

INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

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BIT COINS: CEMENTING REGULATORY GAPS IN EMERGING MARKETS

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ABSTRACT

The world has seldom responded well to radical concepts and technology specifically when it relates to money. Bit coins are revolutionary as it tries to break away from the control of regulatory authorities and deals with non-physical money. Thus the challenge which Bit coin faces today is to overcome the suspicions of human kind and achieve a huge user base to sustain it. Bit coins have the competitive edge of reducing costs in transfer and cost of printing and maintaining paper money and it must use this potential to outweigh the other inherent weaknesses and risks. Bit coins must be backed by metals such as gold or silver to be treated as a purposeful form of money and can gain respect as it can be balanced/proffered for the precious metals. Currently they are used in a numerous application for Android phones like a debit or credit card. Similarly, they must tap the market for retail services, e-commerce etc. to have a competitive advantage. Bit coins need a rational regulatory protocol to attract more customer base. The key trial that is impediment to its growth is that the authorities lack the understanding behind its know-how. The instances of its illegal use have made the scenario more complex. Guidelines that is currently used by financial markets can be used uniformly world over and the software can be developed for making it a successful alternative currency.

KEYWORDS

bit coin, non-physical money.

INTRODUCTION

Bit coin is a decentralized digital currency which has no person or any institution controlling it or is it backed by precious metal holdings. The key distinguishing features of Bit coin is that it is decentralized and operated through peer to peer network - technological breakthrough for some. Created right after the financial crisis of 2008¹, it provided a solution for investors to be confident about the value without the need for the third party. It came at a time when trust was a scarce commodity and when leading Investment Banks had failed. The market sentiment was low as the single point of failure of Investment Banks had led to a complete system failure. Bit coins were the response to this loss of credibility by removing any centralized third party.

Bit coin's innovation was the removal of the financial services middleman. The process of purchasing a Bit coin involves use of Bit coin wallets where their addresses and balances are stored. The Bit coin address² is a 27 to 34 alphanumeric id and is similar to that of a cheque with an account and cheque number plus a routing number. There are no constraints to the number of accounts an individual holds. At the time of transaction the buyer and the seller create a new address which allows them to send the Bit coin and receive the payment and the string of number is sent to the seller. The wallet creates a cryptographic key pair where the private key is given to the buyer and the public key is used by the network to record and verify the transaction in the public ledger.

The verification is done by a miner and the Bit coin protocol replaces the banker with the miner and by doing so removes the cost of a middleman. The traditional role of the banker was to watch every transaction and verifying its validity. Satoshi Nakamoto³ designed a way for a computer to replace a banker. Bit coin is a push payment system, similar to cash, where the customer has to pre-emptively generate the transaction. In contrast, other payment systems such as credit cards are pull systems, where customers empower a retailer and then the retailer pulls the payment from the user's account. Push payment systems can have benefits in reducing fraud or unwanted purchases as customers govern the purchasing process.

Wallace (2011) reviews the early history of Bit coin and states that Nakamoto mined and introduced the first 50 units⁴ into circulation in 2009. Interest grew to the point that Bit coin began to trade in 2010⁵ on a Japanese-based online exchange, Mt. Gox. On the first day of trading on Mt. Gox, 20 Bit coin changed hands at a price of 4.951 cents, for total volume of slightly less than one U.S. dollar. The first purchase of goods and services using Bit coin is said by Wallace (2011) and other sources to have been two pizzas procured at a cost of 10,000 Bit coins in 2009⁶. The pizza parlour did not accept Bit coins directly, and instead a third-party broker was enlisted who agreed to procure the pizzas using a credit card (based on a real currency) and accept the Bit coin, worth almost \$5 million at recent prices, as a consideration.

Fred Ersham, co-founder of Coin base⁷, the leading digital wallet service, estimated in a March 2014 interview that 80% of activity on his site was related to speculation, down from perhaps 95% an year earlier (Goldman Sachs, 2014). If we take this estimate as correct, then perhaps 15,000 Bit coin transactions per day involve the purchase of a product or service from a merchant. In a world with 7,000,000,000 consumers, most of whom make multiple economic transactions each day, Bit coin appears to have an extraordinarily negligible market presence. Ersham further states in his interview that 24,000 merchants are registered with Coin base. Bit coin can accomplish this task securely through the use of cryptography.

OBJECTIVES

The objectives of this paper are as follows:-

1. To find out why digital currency are a new type of investment?
2. What are the key regulations that govern them in India and is there any gap in regulations?
3. To explore the ramifications for Business and the Government?

¹ Financial crisis of 2008, Global Financial crisis, Joel Havemann, Encyclopedia Britannica

² The Bitcoin Big Bang, How alternative currencies are about to change the world, Brian Kelly, Wiley Publications

³ Bitcoin, A peer to peer electronic cash system, Satoshi Nakamoto, www.bitcoin.org

⁴ The rise and fall of Bitcoin, Benjamin Wallace 2011

⁵ Handbook of Bitcoin, Bitcoin, Innovation, Financial Instrument, Edited by David Lee Kuo Chuen

⁶ Is Bitcoin real currency, An Economic appraisal, David Yermack, National Bureau of Economic Research December 2013

⁷ Coin base, Coin base is the World's best popular place to Buy and sell Bitcoin, Fred Ersham

REVIEW OF THE RELATED LITERATURE

Bit coin as an alternative currency authored by Tyler Durden (2013)⁸, delves into the transition of various currencies and the significance of Bit coin in today's digital era where the objective is to reduce the consumption of paper and retain a secure investment avenue. The author concludes the paper by emphasizing on the lack of regulatory control to govern illegal activities.

Omari Marian (2013)⁹ had the objective to find out how Bit coin affects revenue from Tax in his paper titled - Are crypto currency super tax heaven? The results of the study indicated that absence of governing rules under Income tax laws and the anonymity factor fuelled by the fork and merge pattern used by its users have enabled the Bit coin to be a safe haven from being taxed. Nickolos Plassaras (2013)¹⁰ investigated on the potential legal and economic challenges Bit coin poses to IMF for foreign exchange currency and established that Bit coins could cause serious economic harms unless the IMF develops a way to counter them. Since this currency is beyond the purview of legal framework of IMF, it could also be used in speculative attacks. David Yermack¹¹ examined if Bit coins could be used as a real currency in his paper in 2013. He established that it did not satisfy the criteria of medium of exchange nor can it be divided into small parts for purchase and that the threat associated with not being able to be preserved in a safe place are the three major reasons due to which Bit coin cannot be used as real currency.

Ladislav Kristoufek¹² scrutinized the factors which affected the price of Bit coins and reasons for its volatility in his paper published in 2014; he found that the trade – exchange ratio has an inverse impact on its frequent use. This has a direct correlation with the transaction driver (price) and the technical driver (cost of mining).

BIT COIN EXCHANGES IN INDIA - UNOCOIN

Unocoin¹³ is an India based Bit coin exchange which was launched in 2013 on trial basis. It started its regular operation in 2014. The firm is partnering with various Bit coin related companies around the world for the advantage of its patrons. A verified user can trade, transact with, accept and store Bit coins. He can send Bit coins to his friend's email address (who may not have an Unocoin wallet), request Bit coins from a friend (who may not have an Unocoin wallet), and address book option to store multiple wallet addresses. One can even generate paper wallets to keep Bit coins safe and then easily import those addresses to ones' address book. The user may also top-up his/her mobile/DTH directly from their Unocoin account by paying with Bit coins. The users initially register themselves and verify their identity and then can buy/sell 10 Bit coins per day.

BIT COIN EXCHANGES IN INDIA - BTCX INDIA

BTCX¹⁴ India is a Bit coin exchange that offers trading between Indian rupees and Bit coin for Indian nationals. BTCX India is the first Bit coin exchange in India offering a secure, real time trading platform, following KYC and AML guidelines, and allowing instant INR deposits and withdrawals. BTCX India is promoted by S Capital Solutions Pvt Ltd, incorporated on 25th Nov 2013. BTCX India charges a 1% fee on all trades (including taxes). Transfers to/from BTCX India via NEFT, RTGS and IMPS are free of charge.

BENEFITS OF BIT COINS AS AN ALTERNATE CURRENCY

Bit coins have gained more popularity than any other currency within a short span of time. Use of the Bit coin is continuously going up with increasing awareness. Earlier on - one would not have thought that they could send money to other countries without following cross border rules. Other currencies are printed or minted but Bit coin is created by using the computer that makes it unique from others. Apart from reaping the benefits of moving away from paper currency, it provides the following benefits to its end users:-

- 1. LOW TRANSACTION FEES:** The transaction fees for dealing in Bit coins in developed countries ranges from 1% to 3% and in other countries it is Nil. Bit coins use its own payment gateway for transaction and so it charges only networking fees at a nominal rate thus leading to increase in margin.
- 2. ABSENCE OF CONSTRAINTS IN TRANSACTION:** Transacting with Bit coins is very simple anywhere in the world at any given time. There are no restraints on payment across borders, bank holidays etc. Also there are no regulators to control transactions of Bit coins. Merchants cannot charge extra fees and must clarify with the consumer before adding any charge.
- 3. PROTECTION FROM CHARGE BACK FRAUD:** Merchants using Bit coins are protected from charge-back fraud, i.e. a customer looking for a retraction of a payment once the good has been delivered. Critics argue that this is a double-edged sword, as the ones who are subject to fraud risk are the customers. Bit coin supporters counter that charge-backs, as currently implemented in credit card transactions, can be imitated using escrow transaction.
- 4. TRANSPARENT SYSTEM:** With the block chain system, all finalised transactions are available for everyone to see. Customer's public address is clearly visible to everyone so that transactions can be easily verified. However personal information is hidden. Bit coin protocols cannot be manipulated by any person, organization or government.
- 5. SECURITY:** Bit coin protects user's personal information and identity. Customers do not have to disclose personal identity information in Bit coin transactions unlike that for cash or credit card. Customers use anonymous Bit coin address that modifies with every transaction. But Cyber-attacks on major digital currency exchanges have threatened to derail the growth of the block chain technology.
- 6. MOVING AWAY FROM PAPER CURRENCY:** There is substantial cost to printing, retaining and safeguarding currency, which is currently borne in India by the RBI. The RBI and the banking system effectually fund the use of cash as a platform for everyone. This is not a social cost and it also uses raw cotton/wood pulp for its production instead of putting it to alternate use. The same cost could be used for development of education or research & development which is the need of the hour. In India, at the beginning of 2013-14, total currency in circulation amounted to Rs.11.8 trillion¹⁵. By the end of the year, it had grown to Rs.12.8 trillion, with Rs.13 trillion of new currency having been issued during the year. Additional new currency supplied during the year was thus more than the closing stock of currency at the end of the year. This is not an incongruity as the average lifetime of a currency note in India is less than one year.
- 7. EASE OF PARTICIPATION:** Customer requires no credit card or pin. Bit coin consumer only need a computer or smartphone with an internet connection to set up an account and transaction. For example in daily business activity, cheques are received and issued and for that businessman need to visit bank on daily basis. It is a time and money consuming activity. In case of Bit coin transaction, the user has to open account with a Bit coin exchange and commence with the transactions.
- 8. ABSENCE OF FINANCIAL INTERMEDIARY:** In the initial days when computer scientists used phone lines to send data files; they did not perceive they were inventing the Internet. Though the time taken was prolonged for the Internet to evolve into its present form, the metamorphosis was that the Internet decentralized information. Nonetheless, decentralized information also had the constraint of anyone posting erroneous information. This issue meant that one type of information (financial transactions) could not be decentralised, until Bit coin was evolved. Bit coin fathomed the problem of transmitting financial data over the Internet without a middleman and initiated an era where even financial dealings could be undertaken without a financial intermediary.

⁸ Bitcoin as an alternative currency, Libertarian vs Pragmatist, Tyler Durden 12/30/2013

⁹ Are crypto currency super Tax haven, Omari Marian 2013, Asst. Professor of Law, University of Florida Levin College of Law

¹⁰ Regulating Digital Currency, Bringing Bitcoin within the reach of IMF, Nicholas A. Plassaras 2013

¹¹ Is Bitcoin real currency, An Economic appraisal, David Yermack, National Bureau of Economic Research December 2013

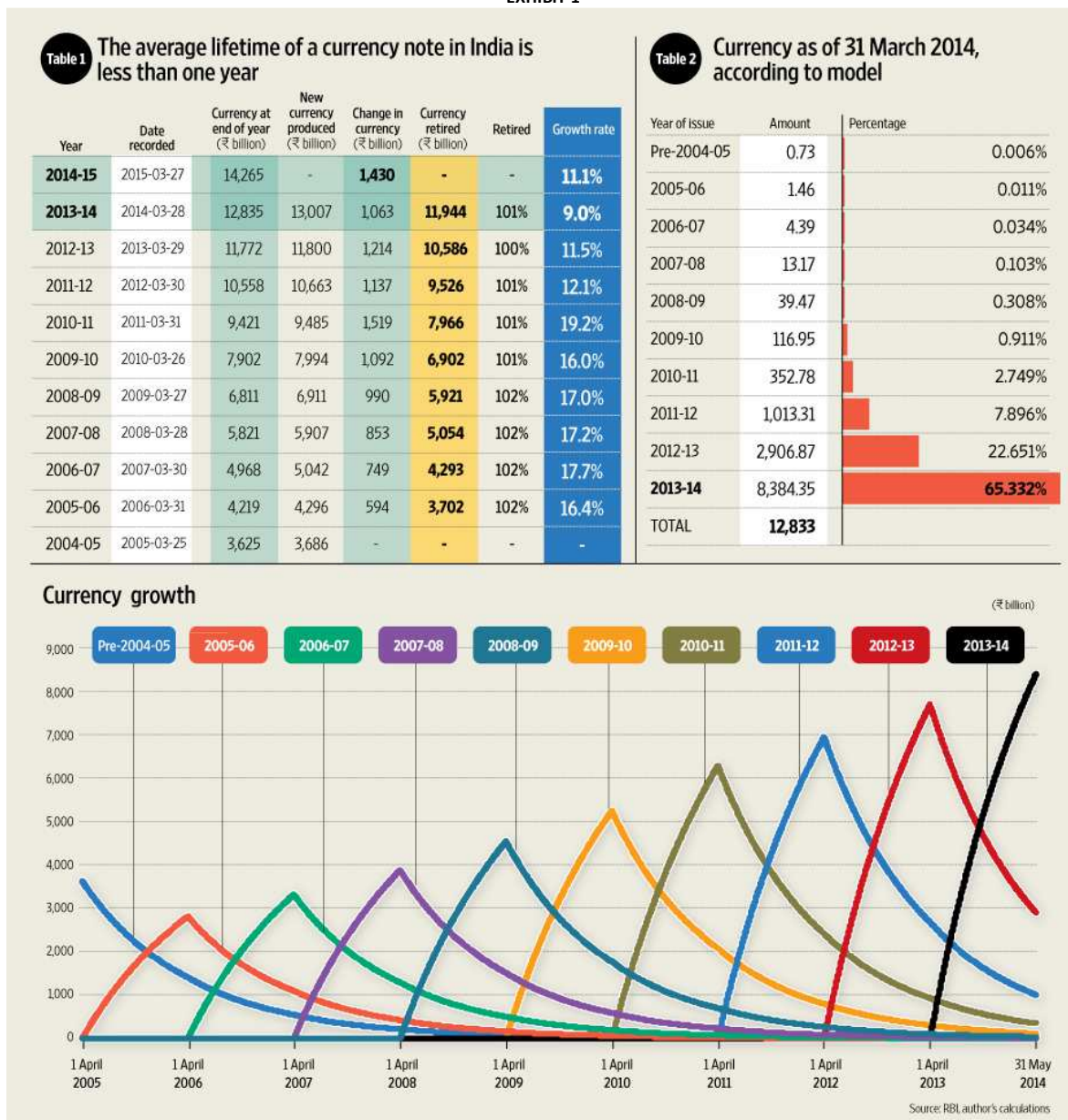
¹² What are the main drivers of Bitcoin prices, Evidence from wavelet coherence analysis, Ladislav Kristoufek

¹³ Coinmonk venture private limited, Unocoin, December 2013

¹⁴ BTCX India Promoted by S capital solution, Incorporated on 25th Nov 2013, BTCXIndia.com

¹⁵ The life cycle and cost of a Banknote, average age of Indian currency, Live mint, April 14 2015

EXHIBIT 1



Source: Live mint, Date-April 14, 2015, Tuesday

CHALLENGES IN USAGE OF BIT COIN IN INDIA

The following are the challenges faced in India on usage of the Bit coin :-

- 1. LACK OF TRUST AND THE VEILED IDENTITY OF ITS INVENTOR:** The physical money that has been used by all is used for all transactions which are conducted by a common man on a day to day basis. He trusts the paper money as it is accountable and will be espoused by the government. But Bit coins cannot be used in this manner and this is a major barrier for the development of this alternate currency. Further the anti- trust on Bit coins is further fired by Satoshi Nakamoto's concealed identity which has not stimulated assurance among the investing community.
- 2. ANONYMITY CLAUSE AND ABSENCE OF THIRD PARTY/RESPONSIBILITY FROM TOP:** The investors can start as many wallets as required and this information is totally confidential. There is no connection with any intermediaries due to which tax authorities cannot easily trace the dealings of the account. Increased anonymity comes from the use of pseudonyms. It is a decentralized peer to peer system with no one responsible at the top management other than the protocol. The common man would not know whom to contact if something goes wrong.
- 3. PROBLEMS WITH SOFTWARE:** One of the major challenges faced by the software is that it can be replicated. This may increase its competitors who can come up with their own digital currency, though the initial cost of installation would be phenomenal.
- 4. SECURITY CHALLENGES:** In a defining moment in Bit coin history, Mt. Gox, the leading Bit coin exchange, exposed a "loss" of 850,000 Bit coins in Feb 2014¹⁶, with a value at the time of approximately \$473 million. One of the world's first Bit coin exchanges, Mt. Gox in the long run had built up a massive customer base – with 80% of global trading volume at its peak. All trading was sealed after technical issues ensued in the said loss, leaving the exchange insolvent and many customers in the lurch. Mt. Gox filed for bankruptcy shield in Tokyo District Court on 28 Feb 2014, stating it couldn't account for 750,000 of its customers' Bit coins and 100,000 of its own, valued at \$474 million apart from the cash customer deposits of \$27.3 million. Mt. Gox, at long had difficulties dispensing international wire transfers for people who wanted to cash out their Bit coins. On 07 Feb 2014, it had ceased Bit coin withdrawals while probing a security flaw called transaction malleability. Bit coin software authorities said Mt. Gox's highly commissioned code may have exacerbated that issue. Mt. Gox's website went blank on 25 Feb 14

¹⁶ Mt. Gox seeks bankruptcy after \$480 million Bitcoin loss, Bloomberg Business, March 1 2014

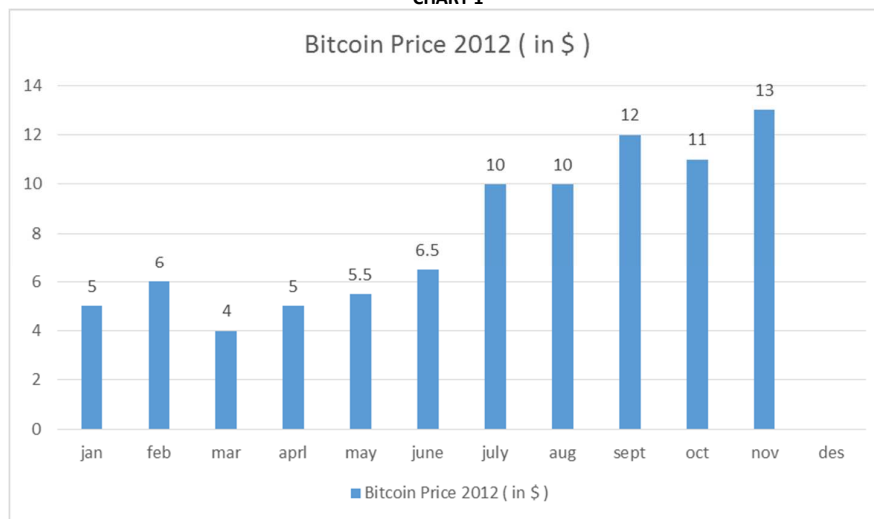
without providing any clarification. On February 23rd, Mark Karpeles¹⁷, the CEO of Mt. Gox, resigned from the board of the Bit coin Foundation. On February 24th, it was revealed that Mt. Gox was planning to go bankrupt and had lost 744,408 Bit coin in a theft that had occurred years earlier.

After the Mt. Gox controversy in 2014, security has become major challenge for this digital currency. Investors primary concern is security of their investments be it short term or long term. In Jan 2015, 19000 (value - \$5million)¹⁸ Bit coins were stolen from BITSTAMP exchange which is world third largest busiest Bit coin exchange. Well protected system and secure wallets are key concern for holding Bit coins. In India, digital currency like Bit coin is a novel concept for the common man where people have less faith in financial institution except the government. Thus the primary challenge is to build trust among people as they don't see it as a prospective investment vehicle like Fixed deposits, retirement plans and pension schemes.

5. REGULATORY CHALLENGES: The crypto currency is less regulated as it is not being controlled by any central authority. There are cases of money laundering and transferring money for illegal activities using this currency. In fact in 2013 FBI and The USA government banned Silk Road¹⁹ an online market place for buying and selling illegal drugs²⁰, where the transaction was conducted by using Bit coins²¹. Globally regulations are being introduced to bring it under the foreign exchange act and thereby boosting investors' confidence in it. The two major concerns associated with Bit coins are absence of tax and absence of insurance against volatility. It cannot be used as a consumer finance credit loans and mortgage nor are any credit cards available.

6. VOLATILITY: One more challenge in using the crypto currency is related to volatility as the demand is higher and the supply is limited. Over the last three years the value of Bit coins has fluctuated by more than 400 %. Such violent price movement are not consistent within such a short time and would not be considered ideal by the investor. However in due course it is expected that its value will settle down to better stability. Bit coin's exchange rate volatility in 2013 was 142%²², an order of magnitude higher than the exchange rate volatilities of other currencies, which fall between 7% and 12%. Gold, which is a plausible alternative to these currencies as a store of value, had volatility of 22% in 2013 based on its dollar-denominated exchange rate. Since it is a start-up currency and investors are still testing it, it has been volatile in nature. Risk management is therefore much needed to treat this highly fluctuating currency. A regulated system for diverting exchange rate risk is thus the need of the hour.

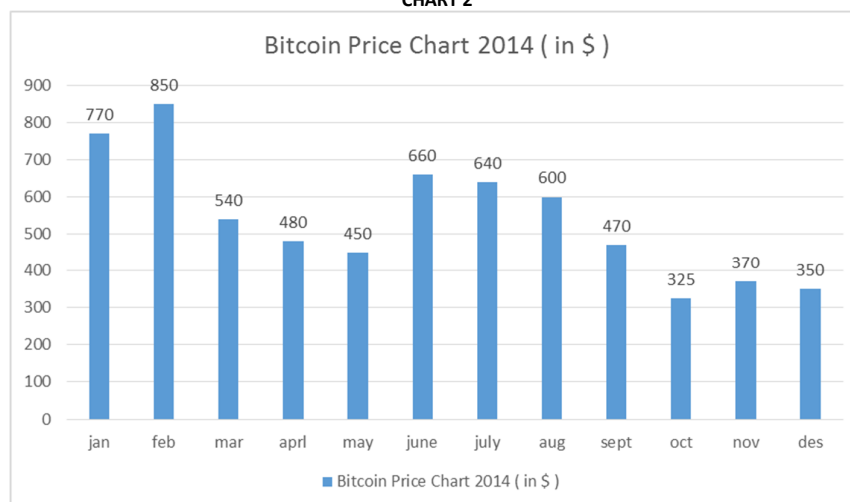
CHART 1



Source: www.Coindesk.com

Block chain info
 Bitcoin charts.com/chart/Bitstamp

CHART 2

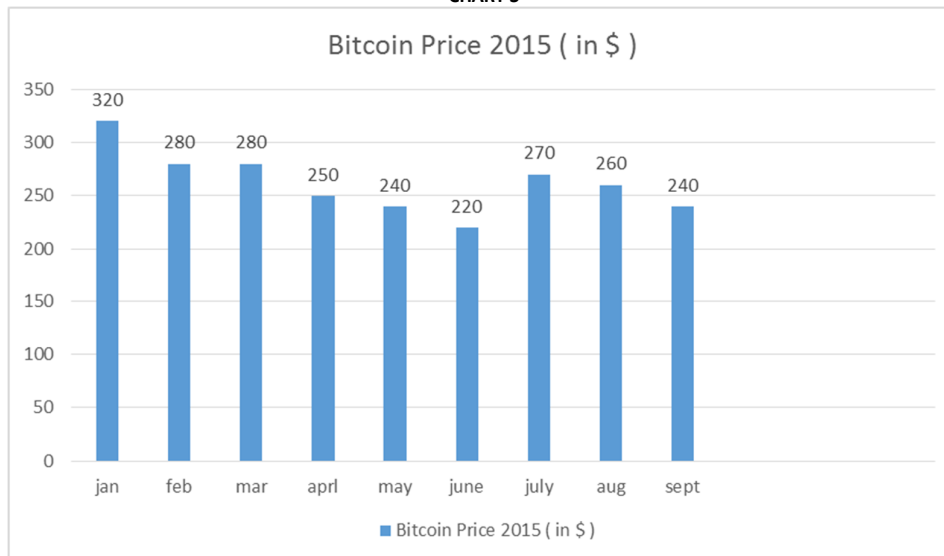


Source: www.Coindesk.com

Block chain info
 Bitcoin charts.com/chart/Bitstamp

¹⁷ Mt. Gox CEO resigns from Bitcoin foundation, Monday 24 Feb 2014, Reuters
¹⁸ Bitstamp exchange hacked, \$5 million worth of Bitcoin stolen, Jan 5 2015, ZD Net
¹⁹ USMS has announced the final Silk Road Bitcoin auction, Silk Road drug, Silk Road 3.0
²⁰ FBI claims largest Bitcoin seizure after arrest of alleged Silk Road founder, The Guardian Oct 2013,
²¹ How the Feds took down the Silk Road drug wonderland, Ross Ulbricht, Nov 2013, W I R E D
²² Is Bitcoin money, Bitcoin alternative theories of money, Independent writing project, spring 2013, professor Christine Deasn, April 23,2012

CHART 3



Source: www.Coindesk.com

Block chain info

Bitcoin charts.com/chart/Bitstamp

7. **LACK OF AWARENESS AND UNDERSTANDING:** There is lack of awareness among the general public about digital currency. The literacy on cryptocurrency and the knowledge of technology is needed as otherwise the understanding of this digital currency may take a long time.
8. **USE FOR ILLEGAL AND IMMORAL ACTIVITIES:** The absence of a regulator may lead to a situation where apart from money laundering, Bit coins are used for trade in weapons, drugs, human trafficking and terror activity. Further once Bit coin wallet is stolen and emptied, the user will have to bear the loss. Bit coins' nature of transaction is untraceable and that might encourage criminal activity like black market. Also if a hacker could obtain the identity of the address analogous to a customer, he/she would then have entree to the customer's complete financial information.
9. **LACK OF LIQUIDITY:** Bit coin lacks liquidity compared to fiat currencies, as attested by the volume of foreign exchange markets for crosses such as the EUR/USD or GBP/USD, which are up to three orders in magnitude larger than Bit coin's exchange turnover. Also, established fiat currencies have large network externalities that preclude competition from alternative currencies. Further, transactions take several minutes on average to be confirmed, i.e. included in the block chain. Meanwhile, change from an unconfirmed transaction is locked and cannot be used until the transaction is cleared. This can cause inconvenience for a user following a regular shopping pattern, say in a mall. A user spending a transaction output would have to wait for the change of this transaction to be confirmed in the block chain before being able to spend this change in a following transaction. Wallets can assist in mitigating this problem, like spreading large transaction outputs into many outputs of small quantity so they can be readily spent.
10. **REGULATIONS OF BIT COINS IN THE GLOBAL SCENARIO:** The digital currency regulation has been stringent in certain countries²³, where they have been banned while few countries have followed the non-intervention policy. The primary reason for their being banned is to rein in international capital inundation. Though many investors may feel repugnant to the idea of regulating digital currency, it is however the need of the hour to give it authority and for protection against rapacity. Central Banks around the globe, taxation authorities and financial market governing bodies are trying to comprehend the impact and scope of digital currency towards regulating the same so that it may be legitimised in the long run.

REGULATIONS IN INDIA

When the Tax department raided the exchange - Buysellbit.co.in²⁴, to probe the use of virtual currency, its operations were shut down. Many start-ups in India, an emerging start-up source are waiting to enter the market for alternative currency, save for the regulations which are yet to be elucidated. Digital cryptographic currencies are new, and there are not enough regulations governing them. Mining, buying and selling Bit coin is not illegal in India²⁵, but it is not recognized by law either, and their taxability is a BIG question mark. The current regulation may be summed up as - "As long as a user retains Bit coins and does not convert them into rupees, it need not be included in his income". This is rather vague. At present, there are no regulations governing virtual currencies like Bit coin in India. On 24 December 2013, RBI, issued a press release²⁶ on virtual currencies like Bit coin, Lite coins, BBQ coins, Doge coins stating that their creation, trade and usage of virtual currencies as a medium for payment is not authorized by any Central Bank or Monetary Authority. Further, RBI has cautioned virtual currency traders and users to various security related risks such as hacking, malware attack etc. While RBI has not legalized Bit coin, it has also declared NOT declared them unauthorized as of now, albeit with the cautionary notice. RBI is currently examining the risks associated with the usage, holding and trading of virtual currencies under the extant of legal and regulatory framework of India, including foreign exchange and payment systems laws and regulations.

RECOMMENDATIONS ON REGULATIONS THAT CAN BE INTRODUCED

There are therefore certain regulations recommended to be imposed on virtual currency, which are as enumerated in the succeeding paragraphs.

1. Bit coins be treated as a virtual commodity and the regulations be implemented according to its characteristics. For example in USA, digital currencies are treated like property rather than a currency²⁷. The ruling has given transparency on its tax implications for investors clearly. Further it is exempted for tax rate as capital gain if it is held for more than a year thus motivating investors to hold Bit coins for a longer period which also reduces its volatility.
2. A law that governs Bit coins be introduced with stipulations of registering of dealers, provide all bank details and also identify source of funds in case of any international transfer. USA took the lead in setting up the first regulatory agency exclusively to deal with digital currency and to curtail the felonious use of digital currency. The objective was to prevent fraud and illegal transactions for any entity that accepts currency and performs money transmission service.
3. The regulatory bodies should apply the same rules that exist at brokerages to remove the anonymity constraint existing in transaction of Bit coins. This makes it mandatory for the financial Institutions to follow the KYC norms. This would enable them to keep track of investment gains and what they owe as taxes.

²³ Taxation on virtual currency, Bal, Aleksandra Marta, 2014-12-2

²⁴ ED raids offices of Bitcoin websites, Medianama.com, Jan 2014

²⁵ Bitcoin Legal or Illegal in India, PSA, E-newsletter, April 2014

²⁶ RBI cautions users of virtual currency against risks, Reserve Bank of India Press release, Des 24, 2013

²⁷ IRS says Bitcoin is property, not currency, The Wall Street Journal, Bloomberg, Mar 2014

4. The regulations should make it mandatory to identify the user in order to complete certain transactions thus making it more transparent and accountable. The regulation of dealing with a virtual currency where the transactions can be done only within India can be introduced to restrict international capital inflow. This would impede money laundering activity.
5. Bit coins be treated as an electronic service and thus made taxable as during the process of sale the trading is done through a website. Government can also introduce VAT²⁸ liability for Bit coin transfers as applicable.

CONCLUSION

The world has seldom responded well to radical concepts and technology specifically when it relates to money. Bit coins are revolutionary as it tries to break away from the control of regulatory authorities and deals with non-physical money. Thus the challenge which Bit coin faces today is to overcome the suspicions of human kind and achieve a huge user base to sustain it. Bit coins have the competitive edge of reducing costs in transfer and cost of printing and maintaining paper money and it must use this potential to outweigh the other inherent weaknesses and risks. Bit coins must be backed by metals such as gold or silver to be treated as a purposeful form of money and can gain respect as it can be balanced/proffered for the precious metals. Currently they are used in a numerous applications for Android phones like a debit or credit card. Similarly they must tap the market for retail services, e-commerce etc. to have a competitive advantage. Bit coins need a rational regulatory protocol to attract more customer base. The key trial that is impediment to its growth is that the authorities lack the understanding behind its know-how. The instances of its illegal use have made the scenario more complex. Guidelines that is currently used by financial markets can be used uniformly world over and the software can be developed for making it a successful alternative currency.

To conclude we quote, Francois Verde(2013), a senior economist at the Federal Reserve Bank of Chicago "Although some of the enthusiasm of Bit coins is driven by distrust of state issued currency, it is hard to imagine a world where the main currency is based on the extremely complex code understood by a few and controlled by a fewer without accountability, arbitration or recourse. Bit coins are free of power of state but it is also outside the protection of state.

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²⁸ Bitcoin – A global prospective, Indian legal and Tax consideration, Nishith Desai, April 2015

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