

The Bitcoins: Anonymous Synonym of Money

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Abstract: Bitcoins are simply the most emerging form of digital currencies. It is a type of crypto currency which was first introduced in 2009. Bitcoins protocol are not very easy to start up but once introduced are easy to handle and make transactions through bitcoins.

The first part of the project deals with the basic introduction of bitcoins and its importance, the reason for its increasing popularity.

The second section is concerned with the startup to a BTC, valuation of bitcoins, how we can actually get bitcoins and the Bitcoin account.

The next section deals with the overall workings of Bitcoin protocol, the way Bitcoin protocol works in the several forms of exchanges, the determination of price, how to trade in BTCs and the official statistical datas of BTCs.

The final section includes the 10 countries who haven't yet legally granted permission to this digital currency, one of them being India. The section covers the happenings related to Indian BTC system, issues concerning the government and most importantly RBI's saying on this protocol.

The study closes with an overall conclusion.

I. INTRODUCTION

"Bitcoins are a type of digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank."

Bitcoins are:

- Decentralized Digital Currency
- Like virtual cash or gold
- Transferred person to person
- No bank or government prerequisites or control
- Symbol: B or BTC
- Type of crypto currency

Bitcoins solves the problem of "double spend" through distributed network. All other digital or crypto-currency had this problem of "double spend" where a person doesn't know whether he has actually spent that particular unit of currency. That's the biggest problem which the bitcoins have solved and has gained so much popularity and the way it does this is through its distributed peer to peer network.

The first bitcoin issued was in 2009 by Satoshi Nakamoto. This is believed to be a nickname and nobody really knows who actually started bitcoins.

- ✓ There are only 21 million bitcoins in circulation
 - X amounts are released every 10 mins

- which will continue till 2140

- ✓ It is divisible upto the eighth decimal place i.e. 0.00000001 (USD=0.1)

- meaning bitcoins can be broken down to very very small amounts

- ✓ Bitcoin protocol is very difficult and expensive to hack

- since no central location governed by specific country

- costs half a billion dollars to hack bitcoins just for 10 mins

So there is a lot of trust over the protocol that has happened over the past few years.

II. MECHANISM OF BITCOINS

A. Bitcoins' Value:

Bitcoins are limited/ scarce (like gold). Just like we can mine certain amount of gold, there are 21 billion BTC to mine. It can be stated as any means for exchanging goods and services. BTC answers the four properties of money:

- 1) Divisible (broken into small amounts)
- 2) Durable (stands test of time)
- 3) Fungible (commoditization, like 1USD=1USD, i.e. equal in value)
- 4) Verifiable (verify its real)

BTC are peer to peer connections (like torrents)

It is anonymous in nature. Though some areas doesn't permit when it comes to anonymous nature of this crypto currency but for most part they are anonymous.

BTCs are transparent, meaning open source. The code or structure of a bitcoin is transparent i.e. anybody can go in, evaluate and look into the code and how it is built.

BTCs are trustworthy. It has been vetted for over 5 years. People put trust in bitcoins protocol even more than they put trust in their government.

BTCs are quite easy to buy and sell. Also, it has extremely low transaction fees.

It is irreversible. There are no charge backs involved. Merchants love it, no problem arises which are faced like in taking credit cards.

It is not required to be backed by anything tangible.

The real value is determined by what people are willing to pay for it, which is why price increased over the years because the demand has been increasing.

Therefore, people place value in mainly these four aspects in bitcoin :

- Lack of manipulation
- Protection from inflation
- Trust in the protocol
- Anonymous nature

B. Bitcoins' Workings:

Step 1: We need to deposit money into a bank account

Step 2: Bitcoins are stored in public ledger. Everybody has access to this ledger from the very beginning since 2009. Each and every transaction made is recorded in this ledger.

Step 3: Sending or receiving bitcoins are as easy as sending an email.

Step 4: Coins are then stored in "wallets",

- Local hard drive (like our coins actually live in our computer)
- Paper (we can physically write down codes that our associated to our bitcoins)
- Hosted online (there are companies which actually provide hosted wallets which lets us access bitcoins anywhere in the world)

C. Parts of Bitcoin "Account":

There are two types of a bitcoin account:

1. **Public Key:** Public keys are 27-34 alphanumeric characters which can be given to anybody who wants to send bitcoins, similar to an account number or an email address.

Example: 172EtXighkIXQsMVrNirCk7isfGDQp2G2a

2. **Private Key:** Private key is the password to access bitcoins in the account. This is where the protection comes in. It is similar whenever we do online banking we need our password to log in. This password is also required to access bitcoin in our account in the public ledger.

D. Acquiring Bitcoins:

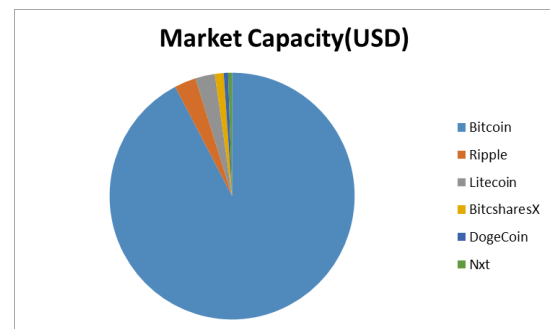
There are three ways of acquiring bitcoins:

1. Buying (from a person or exchange)
2. Barter (like selling the product or service)
3. Mine (running the softwares to find bitcoins, works like a lottery system)

III. CONCLUSION

1) Bitcoin is the most popular digital currency and has the largest market share among such cryptos.

Coin	Market Capacity(USD)
Bitcoin	\$4,41,95,33,131.00
Ripple	\$13,62,31,802
Litecoin	\$12,38,16,863
BitsharesX	\$5,58,92,344
DogeCoin	\$2,74,48,043
Nxt	\$2,49,92,327



- 2) Bitcoins enables people to transfer funds to any part of the world in less than an hour without having to go through a lot of paperwork.
- 3) The transaction fees charged by Bitcoin network to execute these transactions is also negligible.
- 4) Making payments with bitcoins is a walk in the park. In order to make payment, one has to just enter the Bitcoin wallet address or scan the QR code of the wallet and authorize the transaction of the fiat equivalent in Bitcoin.
- 5) Most of the transactions are generally executed within minutes.
- 6) India has the second most population in the world and a huge mobile phone user base. Mobile-based payments are picking up in the nation. These conditions present ideal conditions for bitcoins-based monetary applications in the country.
- 7) There has been progress in Indian Bitcoin sector. There are a handful of companies catering to the country's Bitcoin market and we can expect more players to emerge in the near future.
- 8) When it comes to choosing between gold and Bitcoin, Bitcoin is the ideal option to invest one's money- to multiply the investment. BTCs are digital currencies which cut out middlemen like banks and other financial institutions when it comes to transactions and maintenance of the financial network.
- 9) Miners, who are individuals or companies around the world collectively contribute processing power to process transactions and maintain the network.

- 10) India has around 50,000 bitcoin enthusiasts, with 30,000 of them actually owning the currency.
- 11) India still isn't a significant participant in the BTC protocol, but its potential can't be challenged.
- 12) Given India's huge population, increasing usage of internet users, and tech-savvy individuals and entrepreneurs, India presents to be a great stage for such BTC currencies.
- 13) The regulatory aspect remains a hindrance as the real growth of the Bitcoin industry in India can happen only when the regulatory "uncertainty" doesn't exist.
- 14) On the other hand, the authorities want to ensure that they understand the Bitcoin ecosystem well, before formally framing regulations. The biggest challenge lies in ensuring that no illegal practices are carried out in the name of virtual currency trading. A disruptive process has begun globally and a virtual currency future is almost inevitable.

When the time is right, India will arrive- in a big way.

Bitcoin is the future of the economy. Governments and central banks are already considering ways to implement Bitcoin technology into conventional monetary systems to iron out some of the inherent flaws. Bitcoin has paved the way for all around upgradation of banking and financial sector across the world.

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