

Virtual Currency

Virtual currency is neither issued by the government nor is it regulated by the government. Virtual currencies can be used for transaction in apps and games and are issued by the developers. They do not hold any real value and can only be used digitally, i.e, they cannot be converted to fiat currency (digital or physical form). Virtual currency and digital currency is used interchangeably, but the difference in the two is clear from the mentioned facts.

Cryptocurrency

Crypto currencies are not regulated by any authorities and are a decentralized form of currency. They are created using cryptography which makes it even more secure as double spending can be avoided. Moreover, there are no intermediaries so they can be directly transferred to the receiver in their digital wallet.

How does Bitcoin Work?

Each Bitcoin is basically a computer file which is stored in a 'digital wallet' app on a smart phone or computer.

People can send Bitcoins (or part of one) to your digital wallet, and you can send Bitcoins to other people.

Every single transaction is recorded in a public list called the blockchain.

This makes it possible to trace the history of Bitcoins to stop people from spending coins they do not own, making copies or undo-ing transactions.

How do people get Bitcoins?

There are three main ways people get Bitcoins.

- You can buy Bitcoins using 'real' money.
- You can sell things and let people pay you with Bitcoins.
- Or they can be created using a computer.

How are new Bitcoins created?

In order for the Bitcoin system to work, people can make their computer process transactions for everybody. The computers are made to work out incredibly difficult sums. Occasionally they are rewarded with a Bitcoin for the owner to keep. People set up powerful computers just to try and get Bitcoins. This is called mining. But the sums are becoming more and more difficult to stop too many Bitcoins being generated. If you started

mining now it could be years before you got a single Bitcoin. You could end up spending more money on electricity for your computer than the Bitcoin would be worth.

Why are Bitcoins valuable?

There are lots of things other than money which we consider valuable like gold and diamonds. The Aztecs used cocoa beans as money. Bitcoins are valuable because people are willing to exchange them for real goods and services, and even cash.

Why do people want Bitcoins?

Some people like the fact that Bitcoin is not controlled by the government or banks. People can also spend their Bitcoins fairly anonymously. Although all transactions are recorded, nobody would know which 'account number' was yours unless you told them.

Is it secure?

Every transaction is recorded publicly so it's very difficult to copy Bitcoins, make fake ones or spend ones you don't own. It is possible to lose your Bitcoin wallet or delete your Bitcoins and lose them forever. There have also been thefts from websites that let you store your Bitcoins remotely. The value of Bitcoins has gone up and down over the years since it was created in 2009 and some people don't think it's safe to turn your 'real' money into Bitcoins.

History of Bitcoin in India

In a bid to fight corruption and terrorism, on November 8, 2016, Prime Minister of India Narendra Modi shocked the nation by demonetizing Rs. 500 and Rs. 1000 currency notes – sparking a new interest in the digital currency and other cashless mechanisms such as internet banking, digital wallets, credit cards etc. The demonetized notes amounted to 86% of India's cash in circulation. India is a country where 87% of transactions are done in cash. Chaos was inevitable. This resulted in long queues at the ATMs and banks for weeks. There was not enough cash with the banks to dispense. People holding cash could deposit their money in the bank accounts or exchange for new Rs. 500 and Rs. 2000 notes before 30 December. People who were hoarding

"black money" (unaccounted cash) could not deposit money into their accounts because banks were keeping a close eye on suspicious deposits. What options do these people have? Let go all of their money? Well some of them did exactly that. Old notes were found floating in the river. While others turned to look for commodities to hedge the risk of an economic slowdown; some bought gold, some bought silver. What did government do to curb this? They started raiding gold jewelers. When gold wasn't working, people were buying silver which significantly increased the demand of silver. With gold and silver being targeted by authorities, these souls saw Bitcoin as a safe haven. Using their connections and by paying up to 30-35% premium they started buying Bitcoins with cash. Bitcoin price started to surge and weekly volume of Bitcoin trading nearly doubled. Not to forget, India is one of the largest remittance markets with a total value of more than \$70 billion. On this a user usually pays up to 15% in bank charges and conversion fees. This is where Bitcoins true potential lies. To understand how Bitcoin may progress in India it will be beneficial to know the role gold plays in Indian society.

An American couple's most valuable asset is typically their home, income and education. An Indian couple's possession of gold touches on all these areas. It is fair to compare Bitcoin to gold, as they both are liquid commodities. Bitcoin as a result can be seen in the middle of fiat currency and gold – only lacking the cultural weight that gold has.

How to Buy and Sell Bitcoin in India

The downward trend in cryptocurrency trading in India is mostly due to increased government regulations. However, this does not stop people from trading. Two ways in which many Indians trade are: 1) Exchanges and 2) P2P methods. Both these steps follow the KYC norms and usually require documents like Pan Card, Aadhaar card or passports. **Top Bitcoin Exchanges in India**

Since banking institutions have banned crypto currency trading in India, popular exchanges like Zeb Pay have had to shut down. Nevertheless, the following top exchanges are still currently used in India:

Unocoin

Unocoin was founded in 2013 and is the leading Bitcoin exchange in India. It is backed by investment from the USA and is a regulated company offering low 1% fees which fall to 0.7% with increased trading volumes. It is a relatively easy exchange platform, allowing users to buy crypto currency with any Indian bank account. However, with the banning proposal at hand, things might get challenging for Unocoin.

WazirX

One of India's most trusted exchange platforms, WazirX was founded in 2018. It focuses on exchanges crowd P2P services to enable customers to continue to withdraw INR. WazirX follows the KYC norms, has a mobile application for both Android and iOS users and also claims to provide multiple hundred transactions per second.

Other methods

Outside of exchanges, P2P trading platforms enable Bitcoin purchases in India, in spite of the bank bans. Two important P2P marketplaces in India are:

Paxful is a peer to peer marketplace founded in 2015 that allows buyers and sellers to meet online and trade directly Bitcoin with each other. Sellers on Paxful accept over 300 payment methods, including the major Indian payment methods like PayTM, Bheem, Phonepe. As a result, many Indians use Paxful due to ease of access and payment. There is also no fee for the site itself, since the Bitcoin is traded at a premium.

Local Bitcoins supports the most popular payment methods and allows individuals from different countries to purchase Bitcoin for their local currency. Local Bitcoins currently operates in several major Indian cities like Mumbai, Hyderabad, Kolkata, Delhi, Ahmedabad, Chandigarh, Pune, Guwahati and many more. Again, due to the 2019 Supreme Court Proposal, many exchanges and marketplaces are wary of the Indian government's attitude towards cryptocurrency in general. As of September 2019, there are no Bitcoin ATMs in India.

Where to Spend Bitcoin in India.

Most Indians trade and mine Bitcoin to store them in digital web wallets instead of spending them to buy something. Regardless several ventures have been in place to use Bitcoin for spending. Unocoin has been the most prominent in this sector. In 2017, it linked up with Book My Show, an online cinema ticketing platform. This venture allowed customers to top up their accounts for movie tickets with Bitcoin. Unocoin also launched a 'merchant gateway' which enables business entities to accept Bitcoins. Sellers like Sapna Book House, bus ticket booking portal eTravelSmart and Dharwad International School take payments from customers through the Unocoin gateway.

A more unique Bitcoin experience, Suryawanshi restaurants in Bangalore's Indiranagar and Whitefield neighborhoods accept Bitcoin as a mode of payment, alongside the usual cash, cards, and Paytm. Due to a strong diaspora tradition, many Indians also use Bitcoin on multinational sellers like Dell and Steam but get their shipments through relatives/shipping companies abroad.

BITCOIN AND RBI

India's general attitude towards cryptocurrency has been negative. In 2017, the central Reserve Bank of India (RBI) considered a now-defunct proposal to introduce its own crypto currency, Lakshmi. It has also been looking into encouraging blockchain technology in financial and payment institutions. But the government has shunned cryptocurrency with policymakers opting to outlaw cryptocurrency with incarceration and legal petitions. Bitcoin is not recognized as legal tender and, as of 23 July 2019, the Banning of Cryptocurrency and Regulation of Official Digital Currency Bill has been proposed. Unocoin, an India-based exchange, allowed individuals to trade Bitcoins but is now disabled. However, Bitcoin is still traded in India through digital currency exchanges like Zeb Pay, Coin Delta and Coin Secure. Many Bitcoin traders usually buy through diaspora networks in countries where it is legal tender. **Is Bitcoin Legal in India?**

Finance minister Arun Jaitley, in his budget speech on 1 February 2018, stated that the government will do everything to discontinue the use of bitcoin and other virtual currencies in India for criminal uses. He reiterated that India does not recognise them as legal tender and will instead encourage blockchain technology in payment systems.

"The government does not recognize cryptocurrency as legal tender or coin and will take all measures to eliminate the use of these crypto assets in financing illegitimate activities or as part of the payments system," Jaitley said.

In early 2018 India's central bank, the Reserve Bank of India (RBI) announced a ban on the sale or purchase of cryptocurrency for entities regulated by RBI. Banning of Cryptocurrency and Regulation of Official Digital Currency Bill 2019 draft has proposed a 10-year prison sentence for anyone who mines, generates, holds, sells, transfers, disposes, issues or deals in crypto currencies.

In 2019, a petition has been filed by Internet and Mobile Association of India with the Supreme Court of India challenging the legality of crypto currencies and seeking a direction or order restraining their transaction. In March 2020, the Supreme Court of India passed the verdict, revoking the RBI ban on cryptocurrency trade.

In 2021, the government is exploring the creation of a state-backed digital currency issued by the Reserve Bank of India, while banning private ones like Bitcoin.

The following table showing trends of Bitcoin value in respect of Indian rupee

| Gold value (10 grams) | | | Bitcoin value | | |
|-----------------------|-----------|---------------|---------------|-----------|---------------|
| Date | Price | Change % | Date | Price | Change % |
| Jan 2021 | 34,692.79 | -1.71% | Jan-21 | 26,37,105 | 24.64% |
| Dec 2020 | 35,914.04 | 6.41% | Dec-20 | 21,15,850 | 45.18% |
| Nov 2020 | 31,716.05 | -5.63% | Nov-20 | 14,57,389 | 41.63% |
| Oct 2020 | 35,615.24 | -0.81% | Oct-20 | 10,28,993 | 29.89% |
| Sep 2020 | 36,198.87 | -4.22% | Sep-20 | 7,92,221 | -7.18% |
| Aug 2020 | 39,461.82 | -0.46% | Aug-20 | 8,53,531 | 0.62% |
| Jul 2020 | 39,824.19 | 9.20% | Jul-20 | 8,48,261 | 22.87% |
| Jun 2020 | 33,397.56 | 3.23% | Jun-20 | 6,90,369 | -3.49% |
| May 2020 | 31,339.62 | 3.75% | May-20 | 7,15,323 | 10.30% |
| Apr 2020 | 29,114.60 | 6.74% | Apr-20 | 6,48,529 | 34.20% |
| Mar 2020 | 25,555.22 | 0.73% | Mar-20 | 4,83,270 | -21.91% |
| Feb 2020 | 25,185.69 | -1.68% | Feb-20 | 6,18,838 | -7.53% |
| Jan 2020 | 26,053.19 | 3.79% | Jan-20 | 6,69,214 | 30.35% |
| Dec 2019 | 24,186.47 | 3.62% | Dec-19 | 5,13,407 | -5.16% |
| Nov 2019 | 22,524.01 | -3.03% | Nov-19 | 5,41,312 | -16.66% |
| Oct 2019 | 23,953.75 | 2.77% | Oct-19 | 6,49,510 | 10.86% |
| Sep 2019 | 22,680.36 | -3.49% | Sep-19 | 5,85,865 | -14.52% |
| Aug 2019 | 24,348.48 | 6.15% | Aug-19 | 6,85,360 | -1.32% |
| Jul 2019 | 21,609.00 | 1.36% | Jul-19 | 6,94,522 | -6.68% |
| Jun 2019 | 21,033.70 | 7.14% | Jun-19 | 7,44,275 | 25.36% |
| May 2019 | 18,322.33 | 0.98% | May-19 | 5,93,713 | 52.46% |
| Apr 2019 | 17,966.72 | -0.74% | Apr-19 | 3,89,434 | 34.57% |
| Mar 2019 | 18,235.80 | -1.81% | Mar-19 | 2,89,395 | 4.89% |
| Feb 2019 | 18,914.50 | -0.63% | Feb-19 | 2,75,899 | 10.61% |
| Jan 2019 | 19,154.56 | 2.74% | Jan-19 | 2,49,431 | -6.63% |

| | | | | | |
|--------------------------------|--------------------|--------|--------|------------------|----------------|
| Dec 2018 | 18,146.78 | 4.21% | Dec-18 | 2,67,136 | -5.19% |
| Nov 2018 | 16,710.73 | 0.35% | Nov-18 | 2,81,748 | -40.28% |
| Oct 2018 | 16,594.59 | 1.54% | Oct-18 | 4,71,799 | -1.70% |
| Sep 2018 | 16,096.00 | -0.70% | Sep-18 | 4,79,973 | -3.62% |
| Aug 2018 | 16,325.17 | -2.45% | Aug-18 | 4,97,978 | -6.15% |
| Jul 2018 | 17,155.76 | -2.52% | Jul-18 | 5,30,589 | 21.29% |
| Jun 2018 | 18,055.30 | -3.68% | Jun-18 | 4,37,470 | -13.36% |
| May 2018 | 19,460.25 | -1.70% | May-18 | 5,04,930 | -17.63% |
| Apr 2018 | 20,138.45 | -0.48% | Apr-18 | 6,13,004 | 36.06% |
| Mar 2018 | 20,334.76 | 0.48% | Mar-18 | 4,50,550 | -33.03% |
| Mean | 24457.61 | | | 694462.66 | |
| Std deviation | 7321.635818 | | | 484932.45 | |
| Co-Variance | 0.299360233 | | | 0.6982844 | |
| Correlation coefficient | 0.640122673 | | | | |

(Source: investing india.com)

| | Variable 1 | Variable 2 |
|------------------------------|--------------|-------------|
| Mean | 24457.61 | 694462.6571 |
| Variance | 53606351.05 | 2.35159E+11 |
| Observations | 35 | 35 |
| Hypothesized Mean Difference | 0 | |
| Df | 34 | |
| t Stat | -8.172997212 | |
| P(T<=t) one-tail | 7.79545E-10 | |
| t Critical one-tail | 1.690924198 | |
| P(T<=t) two-tail | 1.55909E-09 | |
| t Critical two-tail | 2.032244498 | |

Inference:

Above table showing that in one tail test Calculated T value (7.79) is greater than table value of t (1.690) so alternative hypothesis have been accepted means there is a significant difference between in changing in the values of gold and bitcoin. But as per two tailed test Calculated T value (1.55) is lesser than table value of t (2.03) so null hypothesis has been accepted means there is no significant difference between in changing in the values of gold and bit coin.

IV. OBSERVATIONS OF THE STUDY

- In March 2020, the Supreme Court of India passed the verdict, revoking the RBI ban on cryptocurrency trade. Now crypto currency trading is legal in India.
- In 2021, the government is exploring the creation of a state-backed digital currency issued by the Reserve Bank of India, while banning private ones like Bitcoin. Hence trading in cryptocurrency is dangerous.
- Change in the value of gold was too low in nov 2020 it was -5.63%, and it was very high in the month of July 2020 it was 9.20%

- d) Change in the value of gold was too low in nov 2020 it was -5.63%, and it was very high in the month of July 2020 it was 9.20%
- e) Volatility of gold value from March 2018 to Jan 2021 is very less (means changes in value of gold is consistent).
- f) Volatility of Bitcoin value from March 2018 to Jan 2021 is very high (means changes in value of gold is inconsistent).
- g) As comparing to changes bitcoin and gold here researcher found that there is a significant changes in their values hence investing in gold is better than investing in Bitcoin.

V. CONCLUSION

The genesis of cryptocurrency is a white paper published by Satoshi Nakamoto proposing "a system for electronic transactions" based on a peer-to-peer network, where transactions would be verified and recorded by nodes, or computing systems, that are part of the network, thereby making such transactions decentralized. Soon after, in 2009, Satoshi Nakamoto implemented the first cryptocurrency – Bitcoin. A draft bill titled as the 'Banning of Cryptocurrency and Regulation of Official Digital Currency Bill, 2019 (**Draft Bill**)' was prepared by the Inter-Ministerial Committee constituted on 2 November 2017 to propose specific action on crypto currencies. The Draft Bill has been under consideration and is yet to be introduced in the Parliament. The Draft Bill gives a wide definition to "cryptocurrency" and effectively prohibits the use of and dealing in all forms of digital assets, not just digital currencies. If bill passed by parliament then investors in digital currencies would be afflicted. You don't need to invest in bitcoin to have a well-diversified portfolio. If you want to make a speculative bet on bitcoin, do it with a small, single-digit, portion of your assets. There isn't sufficient evidence to suggest either will deliver more consistent returns. But investing in gold is better because it will give consistent return as comparing to bitcoin.

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