

**Sustainability of Bitcoins in Indian Market**

**\*Dr. Ruchi shukla**

**\*\*Sahil Aneja**

**\*\*\*Binish Alam**

\*Assistant Professor, VIPS

\*\* & \*\*\*Student, VIPS

**Abstract**

Demonetisation aka notebandi was essentially an attempt to curb black money, corruption and fake money menace but turned out to be an assault on 500 and 1000 rupee currency notes. After such consequences/results the objective was shifted to digitisation i.e. to make India cashless and a digital economy, for a positive overall outcome. This somehow gave rise to usage of plastic money, net banking, mobile wallets, et cetera and words like paytm, oxigen and mobiwik became part of our cashless and digital life. But how many of us have heard about bit coins? Probably very less have and those who have don't give much attention to it. But what if we get to know that current monetary value of one bit coin is around Rs 85000. Now it excites many of us and for sure everybody wants to know about it. Bit coin is an innovative payment network and a new kind of money. Bit coin is a form of digital currency, created and held electronically. No one controls it. Bit coins aren't printed, like dollars or rupees – they're produced by people, and increasingly businesses, running computers all around the world, using software that solves mathematical problems. It's the first example of a growing category of money known as crypto currency. Bit coin witnessed a slow beginning in India. However, banks are now acknowledging its advantages. According to an analyst, Bit coin trade in the country has grown rapidly, at estimated Rs 500 crore per year, with 50,000 Bit coin wallets and over 700-800 Bit coins being operated every day. By observing these facts and figures there would be many questions arising in our minds such as – what are the various purposes of a bit coin ? Who is operating this platform? Who is responsible and accountable for all the transactional loss on this platform? , is it reliable to accept payments by this mode? , who all are accepting payments by this method? et cetera. The answers to all these questions serve as an objective of this paper.

Key words: Demonetisation, bit coin, crypto currency.

**I. Introduction**

In 9000 B.C., the first thing that society started using as money was barter system i.e. exchanging of one commodity in order to get another commodity. This method of transaction was not so reliable because it was not durable, reliable and divisible. So to overcome the problem of barter system, around 4000bc transactions were done through precious metals. Nearly 1000 years ago paper money was born which was actually the receipts that gold smiths used to give to the people who kept their gold with the goldsmiths. Gradually people started exchanging these receipts between them instead of getting gold for every transactions. Currently the money we are using is known as fiat money. Fiat means something which does not have an intrinsic value and only has some value because it is looked after by some central authority and the society accepts that. Now a day's maximum transactions are done electronically. Since the money is not physically transferred there is a third like banks or credit card companies which look after the transactions. The fiat money which we use today is acceptable to hyperinflation. Hyperinflation is a situation where the value of money decreases tremendously in a very short time. In Jan 2009, an anonymous person named as Satoshi Nakamoto invented bitcoins which was a very big invention after the invention internet. The best feature of bitcoin is that it has the benefits of both physical and electronic money at the same time. You can easily make payments across the globe electronically and without the interference of any third party. Bitcoins can be used both physically and electronically. Since this is a direct mode of transaction i.e. no third party is involved, the personal information is secured with us and we are not required to share them with any third party as we do in transactions through bank or credit card. Bitcoin is open-source; its design is public, nobody owns or controls Bitcoin and everyone can take part. Through many of its unique properties, Bitcoin allows exciting uses that could not be covered by any previous payment system. It was introduced on 31 October 2008 to a cryptography mailing list,[16] and released as open-source software in 2009. They are created as a reward in a competition in which users offer their computing power to verify and record bitcoin transactions into the block chain. This activity is referred to as mining and successful miners are rewarded with transaction fees and newly created bitcoins. Besides being

obtained by mining, bitcoins can be exchanged for other currencies, products, and services. When sending bitcoins, users can pay an optional transaction fee to the miners. This may expedite the transaction being confirmed.

## **II. History of Bitcoins**

On August 15, 2008, 3 people, Neal Kin, Vladimir Oksman, associated Charles Bry file associate application for a coding application. All 3 people deny having any association to Satoshi Nakamoto, the alleged creator of the bitcoin idea. The 3 additionally register the positioning Bitcoin.org within the same month, over on anonymousspeech.com- that permits folks to shop for domain names anonymously. Despite the on top of, on Oct. thirty one, 2008, satoshinakamoto releases his written report, revealing his plan for a strictly peer-peer version of electronic money to the planet. In his vision, he manages to resolve the matter of cash being traced, providing an important foundation for bitcoin to grow lawfully. On November 9, 2008, the bitcoin is registered on sourceforge.net, a community collaboration website focused on the development and distributing of open source software. In January 2009, the primary block, nicknamed 'Genesis' is launched permitting the initial 'minning' of bitcoins to require place. Later that month, the primary dealing takes place between satoshi, the developer and Hal Finney, a crypto graphical activist. In October 2009, Bitcoin receives the same price in ancient currencies. The new liberty standard established the worth of the bitcoin at \$1=1.309 BTC. The equation was derived thus on embrace the price of electricity to run the pc that created the bitcoins within the initial place. On Feb 6, 2010, the world's initial Bitcoin market is established by the currently defunct dwdollar. On May 22 2010, a computer programmer living in Florida named Laslo Hanyecz sends 10,000BTC to a volunteer in European nation, who spent about \$25 to order Hanyecz a pizza from papa John's. These days that pizza is valued at £1,961,034 and stands as a significant milestone in Bitcoin's history. On August 15, 2010, Bitcoin is hacked. Vulnerability in however the system verifies the worth of bitcoin is discovered, resulting in the generation of 184 bitcoins. The worth of currency – from a high of \$.80 to \$1 in June drops through the ground. In October 2010, bitcoins go beneath the spotlight. Once a hack in August – associated a subsequent discovery of different vulnerabilities within the blockchain in September- an inter-governmental cluster publishes a report on concealment exploitation new payment strategies. Bitcoin, it recommendation may facilitate individuals finance terrorists team. On October 6, 2010, bitcoin reaches \$1 million. Based on the quantity of bitcoins in circulation at that time, the valuation ends up in a surge in bitcoin price to \$.50/BTC. The first mobile bitcoin transaction took place between Ribuck and Doublec of 1.24 BTC using bitcoin daemon on December 8, 2010. In January, 2011, the trade route, a bootleg medicine market place is established, victimisation bitcoin associate in nursing untraceable thanks to purchase and sell bitcoins online. In February 2011, bitcoin reaches parity with the USA dollar for the primary time. By June every bitcoin is value \$31 giving the currency a market capital of \$206 million. In June 2013, the first major thieving took place. Bitcoin forum founder cure reports having 205,000BTC from his digital case that had a singular worth of \$375,000. Within the same month, a serious breach of security cease the worth of the currency go from \$17.51 to \$0.01 per bit coin. In March 2013, the U.S.A. money crime social control network problems a number of world's initial bitcoin regulation within the style of steering report for persons administering exchanging of victimisation of virtual money. This marked the start of associate in nursing in progress dialogue on however best to manage and also bitcoin market capitalisation reaches to \$1 billion. In August 2013, federal decide, Mazzant claims: "It is evident that bitcoins are often used as money." And "It is often use to purchase goods and services." During a case against Trendon Shavers, the supposed 'Bernie Madoff of bitcoins. Bloomberg began testing the bitcoin knowledge on its terminal. Though different tickers exist, endorsements from Bloomberg prove bitcoin additional institutional legitimacy. The Fed chairman at that time, mountain Bernanke, provides his blessing to bitcoin. In his letter to the Senate homeland security and government affairs committee, Benanke states that "bitcoin may hold long-run promise, notably if the innovations promote a quicker, safer and additional economical payment system". In December 2013, China's financial institutions bars the money establishment handling bitcoin transaction. This ban was issued once the People's Bank of China same bitcoin isn't a currency with "real meaning" and doesn't have constant status as enactment currency. The ban reflects the danger bitcoin poses to China's capital controls and money stability. These days china remains the world's biggest bitcoin dealer, with eighteenth of world bitcoin transactions being processed in china. In January 2014, Bitcoin custodians Elliptic launch the world's initial insured bitcoin storage service for institutional shoppers. All deposits area unit comprehensively insured by a fortune one hundred no depositary financially institutions and commands fully reserve. This implies Elliptic ne'er re-invests consumer assets; instead they secure them in deep cold storage. Overstock.com becomes the primary major on-line distributor to embrace

bitcoin, acceptance payment within the USA. Stock was the primary in what's currently associate in nursing efficiently growing list of huge businesses that settle for bitcoins. In February 2014, HMRC classifies bitcoin as assets or personal cash, which means that no VAT is going to be charged on the mining or exchange of bitcoin. this can be vital because it is that the world's initial and most progressive treatment of bitcoin, positioning the united kingdom government because the most forward thinking and comprehensive with reference to bitcoin taxation. In June 2014, the federal government auctions off over 29,000 bitcoins taken from the trade route, the illicit on-line marketplace. The sale and closure of the marketplace marks growing institutional understanding of the potential use cases of bitcoin. To boot, the closure and auction of the trade route has helped bitcoin gain legitimacy because it demonstrates that bitcoin isn't a simple method for on-line criminals to avoid the rule of law. From this time ahead bitcoin will now not be thought-about as a currency for criminals. The employment of the bitcoin block chain implies that the identity of users will usually be established. In July 2014, the 'Bit License' edges towards reality because the big apple State Department of economic Services releases the primary draft of the agency's planned rules for regulation virtual currencies. The European Banking Authority publishes its opinion on 'virtual currencies'. Their analytical report recommends that EU legislators take into account declaring virtual currency exchanges as 'obliged entities' should go with anti-money wash (AML) and counter-terrorist funding needs. The EBA report is very important because it acts as a catalyst to launch bitcoin into the money thought by light, the very fact that virtual currencies need a regulative approach to try for a global coordination to attain a flourishing regulative regime. Also that month GABI (Global Advisors Bitcoin Investment Fund) launches the world's initial regulated Bitcoin Investment fund. This can be vital to the bitcoin scheme because the launch of this investment vehicle adds any legitimacy to bitcoin additionally to permitting regulated investors the simplest way to take a position in bitcoin. In August 2014, the chancellor of the cash in hand, patron saint dramatist, demonstrates his and hectometer Treasury's positive outlook on bitcoin once he purchases £20 value of bitcoin and announce hectometer Treasury's inappropriate data on digital currencies, giving digital currency businesses the possibility to treat the risk and probably influence the future government policy. In October 2014, Tera Exchange announces that the primary bitcoin by-product dealing was dead on a regulated exchange adding a replacement hedging instrument to bitcoin and instilling credibility and institutional confidence within the entire bitcoin community. From December 2014, Tech Giant Microsoft begins accepting bitcoin payments as well.

### **III. Scenario in India**

India is painting an image to become a large market place where bitcoin as well as the blockchain technology might with success unfold its wings and fly high to succeed in the destined place. Both, the government and private financial institutions are in favour of this technology. With the employment of this international technology in form of digital currency, everybody will be banked. A money infrastructure supported bitcoin and its underlying technology blockchain is probably going to herald a revolution like we did. India witnesses a history of successfully adopting digital technologies like consumption of internet on smartphones that has seamlessly taken it to a next level. It shows that individuals not simply wish to access web however to access it on their smartphone as they're reworking themselves into technology advanced specimens who wish instant access to everything just by a touch on screen. It additional indicates that India is prepared to adopt digital tools with very highly-trained, technical hands and therefore, in turn, suggests that bitcoin is within the right place at the proper time.

With India's recent demonetization, the quantity of bitcoins being listed there has considerably inflated to almost twice its previous levels, pushing its price to new highs.

### **IV. How Does Bitcoin System Function?**

Unlike ancient currencies that are issued by central banks. Bitcoin has no central financial authority instead it's underpinned by a peer-to-peer network created from its users machines similar to the networks that underpin BitTorrent, a file-sharing system, and Skype, an audio and video and chat service. Bitcoins are mathematically generated because the computers during this network execute troublesome number-crunching tasks, a procedure referred to as Bitcoin "mining". The arithmetic of the bitcoin system were found out so it becomes increasingly harder to "mine" bitcoins over time, and also the total number which will ever be mined is restricted to around 21 million. There's thus no manner for a financial institution to issue a flood of new bitcoins and devalue those already in circulation.

The entire network is employed to deserve and verify each the creation of latest bitcoins through mining, and also the transfer of bitcoins between users. A log is jointly maintained of all transactions,

with each new dealing broadcast across the bitcoin network. Collaborating machines communicate to make and agree on updates to the official log. This method, that is computationally intensive, is in truth the method accustomed mine bitcoins: roughly each ten minutes, a user whose updates to the log have been approved by the network is awarded a set range of latest bitcoins. This has prompted bitcoin fans to create ever a lot of powerful computers for use in bitcoin mining.

Bitcoins (or fractions of bitcoins referred to as satoshisis brought and sold-out reciprocally for ancient currency on many exchanges , and can even be directly transferred across the net from one user to another using acceptable software system. This makes bitcoin a doubtless enticing currency in which many international transactions can be settled, without messing around with bank charges or exchange rates. Some net services (such as internet hosting and on-line gambling) are brought mistreatment bitcoin. The complexness and opacity of the system means that it conjointly appeals to those with a lot of villainous functions in mind, like concealment or paying for ill-gotten medication (drugs). However most of the people are reluctant to adopt bitcoin whereas the software system needed to use it remains thus complicated, and also the price of a private bitcoin is thus volatile. Even as BitTorrent wasn't the primary file-sharing service and Skype wasn't the primary voice-over-internet service, it should be that bitcoin are a pioneer within the field of virtual currencies, however are overshadowed by associate degree easier-to-use rival.

## **V. Challenges**

### **a) Cyber security**

Bitcoin exchanges and participants are subjected to security breaches varied times, together with a recent August 2016 hack of the exchange Bitfinex, leading to losses amounting to about USD 72 million. The recent Ethereum DAO hack proves that vulnerabilities will exist outside of the Bitcoin implementation of blockchain technology too. Although the elemental technology underlying the blockchain has seldom been questioned on security grounds, the implementation by participants, exchanges, and DAOs has generally not been water light. One security weakness at a lot of elementary level is that the importance connected to participants' personal keys: some have declared, "Permanent loss of a personal encoding key would be a lot like loss of life." Organizations might therefore face a security v, Value trade-off that "either means that your blockchain is affordable however risky or big-ticket and secure.

### **b) Widespread adoption**

Mr. A.P. Hota, CEO and Managing Director of India's NPCI, recently said after a blockchain event, "While it was clear that the technology is radical, unless the entire ecosystem moves toward it, it is hardly of any significance." This can be easily understood when we consider that the value of Bitcoin is only existent because people are willing to trade currency/goods/services for them. A Bitcoin network of a few people would be of little consequence. Credit Suisse (Swiss multinational financial services holding company) has also pointed out that "critical mass" is essential for the blockchain's success. However, the inertia of established systems (and the integration of the blockchain's success. However, the inertia of established systems (and the integration of the blockchain with them); scepticism towards Bitcoin and the blockchain as rebel systems; and the high cost of a sophisticated blockchain deployment may be challenges to widespread adoption.

### **c) Built in deflation**

Since the full range of bitcoins is capped at 21 million, it'll cause deflation. Every bitcoin is going to be value more and more because the total range of Bitcoins maxes out. This method is meant to reward early adopters. Since every bitcoin are valued higher with every passing day, the question of when to pay becomes necessary. This would possibly cause spending surges which will cause the Bitcoin economy to fluctuate terribly apace, and erratically.

### **d) Fraud and criminal activities**

Bitcoin allows fraud and different criminal activities. This can be completely the only most salient feature of Bitcoin's obscurity. Standard currencies are so subject to wash and counterfeit. There's most likely no way to eliminate those risks utterly. Bitcoin magnifies those risks because it will solely be exchanged anonymously. It dominates dark networks that are famous to traffic in narcotics. Enforcement efforts to shut those networks down can terminate the flexibility of any monetary actor to interact in Bitcoins even for legitimate reasons. Once the network is down, your Bitcoins are gone. Standard currency doesn't work that method in real transactions. Banks and brokerages have offsite

business continuity backups. Securities exchanges and central banks maintain counterparty records. These mechanisms lack Bitcoin's anonymity but structure for that in resiliency and trustworthiness.

## **VI. Conclusion**

Since use of bitcoin involves high level of risks, unless ambiguity close bitcoins is resolved its use can't be foolproof. In summation, bitcoins are digital money and decentralized, peer-to-peer payment system. Being volatile in nature, care must be taken that a mechanism is devised to tackle risks related to fraud and hiding. Regulators will have to be compelled to take steps to supply people and businesses with rules to integrate this new technology with the formal regulated monetary systems. In general, bitcoins have variety of advantages, it considerably reduces dealings prices, permits the expansion, ease and security of e-commerce and physical transactions, etc. keeping pace with the dynamical times, Indian government can have to be compelled to start up with acceptable amendments within the interchange and knowledge technology laws to specifically embrace bitcoins.

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