BITCOIN: A GLOBAL CURRENCY?

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<td>i.e.</td>
<td>That is</td>
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<td>United States of America</td>
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<td>3.</td>
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<td>FinCEN</td>
<td>The Financial Crime Enforcement Network</td>
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<td>ICO</td>
<td>Initial Coin Offering</td>
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Abstract

The purpose of this article is to find out what exactly virtual currency, such as Bitcoin, is and if it is possible for Bitcoin to become the globally accepted currency in the future. Bitcoin is a fully decentralized virtual currency without any interference of the trusted third party. It has value mainly because of two reasons, first its supply is restricted and second there is demand because of its low transaction fees, anonymous nature, investment opportunities and potentials for its use in criminal activities. Its future stance is doubtful as Bitcoin has several weaknesses for example, huge price fluctuations, vulnerability to hacking, and no protection from central banks because of Bitcoin’s decentralized feature. Also the legal classification of Bitcoin, which depends significantly on jurisdiction-to-jurisdiction is discussed and what actions are being taken on a global level. It is concluded that there is a long road ahead of Bitcoin to be accepted as a global currency.

BITCOIN: A GLOBAL CURRENCY?

Chapter 1. Introduction

In the year 2008, the repercussions of the “subprime mortgage crisis” gripped the world, which resulted in the loss of confidence of a segment of the world’s population within the government issued currency (fiat currency) and the inconsistencies of central bank’s capabilities to manage the economic system. The financial crisis had an adverse effect on the economic foundation of the entire global banking sector. At this point, a mysterious programmer or a group of programmers, using the alias Satoshi Nakamoto published a paper to an obscure cryptography e-mailing list outlining the framework for “Bitcoin – A Peer to Peer Electronic Cash System”. (In this dissertation, we will follow the protocol of using Bitcoin ‘with a capital B’ which means Network and bitcoin ‘with a small b’ means a currency). Till date, nobody knows who registered it because his name is in Japanese, he communicates using a German email Id and moreover the content of the emails had British spelling. Satoshi articulated his notion of the world’s first decentralized digital currency without any interference of “trusted third party”. His model was based on Blockchain technology instead of trusted third party. Bitcoin has shown an immense growth in its popularity and usage since the very beginning. Therefore, one may ask if Bitcoin is the next global currency? Despite

6 Jerry Brito and Andrea Castillo, Bitcoin: A Primer for Policymakers (Mercatus Center at George Mason University 2016) 3
7 Zoë Bernard, 'Everything you need to know about Bitcoin, its mysterious origins, and the many alleged identities of its creator' (Business Insider, 02 December 2017) <http://uk.businessinsider.com/bitcoin-history-cryptocurrency-satoshi-nakamoto-2017-12> accessed 29 August 2018
9 Dominic Frisby, BITCOIN THE FUTURE OF MONEY? (Unbound 2014) 2
11 Dominic Frisby, BITCOIN THE FUTURE OF MONEY? (Unbound 2014) xxiv
12 George Cornel Dumitrescu, 'Bitcoin – A Brief Analysis of the Advantages and Disadvantages' [2017] 5(2) Global Economic Observer; Bucharest 63
the fact that it’s very popular around the world, there still exist many concern of legality about this whole new currency.13 Bitcoin has a decentralized payment system not backed by the government or any financial institution. Globally there is no Bitcoin legitimacy practice, which resulted in countries making regulations on their own.14 There is no set agreement or law on how Bitcoins should be treated, monitored and valued. This dissertation evaluates the different legal treatments of Bitcoin across the world by government and financial institutions. To answer this, the research includes case studies of seven different countries namely: Australia, Canada, China, India, Japan, Singapore, United States of America, and studies of one regional group of countries in order to better understand the movement countries are making in regards to Bitcoin with the help of relevant literature, newspaper articles and online sources. The motivation to choose this topic came up because of several reasons; firstly, Bitcoins have marked the starting era of next financial rebellion as a form of cryptocurrency.15 Secondly, since its inception, Bitcoin has been a very debatable topic around the world.16 Countries have had serious discussions in relation to the acceptance of Bitcoin as a currency. Thirdly, Bitcoin is a captivating topic, which is not backed up by any trusted third party, which indicates that it is difficult to find the identity of the sender. Fourthly, no one can deny the fact that it’s popular, trending and is happening around the world at the moment. Fifthly, it can be a game-changer because as per the predictions cryptocurrencies can replace fiat currency and be dominant in the near future. Lastly, there have been many controversies regarding online hacking and fraud regarding Bitcoin,17 for example, the Mt. Gox insolvency.18 It is difficult to predict whether Bitcoin will become a global currency.

13 https://economics.nd.edu/assets/165129/alex_kroeger_essays_on_bitcoin.pdf
1.1 Aim of the study
The aim of this article is to understand what Bitcoin is, whether is it possible for Bitcoin to gain mass acceptance and how it is treated from a legal and regulatory perspective around the world.

1.2 Research Question
a) Is it possible for Bitcoin to gain mass acceptance?
   b) What is the status of Bitcoin’s legality and regulatory framework around the world?
   c) What International measures are taken in regard to the use of Bitcoin?

1.3 Limitations
The decision to evaluate the legality of the chosen jurisdictions was taken because of the fact that there are many countries and the scope of the article would have been too extensive if there would have been a comparison of the legal status between all the jurisdictions.

1.4 Article outline
In my dissertation, my focus will be on a particular cryptocurrency i.e. Bitcoin due to the following reasons:
- The only functioning cryptocurrency with the largest support base
- Highest buying and selling volume\(^{19}\)
- Leading marketplace capitalization\(^{20}\)

Furthermore, most of the cryptocurrencies are based on the Bitcoin practice. Therefore, doing a research on Bitcoin will provide a precise representation of the overall development of cryptocurrencies. Structurally, this thesis is divided into five chapters. The first chapter gives an introduction. The second chapter will give a detailed representation of the concept of Bitcoin by answering questions such as, what are cryptocurrencies, what is bitcoin, who created it, and how does the system operate. The third chapter will discuss arguments for and against Bitcoin and will answer the research question: ‘Is it possible for Bitcoin to gain mass acceptance’. The fourth

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\(^{19}\) https://data.bitcoinity.org/markets/volume/30d?c=e&t=b

The chapter will contain case studies in order to understand how the following countries (government and financial institutions) have reacted to Bitcoins. Following are the countries:

- Australia
- Canada
- China
- European Union including United Kingdom (UK)
- India
- Japan
- Singapore
- United States of America (U.S.A)

The fifth chapter will talk about the outcomes, solutions, and recommendation. The last chapter concludes.
Chapter 2  Conceptualization

Recently, the Bitcoin experiences have attracted substantial media and supervisory attention.21 However, the world is still unclear with the term ‘Cryptocurrency’. In order to understand a new topic, the best approach is to look at something similar and get some insights before approaching the newer subject. In our case, in order to understand ‘Cryptocurrency’ one needs to be clear with the term ‘currency’. Therefore, this chapter explains what is currency, cryptocurrency, virtual currency, what is Bitcoin, who created it, and how does the system operate.

2.1 What is Currency?

In simple terms, a currency can be defined as something (for example coins, cheques, bills) that is in distribution as a medium of exchange.22 FinCEN23 defines the term currency as, ‘ any coin and banknote of any country that is termed (i) to be a legal tender (Coins or banknotes that are legally binding for the payment of arrears),24 (ii) distributes and (iii) is accepted for exchange purposes. FinCEN also described currency as a valid currency.25

2.2 What is Cryptocurrency?

The phenomenon of Cryptocurrencies in today’s world is one of the major technological developments, which has received substantial attention given its advanced features, easiness, transparency and its rising popularity. The digital transformation is a modification from traditional technology to digital technology and is presently developing at a tremendous speed. Since digital technology is in trend, it is rational that the digital form of currency, i.e., the cryptocurrency, had to occur.26

22 Jonathan Law, A Dictionary of Business and Management (6 edn, Oxford University Press 2016)
23 The Financial Crime Enforcemnet Network, an organization of the United States government
24 Jonathan Law, A Dictionary of Finance and Banking (5 edn, Oxford University Press 2014)
26 Monia Milutinović, ‘CRYPTOCURRENCY’ [2018] 64(1) SCIENTIFIC REVIEW ARTICLE 105-108
The cryptocurrency operates with the help of a system called ‘cryptography’.27 Cryptography can be defined as a process that decodes readable information into codes that is difficult to break.28 The first ever cryptocurrency that appeared was Bitcoin in the year 2009.29 After that many cryptocurrencies emerged which were called the ‘Altcoins,’ as they indicated the mixture of Bitcoin substitutes.30 Unlike the electronic banking procedure, Bitcoin has a decentralized system that denotes no supreme authority can control it. Things are totally different in the case of cryptocurrencies. To collect all the information and statistics the cryptography process is used, and then it passes across Blockchains, which symbolize the distributed public ledger. All this process is controlled through a computer-generated digital ledger and the government has no role to play in regards to the production of new units. The basic idea behind the creation of cryptocurrencies was to have a digital payment system that will operate on the standards of peer to peer.31

2.3 What is Virtual Currency?

Given the uniqueness of the occurrence and its expeditious transformation, suggesting a unanimous but comprehending description of virtual currency is a task.32 One simple way to understand virtual currency is to first explain what is fiat currency? Fiat money is a currency that is issued and entitled by a government (trusted third party) to be a legal tender.33 Neither it has “intrinsic value” nor it is changeable by law into anything34 but still it is accepted by people in exchange for commodities and facilities as it is
supported by a regulatory authority. Virtual currency is a new step in the monetary development that comes within a wide category of digital currency. In contrast to fiat currency, virtual currencies are becoming progressively used for monetary transactions globally. It can be defined as a type of unregulated, digital demonstration of value, created by private individuals. The main difference between fiat currency and virtual currency is that it is not given a 'legal tender' status in any dominion in the world. This currency is not considered unlawful but it is also not secured nor issued by any sovereign authority. In today’s time, Bitcoin is one of the most leading currencies that make use of digital units and functions directly from peer to peer without any interference by financial institutions.

2.4 What is Bitcoin?

Typically Bitcoin is regarded as a cryptocurrency, which means a currency that is encoded, in the form of virtual currency, or more accurately in the form of money and in this way its users recognize it. The foremost description, of the term Bitcoin, as mentioned on the portal by Satoshi Nakamoto explains it as a pioneering payment grid and a different kind of digital money. Before analysing Bitcoin as a pecuniary phenomenon, it is significant to acquire a complete knowledge of the technology.

At its very basic, Bitcoin is a form of electronic payment system that uses cryptography to regulate its formation and transactions, instead of relying on trusted third parties. The main purpose of the protocol is to allow its users to directly transfer money between

38 Paper notes and coins that, by law, can be officially used in a country, http://www.businessdictionary.com/definition/legal-tender.html (visited July 26, 2018)
40 Max Kubát, 'Virtual currency bitcoin in the scope of money definition and store of value' [2015] 30 Procedia Economics and Finance 410
41 https://bitcoin.org/en/faq#what-is-bitcoin
peer-to-peer in a decentralized manner. Basically, it is a ‘software-based’ virtual cash system, which was presented in 2009 as ‘open-source software’ to be used by everyone.

2.5 Who created Bitcoin?

Bitcoin is regarded as the first application of a model called ‘cryptocurrency’, which was first explained on the cypherpunks e-mailing list by Wei Dai (b-money) in the year 1988, proposing the notion of a new type of money that makes use of cryptography to regulate its creation and management, rather than relying on a trusted third party.

Subsequently, in the year 2009, Satoshi Nakamoto posted the first Bitcoin description and proof of concept in a cryptography e-mailing list. However, in late 2010 without revealing much about his identity Nakamoto left the project. Since then the society has expanded and grown exponentially with several other creators working on Bitcoin. Nakamoto’s obscurity had often raised numerous apprehensions, out of which many are linked to misinterpretation of the open-source description of Bitcoin. The Bitcoin software is freely available across the globe with any developer to analyse the code and make their own customized form of the Bitcoin software. As it is said, ‘the individuality of Bitcoin’s creator is probably as pertinent today as the individuality of the person who created paper.'

44 Jerry Brito and Andrea Castillo, Bitcoin: A Primer for Policymakers (Mercatus Center at George Mason University 2016) 4
47 In 1992, Tim May, Eric Hughes and John Gilmore, started the cypherpunks’ mailing list to discuss cryptography related issues.
2.6 How does Bitcoin work?

Now that Bitcoin is several years old and soaked into a typical culture, half of the world is still unaware about the fact that how it actually works.

As per new users perceptions, who are not interested in the mining process, Bitcoin is nothing but merely a mobile application or computer software that offers a private wallet, which permits users to transfer bitcoins as shown in figure 1.

Figure 1: shows an illustration of the peer-to-peer transmission of Bitcoin.

One of the most significant features of Bitcoin is its harmonized peer-to-peer system. In simple terms, when two computers/laptops are connected in order to share information without any interference from the trusted third party is regarded as the most easiest form of peer-to-peer network. LimeWire, Napster, and Bitorrent are some of the most well known peer-to-peer systems that are adopted by Bitcoin users. However, Bitorrent so far has been considered to be the fastest and more reliable options in comparison to others.

But the actual working of this technology can be understood by looking behind the scenes, where Bitcoin contains two major virtual components.

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54 Wallets come in several forms, including paper wallet, desktop access, physical bitcoin, mobile access, hardware and web-based access.
56 https://money.cnn.com/infographic/technology/what-is-bitcoin/
• The first component is a public ledger, known as the ‘blockchain’. This is a public ledger distributed across the network to which anyone can make changes that records each and every bit since the beginning of cryptocurrencies and all the systems that are directly connected to the Bitcoin Protocol and network (called a ‘node’) has their own copy since the blockchain system is decentralized, which means that it does not remain in a single position, instead exist universally, with all users in the network having their own copy.

• Unverified transactions combined into bigger portions are called ‘blocks’ which are set serially and this series is regarded as the ledger. The main feature of this ledger is that it includes all the transaction ever processed, letting a user’s system to confirm the cogency of each and every transaction.

• Henceforth the term blockchain can be defined as a series of blocks. Any user making a transaction will use blockchain as a reference for knowing the balance and transaction history. The proper order, as well as reliability, is maintained by cryptography.

Encryption and Decryption

Both encryption and decryption changes are been used for a security purpose in order to ensure that the content is not used maliciously. Encryption is used to convert the real content into some other form, called ciphertext, which means it will not be readable by someone else. Whereas, on the other hand, decryption is used to decode the content

58 Joseph W Guzzetta, ‘How Bitcoin Works-A Technological Description of Blockchain-Based Cryptocurrencies for Nontechnical Lawyers’ [2018] 35(3) Computer and Internet Lawyer; Frederick
59 The term node means “full client” that owns the blockchain and is sharing transaction across the network
60 Peter Šurda, ‘Economics of Bitcoin: is Bitcoin an alternative to fiat currencies and gold?’(Nakamotoinstitute.org.)<https://nakamotoinstitute.org/static/docs/economics-of-bitcoin.pdf> accessed 29 July 2018
being sent. Therefore, ‘Encryption algorithms’ are very important, as they are the means to provide privacy.63

- The second virtual component is known as ‘keypairs’.64
- In order to understand, let us take an imaginary Bitcoin holder, Emma, who is having two sequences of numbers that constitute her possession. Emma wants to transfer few bitcoins to rob for which she will run a message ‘transfer 20 bitcoin from Emma to Rob’. A copy of the ledger will be updated with the help of nodes. Money in an account can be spent with the help of ‘keypairs’. The foremost, which is known as the private key is an order of numbers that permits Emma to insert a digital signature to each and every transaction that she makes for the purpose of authenticity. Figure 2 shows an example of how real addresses look while transferring bitcoins:

![Figure 2: bitcoin transaction](image)

- Encrypted with her private key, the entire information relating to the transactions can now be seen publicly and its genuineness can be confirmed by another keypair: Emma’s public authentication key. This public key permits the entire Bitcoin society to confirm whether Emma’s private key was used to produce the signature or not. One main feature of the public key is that it acts as the wallet address for all the transactions. Emma will need her public key in

63 Rostislav Skudnov, ‘BITCOIN CLIENTS’ (Theseusfi, 3 Jun 2012)<https://www.theseus.fi/bitstream/handle/10024/47166/Skudnov_Rostislav.pdf> accessed 1 August 2018
64 Peter Šurda, 'Economics of Bitcoin: is Bitcoin an alternative to fiat currencies and gold? (Nakamotoinstitute.org)https://nakamotoinstitute.org/static/docs/economics-of-bitcoin.pdf> accessed 29 July 2018
order to receive payment from others. These two keypairs, as shown in Figure 3, are jointly referred to as the Bitcoin Wallet.

![Comparison between Private and Public key](image)

Figure 3: Comparison between Private and Public key

As a similarity, Emma’s public key is regarded as her street address, whereas her private key leads to her front door.

Furthermore, in the magic of ‘mining’, any user can make use of their computing power of a particular hardware and can be compensated with bitcoins. Nowadays, mining bitcoins has become a large, callously competitive profession.

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66 Kehan Zhou, ‘A Currency You Can’t See: Bitcoin And Its Impacts On Our Society’ ([Wesleyan.edu](https://wesscholar.wesleyan.edu/cgi/viewcontent.cgi?article=2341&context=etd_hon_theses)) accessed 30 July 2018


69 Sweden Boden, 'The magic of mining' ([The Economist.com](https://www.economist.com/business/2015/01/08/the-magic-of-mining)) accessed 30 July 2018
Basically, the miners are rewarded for two major sources.

1. Firstly, each user agrees a tip before proceeding with a transaction and the amount of which is entirely depended on the payer. However, in order to get the transactions recorded it is necessary to keep miners encouraged and it is expected from the person paying to pay a decent amount of tip. This giving of tip process is known as the transaction-based salary for the miners.70 In August 2017 the data collected from “blockchain.info.com” reveals that the transaction tip paid to bitcoin miners has almost touched $2.3 million. Miners are regarded as the “hamsters in the wheel” that help maintain bitcoins system running. Since thousands of people have started using bitcoin, the price to make a transaction has touched the skies. As Lasher71 said, “I just made a transaction this morning and it cost me $25.”

2. Secondly, every time when miners finish making a block they are compensated with 25 Bitcoins.73 This way new Bitcoins are added into distribution, given that there is no trusted third party that can regulate the money supply. This source is called coin-based income, which is foreseeable and planned to decrease every fourth year. Both the above-mentioned sources of income encourage the miner to gather all the transactions information into a block and operate what is called the ‘proof of work’ (POW) function, which is considered as the most inefficient and time-wasting feature of Bitcoin mining. The reason behind making mining resource-intensive and inefficient is to confirm that the miners spend plenty of their time in making the blocks. POW can be defined as a mathematical task that requires the miner to answer it and the moment it is achieved it becomes very simple for the network to confirm it.74

71 The chief marketing officer at Breadwallet
73 https://www.bitcoinmining.com (last visited: 30/07/2018)
Further, this whole process gives Bitcoin its value by making it tough to achieve. However, Bitcoin targets to uphold a persistent ratio of coin production, which is nearly around 10-12 minutes each block. Nowadays, as laptops and computers are becoming more dominant, POW needs to modify its own difficulty to balance with faster systems. Depending on the ratio of mining activities the difficulty of POW modifies after every two weeks. This way the speed of Bitcoin remains constant. 

Bitcoin’s most significant element is its decentralized and distributed system with independent miners that are spread around the world and who are in a race against each

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other in order to process the transaction first and earn reward. The chances of winning the reward (which is nearly around 12.5 Bitcoin) depend on how much computing power and electricity a miner is spending to complete the transactions. Great numbers of miners have been attracted to Bitcoin, due to the rise in price and because of their support Bitcoin system is becoming more decentralized. As the percentage of miner increases and turn out to be more geographically distributed, it will be more expensive and challenging for the governments to close the system. Till date, nobody is able to hack the Bitcoin network.77

According to Nakamoto, a currency should be grounded on Blockchain technology (crypto-proof) instead of relying on trusted third party (trust). Protected by algorithms and a decentralized channel, the distributed blockchain has empowered Bitcoin to prosper as compared to other cryptocurrencies, which have failed. As it is said, firstly money was supported by objects, then by political authority and now in the era of digitalization money it is supported by computational proof.78

Chapter 3   Is it possible for Bitcoin to gain mass acceptance?

Half of the world is trying to convince others that Bitcoin is simply a ‘Bubble’ whereas few have already proclaimed it as the future of money. But there still exist few important questions for example, is cryptocurrency genuine? Can I use Cryptocurrency just like debit and credit card? Can I buy anything with it? All the above-mentioned questions curtails out from one question, i.e. is it possible for the cryptocurrency to gain mass acceptance? Therefore, the sole objective of this chapter is to throw some light on both of these perspectives.

3.1   Why are people attracted towards it?

One common question that comes to my mind is why are some people using virtual currencies like Bitcoin when we have a fiat currency which is backed by a central authority, can be accepted and traded on exchanges, and moreover is accepted by all

77 Peter Shin, 'Hate Bitcoin? This might change your mind' (Medium, March 2010)<https://medium.com/@petershin45/hate-bitcoin-this-might-change-your-mind-837963c24d70> accessed 7 August 2018
78 Dominic Frisby, BITCOIN THE FUTURE OF MONEY? (Unbound 2014) 24-25
traders around the world. A simple reason behind this very basic question is ‘Financial Freedom’, which means that your money is not backed by any regulation or central authority. Despite these ongoing opinions relating to the use of a virtual currency rather than fiat currency, Bitcoin has shown an immense growth and being accepted rapidly by the people. There are many advantages of using Bitcoin namely, (1) Privacy/Security: Using bitcoins offer users with high level of confidentiality because bitcoins are been transferred without the interference of any trusted third party. Senders and receivers of bitcoins remain almost unknown. Moreover, no personal data is stored in the Blockchain except for the account number.

(2) There is wide range of options available with Bitcoin users. For example,

I. if you want to buy a present for somebody you have an option to purchase gift cards, through Gyft or eGifter. The person will then be able to spend it at one of the retailer’s store,

II. You can pay for your hotels and flights with the help of Expedia, CheapAir and Surf Air,

III. Microsoft has also added the alternative to pay with bitcoins if one wants to download games and movies,

IV. You can renovate your house or buy something special through Overstock (one of the biggest stores to accept bitcoins).

81 See FAQ — Bitcoin, what are the advantages of Bitcoin? BITCOIN PROJECT, https://bitcoin.org/en/faq#is-bitcoin-anonymous (last visited August 02, 2018)
82 A digital gift card destination to buy and send gift cards > https://www.gyft.com/about-us/ accessed on 09.08.2018
83 An online platform to buy and send branded gift cards via email, delivery or text > https://www.egifter.com accessed on 09.08.2018
84 Expedia, CheapAir and SurfAir are online travel companies that help you book your hotels and flights for bitcoins
85 Pedro Hernandez, ‘Microsoft: Bitcoin Accepted Here’ (EWEK, 14 December 2014)<http://www.eweek.com/cloud/microsoft-bitcoin-accepted-here> accessed 11 August 2018
V. Anybody who loves pizza can get it delivered to their doorstep in exchange for bitcoin.88

VI. Moreover, if it’s about knowledge, several public and private universities are accepting tuition fees by bitcoins89 (such as, University of Cumbria in the United Kingdom was the first in the world to experiment with bitcoins,90 The University of Nicosia in Cyprus91 and Lucerne University in Switzerland accepted bitcoins for their Arts and Science courses)92 and one of the preschools in New York don’t accept credit cards rather they prefer taking bitcoins.93

(3) The Bitcoin technology has made peoples’ life quite easy in a way: if someone needs to transfer money internationally to a friend and family,94 making the payment through wire transfer by the help of existing established payment network (SWIFT CODE) can take anywhere from 2 to 5 working days, with standard transfer fees of up to $30-$40.95 It’s a fact, that making an international payment through wire transfer can be a pain as its very slow and can cost you much more than sending that same amount of money through courier.96

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88 BBC, 'Bitcoin virtual currency can now be used to pay for pizza' (BBC News, 12 February 2013)<https://www.bbc.co.uk/news/technology-21427505> accessed 11 August 2018
94 Cryptopay, 'International Money Transfers Over Bitcoin Protocol' (Cryptopay.me, October 2003)<https://cryptopay.me/bitcoin-international-transfers> accessed 7 August 2018
95 Transferwise, 'Why is sending money internationally so expensive when sending an email is free?' (Venture beat, 29 November 2017)<https://venturebeat.com/2017/11/29/why-is-sending-money-internationally-so-expensive-when-sending-an-email-is-free/> accessed 7 August 2018
On the other side there are nearly around 2 billion people globally who don’t even have the facilities of a bank account.97 For them the option is left to approach companies like Western Union, which again levy high percentage of fees plus conversion fees (in order to send $500 the company will charge you as much as $47.5).

The worst part is that the disadvantaged people who are not provided with the banking facilities have to pay such a huge fees in order to send their salaries to family members. Then with the introduction of Bitcoin technology, it was made possible with the help of an internet connection to send and receive money to/from anyone, with reasonably low transaction fees or no fees at all. 98

On November 16, 2011 the biggest Bitcoin transaction of 500,000 Bitcoin was transferred and processed immediately. Moreover, the speed at which transactions can be made worldwide and the beneficial investment opportunities that are available is what has attracted most of the people.99

### 3.2 Most Innovative Development: KENYA’S Money via Mobile (M-PESA)

Most of the people might have not expected Kenya to be the country to do the greatest inventions in money and provide banking facilities to non-account holders.100 Kenya has become a creator and an international leader despite having a Gross Domestic Product per capita of $1507.8, which if we compare is only 1/40th of the United States.101

In 2007, a service called M-Pesa was introduced in Kenya, which is mutually controlled by “British telecommunications company Vodafone and Africa’s Safaricom”, that permits people to deposit money into their mobile phone and then use that money to

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transfer via a simple text message to anyone having the same network without the help of financial institutions like banks. Since its launch, it has become so popular amongst the underprivileged population of the country that the percentage of people using M-Pesa has reached nearly around 20 million. Studies have found that a service like this have helped number of people to come out of poverty and the income level for rural households in Kenya who accepted M-Pesa have increased from 5-30% which is an amazing figure for Kenya’s overall growth and development. Kenya wanted to reach out and help other countries. In today’s time there are about 18 million M-Pesa users in Kenya and 30 million within 10 countries and in 2016 nearly around 614 million transactions were completed. However, services like these face some restrictions same as the banks that they aim to supersede:

- First limitation in their way was profit related issues. In order for them to expand their services in other countries they have to check if it is profitable or not. Since Vodafone operates it, a minimal amount of fees is charged for their services in order for the company to sustain.

- Another limitation was in terms of geographic. The transfer of money can take place between two M-Pesa networks only and in the same country. Due to the above-mentioned limitations it was not possible for M-Pesa to expand globally. However, on the other hand, none of the above limitations apply in the case of Bitcoin.

- Since Bitcoin is not a corporation, have no monthly or yearly targets, have no partners or shareholders who can force it to increase the fees in order to raise their benefits.

- There are no geographical restrictions as Bitcoin is happening around the world.

102 M-Pesa‘<https://www.fastcompany.com/company/m-pesa> accessed 7 August 2018
105 Peter Shin, 'Hate Bitcoin? This might change your mind' (Medium, March 2010) <https://medium.com/@petershin45/hate-bitcoin-this-might-change-your-mind-837963c24d70> accessed 7 August 2018
From the above information, we may agree that Bitcoin has several advantages but on the other hand, it cannot be denied that Bitcoin has a negative side too.

### 3.3 The dark side of Bitcoin?

One of the major advantages of Bitcoin is its decentralized and anonymous nature that drives many issues related to Bitcoin. Dread Pirate Roberts,\(^{106}\) said in an interview, Bitcoin is the only reason that let him win the Drugs war.\(^{107}\) Bitcoin provides benefit to tax-evaders that established taxpayers do not have because the functioning of Bitcoin does not rely on the subsistence of financial institutions i.e. banks.\(^{108}\) Furthermore, the nature of Bitcoin is uncertain, so there are possibilities for investment rip-offs.\(^{109}\) The biggest drawback of Bitcoin at the moment is its efforts being used in some way to support criminal activities. There are various inherent risks accompanying Bitcoin; such as, money laundering, tax evasion, extortion and illegal imports. There is an ongoing hassle between Bitcoin and law enforcement agencies, as agencies have number of techniques to identify criminal conduct, whereas criminals, on the other hand, find new evasion ideas in order to beat the efforts made by agencies.\(^{110}\)

#### 3.3.1 The Challenge of Anonymity – Money Laundering

Anonymity (Privacy/secrecy) is regarded as the most important tool in the criminal world. Particularly in the area of money laundering, the entire motive of criminals is to hide their identity from illegal transactions. Therefore, Anti-Money Laundering (AML) major concern is for cryptocurrencies. Helen Rosenberg\(^{111}\), explaining in his white paper, states that criminals have this misconception about Bitcoin being completely

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106 Owner of the world’s popular online drug market Silk Road
107 Adi Robertson, 'Silk Road manager says Bitcoin let it win the War on Drugs' (The Verge, 14 August 2013)<https://www.theverge.com/2013/8/14/4622284/silk-road-manager-says-bitcoin-let-it-win-the-war-on-drugs> accessed 3 August 2018
111 Director of Cash Management, Global Transaction Banking for Barclays US
anonymous, which is not entirely correct. Since all the transactions are recorded in Blockchain (public ledger) it increases the possibility to trace client’s activity. But criminals find various other ways to overcome this anonymity issue.112 One approach they adopt is ‘Zero-proof Technology’ (a technology which allow users to authenticate the genuineness of something without disclosing any information) which deletes all the identifying information’s of the sender and receiver from the public ledger, which is considered as the most celebrated characteristics of Bitcoin. 113 Another wild experiment adopted by criminals is called The Onion Router (Tor), which hides the IP address. This type of approach is most commonly used in illegal imports. Tor posses a great challenge for the enforcement agencies.114

3.3.2 Criminal Activity

In 2011, Silk Road (the most shadowy e-commerce destination for drugs and other prohibited goods) is the perfect example of doing illegal business under the shadow of Bitcoin.115 This market enabled its users to trade in illegal drugs and weapons in exchange for bitcoins while cloaking their identity.116 It was estimated that more than $220 million value of drugs were sold. Thereafter, the owner Ross Ulbricht (Dread Pirate Roberts) was accused of several charges including drug trading, money laundering and hacking.117 In 2013, $48 million has been obtained after closing down the Silk Road.118

3.3.3 Tax Evasion

Another dark side of Bitcoin is the possibility to evade taxes. Generally there are two main features of established tax haven. Firstly, there is no authority to regulate the Bitcoin activities and secondly it is anonymous. Bitcoin users can make as many accounts as they want for the trading purpose and the profits derived from these transactions will remain unknown.119 On the other side, governments are getting involved in tracing down the flow of funds. With the help of blockchain they check whether traders who are accepting Bitcoin are timely reporting it and paying their taxes.120

3.3.4 Extortion

Extorting money by blackmailing people is a favorite pastime of hackers with an advantage of not revealing their identity. The rate of Ransomware attacks increased with the help of Bitcoin for example, the WannaCry or WCry cyber attack (extortion scheme), which used to send emails misleading users to open the attached file, once opened it releases viruses into their system in a method known as phishing. The virus then affects the computer by locking up all the files in a way that you cannot open them. The hackers then blackmail the victim holding their personal contents until they get paid.121

Despite the pros and cons of this technology, will it be possible for Bitcoin to gain mass acceptance?

3.4 Possibility for Bitcoin to gain mass acceptance?

3.4.1 What is mass acceptance?

119 Omri Y Marian, 'Are Cryptocurrencies 'Super' Tax Havens?' (Ufle du, October 2013)<https://scholarship.law.ufl.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1365&context=facultypub> accessed 20 August 2018
120 Mike Orcutt, 'Criminals Thought Bitcoin Was the Perfect Hiding Place, but They Thought Wrong' (MIT Technology Review, 11 September 2017)<https://www.technologyreview.com/s/608763/criminals-thought-bitcoin-was-the-perfect-hiding-place-they-thought-wrong/> accessed 9 August 2018
In order to begin further, let us get familiar with the term ‘Mass Acceptance’. It can be described as a point when enough or say majority of the world’s population start using an innovation. This can be either on a nationwide or worldwide gamut.122

### 3.4.2 The future of mass acceptance

Two researchers from Imperial College London, William Knottenbelt and Zeynep Gurguc, stated that Bitcoin are criticized from going mainstream. According to Knottenbelt, the digitalized world is growing as quickly as the substantial collection of unclear terminology that complements it. In their report called, “Cryptocurrencies: Overcoming Barriers to Trust and Adoption” they argued that mass acceptance is definitely on the prospect since Bitcoin meets one of the three basic criteria of established fiat currency; i.e. performing as a stock of value. According to Gurguc, any form of innovation do not develop overnight, but it is worth mentioning that the idea of currency has advanced in our lifetime from physical use of cash to digital or contactless transactions.123 Now the next logical step is the broader use of cryptocurrencies. Further they argued that in order for Bitcoin to go mainstream the blockchain developers need to find solutions for the price volatility, scalability, and privacy related issues. The managing director of eToro, Iqbal Gandham also commented that within a decade Bitcoin would gain mass acceptance. But scalability124 is the biggest difficulty ahead of Bitcoin mass acceptance. Despite all the problems, Knottenbelt and Gurguc remains convinced of the forthcoming acceptance of Bitcoin.125 However, there are three major factors, which are preventing Bitcoin from going Mainstream:

1. **Technological difficulties**

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124 Bitcoin scalability can be explained as the capacity to be changed in size and frequency
One of the most limiting factors of currency is a technological barrier as shown in figure 5. Though Bitcoin have shown an immense growth and development in the digitalized world, it can never grow unless and until the figures don’t add up for a worldwide audience. Two of the most considered elements of Bitcoin are aggregate supply of coins and transaction volume. The total limit of Bitcoin in circulation is 21 million. Most of the people has this misconception that 21 million is not sufficient in order to serve as a sustainable currency for the entire world. One very important thing that these people don’t understand is that like any other fiat currency, Bitcoins are divisible.

For example, the estimated amount of dollars in circulation (according to the latest

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figures as on June 27, 2018) is nearly about $1.67 trillion\textsuperscript{131} (if we take the lowest undividable unit which is around 1.05 quadrillion US cents. Surprisingly, this figure is lower than the $1.6$ quadrillion of satoshi’s. Therefore one thing is clear that supply of financial units is not an issue (after comparing it with the largest fiat currency in the world). The actual barrier is the transaction volume because it restricts the number of transactions that can be completed each second.\textsuperscript{132} The restriction is stated by the maximum block size, which is 1 megabyte.\textsuperscript{133} Due to this limit approximately 3-7 transactions are completed per second as shown in Figure 6:

![Graph represents the estimated Bitcoin Transactions per second\textsuperscript{134}](image)

When we compare this with the established payment systems such as cash, which has an infinite limit, or say, credit or debit cards that are capable of completing thousands

\textsuperscript{131} Federal reserve.gov, 'How much US currency is in circulation?' \textit{(Board of Governors of the Federal Reserve System, 09 July 2018)}<https://www.federalreserve.gov/faqs/currency_12773.htm> accessed 11 August 2018

\textsuperscript{132} Andrew Marshall, 'When Will Bitcoin Achieve Mass Adoption And Is It Even Possible' \textit{(Cointelegraph, 07 March 2017)}<https://cointelegraph.com/news/when-will-bitcoin-achieve-mass-adoption-and-is-it-even-possible> accessed 10 August 2018


\textsuperscript{134} Blockchain, 'Transaction Rate' \textit{(Blockchaincom, 10 August 2018)}<https://www.blockchain.com/en/charts/transactions-per-second?timespan=1year> accessed 11 August 2018
of transactions per second. Therefore, this is an extreme factor that is stopping Bitcoin to go Mainstream.

(2) Level of Acceptance by Retailors

![Utilitarian Limitation Diagram](image)

**Figure 7: Utilitarian limitation**


Another major factor is Utilitarian as shown in Figure 7, which shows that the actual acceptance ratio depends on the utilitarian factor of Bitcoin, when compared to other payment systems. The biggest problem is risk amplification by social media and retail shops. There are several shops that do not encourage taking bitcoins and moreover the influence of media is huge, which results in people loosing trust towards bitcoins. The solution to this is if more consumers are made aware of the benefits that Bitcoin offers over other forms of payment systems. Just like other payments systems (like visa/master cards) are accepted worldwide, same should be the case with bitcoins if retailers show some efforts to adopt this new form of currency.

(3) Psychological Barrier

![Psychological Factor](psychological-limitation.png)

**Figure 8: Psychological limitation**

137 Id


It goes without saying that Bitcoin suffers from massive price instability, meaning that the value of bitcoin varies enormously.140 According to Crypto exchange Coinbase, the value of bitcoin is determined by the fundamental laws of demand (quantity) and supply (production). The price goes up when traders assemble to buy tokens, and falls when traders plan to sell their tokens.141 Most of the time there is negative news about Bitcoin, such as, it is the currency for criminals or it is use for illegal activities. Many people heard about Bitcoin from the failure of Mt Gox with a strong note stating that ‘Bitcoin is a fraud’ and then afterwards with the disaster of Silk Road and getting his owner arrested. These reviews leave a negative connotation in the minds of general public, stopping them from building an interest in Bitcoin.142 Another concern with Bitcoin is not providing enough consumer protection. For example, if you lost your credit or debit card you have an option to contact your bank, which is not an option in case with Bitcoin.

(4) Security

Lastly, what is about ‘security’? According to some analysts, the Bitcoin system is impossible to hack. Which is true to some extent. That said, the Bitcoin protocol and network is very strong, which means it is unlikely to be hacked. However, what can be hacked are the Bitcoin wallets.143 Following is the brief list of Bitcoin Hacks and frauds:

- In the year 2011, Allinvain a bitcoin user mined bitcoins and earned 25,000 bitcoins. By June 2011, his bitcoins valued around $500.00 as the price mounted to $20. One morning he woke up and found his wallet empty, claiming his system to be hacked.144

In August 2011, MyBitcoin was one of the popular wallet service company which vanished from the web, claiming that their website was hacked.\textsuperscript{145}

Then came the Ponzi scheme. Number of Public was attracted thinking of getting high returns. The scheme worked by giving profits to previous customers with the new customer’s deposit. Finally, the scheme ended in 2012 with its owner getting accused.\textsuperscript{146}

In September 2012, attackers stole 25,000 bitcoins making Bitfloor (a Bitcoin exchange) bankrupt.\textsuperscript{147}

In February 2014, the most famous breakdown of Mt Gox happened announcing that 850,000 bitcoins are stolen.\textsuperscript{148}

In January 2015, the popular Bitstamp got hacked losing nearly around 19,000 bitcoins.\textsuperscript{149}

In August 2016, another exchange named Bitfinex proclaimed to be hacked losing $72 million bitcoins.\textsuperscript{150}

In the year 2017, South Korean company called Bithumb got hacked, and nearly $30 million were stolen. Moreover, 30 thousand of its users were affected as the thieves stole some of their personal information’s as well.\textsuperscript{151}

\textsuperscript{146} Alex Hern, 'A history of bitcoin hacks' (The guardian, 18 March 2014)<https://www.theguardian.com/technology/2014/mar/18/history-of-bitcoin-hacks-alternative-currency> accessed 11 August 2018
\textsuperscript{147} Adi Robertson, 'Hacked Bitcoin exchange BitFloor back online, founder promises to repay stolen funds' (The Verge, 27 September 2012)<https://www.theverge.com/2012/9/27/3418022/bitcoin-exchange-bitfloor-back-online-after-hack> accessed 11 August 2018
\textsuperscript{151} Saheli Roy Choudhury, 'South Korean cryptocurrency exchange Bithumb says it was hacked and $30 million in coins was stolen' (CNBC, 19 June 2018)<https://www.cnbc.com/2018/06/19/south-korea-crypto-exchange-bithumb-says-it-was-hacked-coins-stolen.html> accessed 11 August 2018
It cannot be denied that Bitcoin have many benefits (for example, decentralized currency, low-cost transaction fees, easily transferable, blockchain technology), but it is also rational to say that Bitcoin has a long road to mass acceptance. There are many things that need to be done from a technological, psychological, utilitarian and security point of view. At the moment, we can just say that Bitcoin have reached ‘mass awareness’ instead of ‘mass acceptance’.152

Chapter 4   Bitcoin around the world

4.1 Legal Status of Bitcoin in different countries

Bitcoin’s increasing popularity has gained much attention from various jurisdictions around the world. Various governments and financial institutions are still revolving from the consequence of such a technology.153 The fact that Bitcoin’s are not issued, authorized, or controlled by any central authority, one relevant question arises – is the use of bitcoin considered legal or illegal?154 The legal classification of bitcoin varies significantly from jurisdiction to jurisdiction. Governments have responded quite differently to the introduction of bitcoin in their respective jurisdictions. The responses have ranged from hesitation to full-scale adoption.155 Figure 9 depicts different countries with their focuses on the legality of bitcoins.

152 Procommerce.blog, 'Are Bitcoin and Cryptocurrencies Accepted by the Masses?'(PRO Commerce Cryptocurrency, 25 January 2017) <http://procommerce.blog/bitcoin-and-cryptocurrencies/are-bitcoin-and-cryptocurrencies-are-accepted-by-the-masses/> accessed 31 August 2018


Figure 9: shows Bitcoin Legality around the world

The purpose of the figure is to highlight each country’s outlook towards Bitcoin legality. The different color-coding indicates the level of acceptance by the countries around the world. Countries marked with green color signify that they are legally involved in Bitcoin markets. Orange color indicates countries that are not in favour of Bitcoin, but also have not imposed any limitations against the use of it. Countries with light pink color have restricted the use of Bitcoin. Dark pink color signify countries that have completely banned and outlawed the use of Bitcoin and if still anybody tries to use it they will have to face consequences. Lastly, countries with grey color indicate that they are yet to make a statement on Bitcoin’s legality.

According to the map, it appears, that countries towards the Western side are more favourable and open to Bitcoin as compared with the eastern sides that are confused about it. Currently, Russia seems to be the major country to outlawed the use of Bitcoin. Alexei Moiseev, The Deputy Finance Minister of the Russian Federation,

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commented that it’s illegal to buy and sell Bitcoin. Moreover, all the trading websites are blocked and the court has stated bitcoin to be currency substitute, which is criminalized on the region of Russian Federation. Other than Russia, there are more countries that have outlawed the use of Bitcoin: Ecuador, Vietnam, Bolivia, Bangladesh, Iceland, Morocco, Nepal, Algeria and Kyrgyzstan. These countries had ban Bitcoin because some think it poses a great risk to established banking systems while some are concerned about the possible use for criminal activities. On the other hand, China and South Korea are the countries to move ahead with their inspection and monitoring of Bitcoin. Also, these two countries are the energetic hotspots because they have provided a number of trading liquidity to the developing market.

If we talk about the most accepting territories in the world they are North America, Australia, Central Asia and Western Europe. Intriguingly, Iran, Iraq and Turkey also accepted Bitcoin whereas; Pakistan, Egypt and Saudi Arabia have changing levels of limitations. Figure 10 depicts a classification based on the Bitcoin Legality out of 246 countries:

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Figure 10: Pie chart represents the level of acceptance globally

Figure 10 indicates that out of 246 countries around the globe only 37% have no limitations on Bitcoin, 7% are neutral, 3% have impose certain limitation, 4% have declared it to be illegal and finally 49% of the world has not spoken anything on this topic. This is a major peril for Bitcoin in order to become a global currency, as there is a possibility that these unclear countries could ultimately end up placing limitations on the use of Bitcoin.163

The above-mentioned information was an overall representation of the Bitcoin’s legality within the globe. Now the next part of this chapter will focus on Bitcoin tax status and how the governments and financial institutions have reacted.

4.2 Case Studies

Bitcoin is a pioneering technology, but there still exist many legal and supervisory concerns.164 The most important fact is that several countries are struggling describing bitcoin’s nature. Whether it is a currency, commodity, stock, security or something

The classification of bitcoin is important in order to determine what laws and guidelines will apply. For example, if we talk about United States, the amount of tax that will be applied by the Internal Revenue Service (IRS) on bitcoin related transactions would depend on Bitcoin’s nature (whether it is a currency, commodity or a security). Moreover, classifying the nature of bitcoin will decide which federal agency has authority over bitcoin transactions in regulatory and illegal activities.

The countries selected below offer the most extensive and latest information available on their legal status and regulation. Therefore, this section will examine in brief the nature of bitcoin, taxes on Bitcoin and finally the different viewpoints by the governments and the banking sector.

4.2.1 Australia

Bitcoin status: Legal (classified as property)

Bitcoin exchanges: Legal

Australia has been radical in its application of Bitcoin regulations and has been following Japan’s footsteps.

Australian Taxes on Bitcoin

Bitcoin is classified as property so Capital Gains Tax (CGT) applies. Since the government has declared it to be legal tender there is no longer concerns for “double taxation”. Country’s 2017-2018 budget states the plan to make it simpler for cryptocurrency businesses to function in Australia and make sure that Goods and Services Tax GST is paid only once.

167 Nikolei M. Kaplanov, ‘Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against its Regulation’ [2012] 25(1) Loyola Consumer Law Review 145 (if bitcoin is classified as security then Securities and Exchange Commission will have the authority to regulate or even ban bitcoin transactions).
168 Jamie Smyth, ‘Australia follows Japan in move to regulate bitcoin’ (Financial Times, 17 August 2017) <https://www.ft.com/content/4cd5cc3c-8309-11e7-a4ce-15b2513cb3ff> accessed 20 August 2018
Government Viewpoint on Bitcoin Businesses

Australia’s government in 2017, classified Bitcoin’s to be legal tender and specially mentioned that bitcoin must be treated as property. On 11 April 2018, the Australian Transaction Reports and Analysis Centre (AUSTRAC) declared the application of stronger cryptocurrency exchange regulations. The new cryptocurrency regulations require exchanges to be registered with AUSTRAC, identify and authenticate users, maintain records, and comply with government AML/CFT reporting obligations. Moreover, failure to register will lead to criminal charges and financial penalties.

How Australia’s Banking Sector views Bitcoin?

Australia’s biggest banks have announced that there is no restriction on their customers from purchasing and selling bitcoin. Moreover, National Bank of Australia (NAB) has stated that in order to protect their customers, they will not process certain transactions.

4.2.2 Canada

Bitcoin status: Not legal tender

Bitcoin exchanges: Legal, but all provinces have their own regulations

Canadian laws concerning Bitcoin’s are very upfront and are quite similar to that of US. The status of bitcoin is legitimate but only for trading purpose.

Canadian Taxes on Bitcoin

Canada’s Revenue Agency (CRA) considers Bitcoin as a commodity, which means that any Bitcoin-related transactions are treated as “barter”\(^{176}\) and income derived from trading or transactions activities are considered business income.\(^{177}\) According to CRA if you use your digital money to buy goods, sales tax will apply on the reasonable market cost. In case of mining process, if an individual mines for his personal interest then the profit derived is nontaxable but if he mines for a commercial firm then the profit generated will be included in his income tax.

**Government Viewpoint on Bitcoin Businesses**

A Cryptocurrency regulation is unreliable at the provincial level but federal authorities consider cryptocurrency as securities. Cryptocurrencies are regulated by a bill, which was passed by Canadian Parliament in 2014. The bill includes amendments to AML act. The bill for the purpose of AML classified bitcoin as “money service businesses” (MSB). In 2017, Canadian Securities Administrators issued a notice stating how securities law may apply to initial coin offering (ICO).\(^{178}\) Moreover, Canada is getting advance on the blockchain technology and in 2018, Canada’s first Blockchain Technologies ETF was approved.\(^{179}\)

**How Canada Banking Sector views Bitcoin?**

In January 2018, the head of Canada’s Central Bank described Bitcoin “technically” as securities.\(^{180}\) The three biggest banks in Canada namely, The Bank of Montreal,

\(^{176}\) Barter transactions means exchanging one good for another for example, a pack of milk for a pound of bread.


Scotiabank and Toronto Dominion Bank has prohibited the use of cryptocurrency with their debit and credit cards (following the lead of US banks). The Royal bank of Canada has stated that they are reviewing their policies in order to support their clients in best possible manner therefore, it allows it customers to buy Bitcoins but only on certain conditions.

### 4.2.3 China

**Bitcoin status:** Not legal

**Bitcoin exchanges:** Illegal

Shifting the focus to China, Surprisingly, it does not consider bitcoin to be a legal tender and the country is known for its rigorous cryptocurrency regulations. As far as Bitcoin mining is concerned it is legal and the country’s predictable mining rate is nearly around 85% because of three factors.

I. Firstly the cost of electricity, which is the most significant aspect to derive profit out of the mining process, is very cheap. Figure 11 shows the average electricity cost by countries.

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182 Doug Alexander, 'Canadian banks will let you buy cryptocurrencies with a credit card — for now' *(Financial Post, 05 February 2018)*<https://business.financialpost.com/technology/blockchain/canadas-banks-allow-credit-card-crypto-purchases-for-now> accessed 19 August 2018

183 Kate Rooney, 'Your guide to cryptocurrency regulations around the world and where they are headed' *(CNBC, 27 March 2018)*<https://www.cnbc.com/2018/03/27/a-complete-guide-to-cyprocurrency-regulations-around-the-world.html> accessed 19 August 2018

From the above figure, it can be see that miners in China are at peak as they have the lowest cost of electricity as compared to other nations.\(^\text{185}\)

**II.** Secondly, the major source for producing energy is coal, which is also very cheap in China.

**III.** Lastly, there are factors, which include cold weather and steadfast Internet.\(^\text{187}\)

### Chinese Taxes on Bitcoin

In 2017, several Chinese exchanges have been closed down so currently there is no information on taxes in China.\(^\text{188}\)

### Government Viewpoint on Bitcoin Businesses


Chinese government through the Institute of International Finance stated that an international regulatory structure for cryptocurrencies is on their prospect.189

**How China’s Banking Sector views Bitcoin?**
In 2013, The People’s Bank of China (PBOC) has banned financial institutions from handling Bitcoin transactions. Further, by 2017 they prohibited the ICO deems it to be illegal and also the domestic cryptocurrency exchanges.190

**4.2.4 European Union**

**Bitcoin status:** Legal

**Bitcoin exchanges:** Regulations differ as per member state

The EU parliament is working towards the cryptocurrency regulation, and in the meanwhile, member states have adopted different approach towards Bitcoin as per their legal customs and practices.191

**EU Taxes on Bitcoin**
Any gains or losses generated from cryptocurrencies have become a center of attraction for global watchdogs. When it comes to taxation, all the member states have taken a different path that brings certain difficulties to the individual. Due to lack of decision from the EU the cryptocurrency taxation ranges from 0-50%. In 2015, it was held by the EU’s Court of Justice that exchange of fiat currency for cryptocurrency should be exempted from Value added Tax (VAT).192

**Government Viewpoint on Bitcoin Businesses**
Currently, Bitcoin exchanges are not regulated and according to member states, exchanges will have to register with their respective regulators for instance, Germany’s Financial Supervisory Authority (BaFin), France’s Autorité des Marchés Financiers (AMF), or Italy’s Ministry of Finance. In April 2018, the EU agreed on the Fifth Money Laundering Directive, which will now encompass crypto-fiat currency exchanges under EU’s anti-money laundering legislation. Further, the AML legislation requires users to register with the authorities.

**How EU Banking Sector views Bitcoin?**

EU banking authority had warned people about all the possible risks associated with cryptocurrencies.

In February 2018, Mario Draghi, the President of the European Central Bank stated that authorities like Single Supervisory Mechanism are working to develop a way of identifying possible financial risks that cryptocurrency pose.

Every EU member state has established its own vision of Bitcoin ranging from full acceptance to issuing warning.

- **Bitcoin in Belgium** – Belgium has a neutral viewpoint. The Central bank said that cryptocurrencies are no danger to us as it is unstable. The Federal Public Service Finance has declared Bitcoin to be exempted from VAT.

- **Bitcoin in United Kingdom** – The UK has been very optimistic towards Bitcoin. Although there are no specific laws and regulations but it is considered

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196 Jim Brunsden, 'ECB’s Draghi: bitcoin ‘very risky’ asset' (Financial Times, 05 February 2018)<https://www.ft.com/content/2cbd8946-0aa2-11e8-8eb7-42f857ea9f09> accessed 19 August 2018
legal in terms of bitcoin exchanges with a requirement that it should be registered with the Financial Conduct Authority (FCA). \textsuperscript{199} Gains or losses derived from Bitcoin transactions are subject to capital gains tax.\textsuperscript{200} The Bank of England in 2018 has issued notice to banks executives about the increasing number of frauds in cryptocurrency transactions and also stated that cryptocurrency regulations for the UK are on the prospect.\textsuperscript{201}

- **Bitcoin in France** – France is not so positive and welcoming in terms of Bitcoin as compared to other member states of the EU. France has set strict regulations on cryptocurrency exchanges. It requires that any wallet or exchange happening must provide them with the users details, which is unfortunately not the feature of Bitcoin.

- **Bitcoin in Netherlands** – The Dutch have granted Bitcoin a status of barter transactions. This means that it does need not to follow any agreement or authorizing rules.\textsuperscript{202}

- **Bitcoin in Switzerland** – The canton of Zug is referred as a ‘crypto valley’, since major cryptocurrency trading’s have set up there.\textsuperscript{203} Bitcoins are considered to be a ‘foreign currency’ in Switzerland.\textsuperscript{204} The country is planning to regulate cryptocurrency but with stricter laws.\textsuperscript{205}

\textsuperscript{199} Kate Rooney, 'Your guide to cryptocurrency regulations around the world and where they are headed' \textit{(CNBC, 27 March 2018)}<https://www.cnbc.com/2018/03/27/a-complete-guide-to-cryptocurrency-regulations-around-the-world.html> accessed 19 August 2018
\textsuperscript{202} Vivek Sancheti, 'List of Countries where Bitcoin is Legal' \textit{(Cryptoground.com, 24 February 2018)}<https://www.cryptoground.com/a/list-of-countries-where-bitcoin-is-legal> accessed 19 August 2018
\textsuperscript{203} Oscar Williams-grut, 'Here's what it's like to visit 'Crypto Valley' — Switzerland's picturesque blockchain version of Silicon Valley' \textit{(Business Insider, 02 July 2018)}<http://uk.businessinsider.com/what-its-like-in-zug-switzerland-crypto-valley-2018-6> accessed 19 August 2018
\textsuperscript{204} Giulio Prisco, 'Swiss Tax Authorities Confirm that Bitcoin is VAT-free in Switzerland' \textit{(Bitcoin Magazine, 06 December 2015)}<https://bitcoinmagazine.com/articles/swiss-tax-authorities-confirm-bitcoin-vat-free-switzerland-1434140401/> accessed 19 August 2018
\textsuperscript{205} Vivek Sancheti, 'List of Countries where Bitcoin is Legal' \textit{(Cryptoground.com, 24 February 2018)}<https://www.cryptoground.com/a/list-of-countries-where-bitcoin-is-legal> accessed 19 August 2018
• **Bitcoin in Cyprus** – Cyprus also has a neutral viewpoint towards Bitcoin. There are no specific laws or regulations related to virtual currency.206

• **Bitcoin in Germany** – Germany the continent’s biggest economy treats bitcoin as a ‘private currency’ for the purpose of taxation.207 In 2018, the Germany’s Finance Minister classified it as a “unit of account” which means that users with 4-year-old cryptocurrency will be liable to pay taxes.208

### 4.2.5 India

**Bitcoin status:** Not legal tender

**Bitcoin exchanges:** Neutral (government taking steps in order to eradicate the illegal use of cryptocurrencies)

India’s view on Bitcoin is quite on a neutral side. Neither Bitcoin’s is given a legal status nor it has been regulated.

**Indian Taxes on Bitcoin**

There is a lack of clarity over the tax status of cryptocurrencies as the idea of Bitcoin’s is quite different to the Indian marketplace.209 The chairman of the Central Board of Direct Taxation clearly stated that anyone making profit from Bitcoin activities is liable to pay tax.210

**Government Viewpoint on Bitcoin Businesses**

In 2017, the Secretary of Economic Affairs department formed a committee to discuss the potential AML/CFT and consumer safety issues related to Bitcoin’s. According to 2018 reports, which indicated that government committee is planning to draft a new
regulatory legislation, for the betterment of the People of India, which shall be introduced by the end of 2019.211

**How Indian’s Banking Sector views Bitcoin?**

Reserve Bank of India (RBI) has been giving warning to all the users who trade in Bitcoin about the legal, financial, and safety related risks that are involved.212 In April 2018, RBI has given orders to banks and all the financial institutions to ban all the accounts that trade in Bitcoin’s or other virtual currencies.213

4.2.6 Japan

**Bitcoin status:** Legal tender

**Bitcoin Exchanges:** Legal but important to list with the Financial Services Agency

In terms of Bitcoin, Japan is one of the most progressive nations. Mt. Gox, the world’s most famous Bitcoin exchange was centered in Tokyo.214 Moreover, the introduction of Bitcoin by an anonymous Satoshi Nakamoto had a Japanese pseudonym.215 At the moment, Japan is one of the countries that are leading at the forefront for giving Bitcoin its legal classification. For instance, Japan is considered to be the first country globally to (possibly) accept Bitcoin as a legal tender. Also, for their safety purpose it


was the first country to get a self-regulated body\textsuperscript{216} called the “Japan Virtual Currency Exchange Association” (JVCEA) for its cryptocurrency exchanges.\textsuperscript{217} According to the Q1 2018, Japan is reported to be the major hub in cryptocurrency trading.\textsuperscript{218}

**Japanese Taxes on Bitcoin**

In December 2017, Japan’s National Tax Agency released guidance on the tax action of crypto profits. Basically, if anyone earning above $184k yearly or making profit in excess of $1,84 will be liable to pay taxes.\textsuperscript{219} Such earnings are classified as miscellaneous income.\textsuperscript{220}

Japan has a 6-tiered system of taxation. The taxes range anywhere from 5 – 45% based on annual earnings.\textsuperscript{221}

There is also a residential tax on all income of 10%, for a highest rate of 55%.\textsuperscript{222}

When, on 01 April 2017, bitcoin was declared as a legal payment method Consumption tax was removed.\textsuperscript{223}

**Government Viewpoint on Bitcoin Businesses**

On 4 March 2016, Japan’s Cabinet officially accepted Bitcoin as a ‘real currency’.\textsuperscript{224}


\textsuperscript{220} See (Japanese Residence Tax) http://www.nic-nagoya.or.jp/en/e/archives/358 (accessed on 17.08.2018)

\textsuperscript{221} Kazuaki Nagata, 'Cryptoprofits are taxable — have you filed?' (The Japan Times, 18 Feb 2018)<https://www.japantimes.co.jp/news/2018/02/18/business/financial-markets/cryptoprofits-taxable-filed/#.W3YPui-ZP-Y> accessed 17 August 2018


\textsuperscript{223} Altcoin news, 'Japan’s Cabinet Passes Bills to Officially Recognize Digital Currencies As Real Money' (CCN, 04 March 2016)<https://www.ccn.com/japans-cabinet-passes-bills-officially-recognize-digital-currencies-real-money/> accessed 17 August 2018
Japan’s Virtual Currency Act (VCA) came into effect from the 1 April 2017 that aims to regulate the capital requirements and security procedures of exchanges. Further, in May 2016 The Nomura Research Institute completed a survey and issued a report on blockchain technology, and suggested that the country’s other laws need to modify in order to deal with the technology, particularly the “Banking Act and the Financial Instruments and Exchange Act”. Also, The Accounting Standards Board of Japan is working on an agenda for the conduct of cryptocurrency.

How Japan’s Banking Sector views Bitcoin?
Mitsubishi UFJ, the largest bank of Japan, is planning to launch its own cryptocurrency in 2019 that means their own coin, which can be called digital yen.
In early 2017 or by late 2016, Japan’s largest bitcoin exchange, named bitFlyer, received investment from all three biggest banking corporations of Japan; namely, Mitsubishi UFJ, Sumitomo Mitsui and Mizuho Banking corporation.

4.2.7 Singapore

Bitcoin status: Not legal tender

Bitcoin exchanges: Legal and has very comfortable rules on regulation

When it comes to Bitcoin users Singapore is the most popular Southeast Asian nations.
In Singapore, Bitcoin exchanges and trading is legal.

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Singaporean Taxes on Bitcoin

In view of, The Inland Revenue Authority of Singapore (IRAS) Bitcoins are to be classified as goods and therefore Goods and Sales Tax (GST) applies. Companies purchasing or trading Bitcoin to or from clients will be accountable for GST on the profits earned as well on their commission fees.232 Capital gains tax evidently does not apply to long-term investments into Bitcoin. Therefore, currently there is no capital gains tax system in place.233

Government Viewpoint on Bitcoin Businesses

On February 2018, the Deputy Prime Minister of Singapore and Minister of the Monetary Authority of Singapore (MAS) responded to several governmental questions surrounding the prohibition of Bitcoin trading.

The Deputy Prime Minister highlighted that Bitcoin’s are an experiment that are getting popular globally and, which is home to many illicit transactions and present a huge risk to users. He also said that the MAS are closely scrutinizing cryptocurrencies and warns the people about the possible risks.

However, the Deputy PM also mentioned that there is no robust reason to prohibit Bitcoin at this stage, and that Singapore can bear the use of cryptocurrencies.234 Also there are many ATM’s installed where Bitcoin users can exchange fiat currency for Bitcoins.235

How Singapore’s Banking Sector views Bitcoin?


On 26 September 2017, Singaporean banks declared to close numerous cryptocurrency businesses’ bank accounts.236

4.2.8 United States of America

Bitcoin status: Not recognized as legal tender

Bitcoin exchanges: Legal, but regulation differs state-to-state

The United States has adopted an open and positive approach towards Bitcoin.237 The only concern is that laws governing Bitcoin exchanges differ by state, which means each state federal authority is managing regulations in different manner. 238 For example, in the state of Wisconsin, the bitcoin wave has revolved the ‘badger state’239 into a haven for Bitcoin trades and enthusiasts. This happened when the state policymakers passed some bills, which authorized money-transferring businesses to transfer cryptocurrencies under an agreement with the Department of Financial Institutions.240 In New York, the Attorney General set-up an inquiry into the rules and Regulations of trading platforms used by consumers and investors to buy and sell Bitcoins. In order to protect investors and consumers interest, he sent letters to 13 major cryptocurrency platforms demanding them to provide with the information on their internal and external operations.241

While in Arizona, some bills are under review to give bitcoin a legal status for taxation purposes. If the bill is passed there will be taxes for any gains or losses generated from Bitcoin transactions.242 While other states are concerned some have taken positive

239 An unofficial nickname given to the Wisconsin state http://www.netstate.com/states/intro/wi_intro.htm (accessed on 17.08.2018)
measures and some protective. One non-profit organization, the Uniform Law Commission (ULC) founded in 1892, provides states with well-drafted regulation that brings precision and constancy to critical parts of statutory law.\textsuperscript{243} In 2017, Uniform Regulation of Virtual-Currency Business Act was released (means exchanging, transferring, or storing virtual currency) that provides a legislative framework for the regulation of businesses engaging in virtual-currency activities.\textsuperscript{244}

**United States Taxes on Bitcoin**

In 2013, The US Treasury defined Bitcoin as an exchangeable, decentralized virtual currency, and in 2014 IRS published a notice explaining how prevailing tax guidelines apply to Bitcoin transactions. Basically, IRS was of the view that if any purchase or sale of exchangeable virtual currency is made or using the same if anyone buy goods or services will be liable to pay taxes.\textsuperscript{245} Thus, for tax purposes, IRS considers bitcoin as a property and therefore existing tax guidelines related to property are applicable to Bitcoin-related transactions.\textsuperscript{246}

Moreover, for taxation purpose a taxpayer is entitled to add in his/her gross income any bitcoin received for the payment of goods and services and also the income received by individual from the mining process.\textsuperscript{247}

**Government Viewpoint on Bitcoin Businesses**

On March 2013, The US Department of Treasury FinCEN released special guidelines on the (individuals trading, transmitting, generating, or earning) digital currencies\textsuperscript{248} and categorized Bitcoin exchange platforms as Money Transmitting Business who is

\textsuperscript{243} See About the ULC http://www.uniformlaws.org/Narrative.aspx?title=About%20the%20ULC (accessed on 18.08.2018)


\textsuperscript{247} Section 4 of the IRS Notice 2014-21

expected to follow two key rules, AML and Know Your Customer. In March 2018, The Securities and Exchange Commission (SEC) said that if any cryptocurrency platforms trade in digital money and exchanges that are considered to be securities under the federal securities laws, then that platform must disclose it to the SEC. By contrast, The Commodity Futures Trading Commission (CFTC) termed Bitcoin as a ‘commodity’ putting them on a similar level as gold, oil and coffee.

For the protection of investors and consumers The Justice Department is harmonizing with the SEC and CFTC on how to improve regulations. The US Treasury is all set to combat criminal activities by forming AML and Counter Terrorist Financing regulations more harsh.

**How United States Banking Sector views Bitcoin?**

The American banking sector has a very strict approach towards Bitcoin transactions. US leading banks namely, Bank of America, JP Morgan Chase & Co. and Citigroup Inc. said they are prohibiting the buying and selling of Bitcoins on their credit cards (including all personal and business cards). JP Morgan Company stated that they don’t want any financial risks linked with Bitcoin transactions. There were several reasons namely, massive price variation, misuse of cards by thieves, and general instability of the crypto market.

On the other hand, some banks of America like TD Bank are rejecting to process money transfers who are having accounts linked with cryptocurrency and some are refusing

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250 Evelyn Cheng, ‘The SEC just made it clearer that securities laws apply to most cryptocurrencies and exchanges trading them’ ([CNBC](https://www.cnbc.com/2018/03/07/the-sec-made-it-clearer-that-securities-laws-apply-to-cryptocurrencies.html)) accessed 18 August 2018
252 Comply advantage, 'Cryptocurrency Regulations Around The World' ([Comply Advantage](https://complyadvantage.com/blog/cryptocurrency-regulations-around-world/)) accessed 17 August 2018
Bitcoin trading on US exchanges. This is causing major businesses that are linked with cryptocurrency to form a constructive bond with banks.254

4.3 Bitcoin Status

Form the above information it is observed, that the status of bitcoin is actually the main problem, which is faced by many countries. The Bitcoin world is entirely a new thing for the industries; different countries have different opinion when it comes to the status and setting up a regulatory framework for Bitcoin. Today Japan is the only country where Bitcoin is classified as a legal means of payment, which is relatively equal to fiat currency. In the United States, all the five authorities have their own classifications of Bitcoin. First up is the U.S Treasury who classified Bitcoin as ‘convertible currency’. Then comes the IRS who treated it as a ‘property’ for taxation purpose. Likewise, FinCEN regarded it as ‘Money Transmitters’.255 The SEC said it is a ‘security’. And lastly, CFTC classified it as a ‘commodity’. When it comes to the EU, the status varies according to member states. According to Netherlands, it is like a “barter transaction”, for Germany it is regarded as ‘Private currency’, for Switzerland it is like a ‘foreign currency’. Rest all member states of EU have a neutral mindset in relation to the Bitcoin status. Next up is Canada, which treats it as a ‘barter transaction’ and on the other hand, Canadian Parliament classified it as ‘Money Service Businesses’. The Canadian banks treat it as ‘securities’. Then comes China where Bitcoin is completely illegal, and India has a neutral mindset. The IRAS treats it as ‘goods’. Finally Australia, which is following the footsteps of Japan, regards it as a legal tender in terms of ‘property’.256 Therefore, it is difficult for Bitcoin to become a global currency. The main reason is that there are many countries and every country has their own rules and regulations. For Bitcoin to become a global currency there has to be consistency and uniformity between all the regulatory authorities.

256 Id.
Chapter 5     International Position – Future of Bitcoin

It is expected that, the growth of Bitcoin can get two reactions from the regulatory authorities: first, where the government can ban the system and bring an end to it and the second where it uses regulation to take it over. However, the former is not possible as till date the government is unable to hack the system therefore, it is recommended that the government should take necessary legislative and regulatory actions in regards to Bitcoin, as taking over the Bitcoin is more easy than try to ban it.257 In light of the above research, now we shall discuss what actions/steps the global regulators and authorities in regards to bitcoin are taking and planning to take?

• Global Regulators

In July 2017, G-20258 coordinated by the Financial Stability Board259 (FSB) organized a meeting to discuss how to regulate Bitcoin globally? Hence, the foremost step that has been taken by the G-20 is that all the member states will bring their records and all the necessary information in order to start recommendations on how we can regulate Bitcoin globally.

i. One measure that the entire G-20 agreed upon was the FATF260 to combat Money Laundering and Terrorist financing.261 The G-20 in a draft statement said, that the FATF guidelines will be applied to the crypto-markets, and an International standard-setting bodies262 (SSBs) will be setup to continue their supervising of crypto-markets and risks associated with it.263

258 Group of 20 Economies
259 An International organization that controls and advice about the global monetary system< http://www.fsb.org/about/ (accessed on 30.08.2018)
260 Financial Action Task Force is an organization that makes and promote policies and guidelines in order to stop illegal crimes< http://www.fatf-gafi.org/about/ (accessed on 30.08.2018)
261 http://www.fatf-gafi.org/about/whoweare/ <accessed on 28.08.2018
262 SSBs includes several International bodies, See Standard-Setting Bodies in the Compendium< http://www.fsb.org/what-we-do/about-the-compendium-of-standards/ (accessed on 30.08.2018)
ii. France and Germany will be presenting a combined proposal, with the purpose of reducing the risks in regards to the Bitcoin regulation.

iii. A committee has been formed by the US FSOC264 to investigate the crypto-market.

iv. The financial regulator of South Korea is working with China and Japan to bring forward a regulatory regime for bitcoins and other related cryptocurrencies.265

Criminals were thinking that they will never get caught and Bitcoin is the perfect hiding place for them to continue with their illegal businesses. Unfortunately, they are wrong. In today’s time, law enforcement agencies are doing their best to follow the digital money with the help of blockchain and track the suspect’s identity. It’s easy for criminals to hide their identity but there are some other information’s (that they can’t hide) that can be used by investigators.

- **Criminal endeavor dropped by 80%**

Since many years, Bitcoin supporters have been arguing that it’s partial to portray bitcoin as a haven for illegal drugs and money laundering. But, now they have statistics to support their arguments.266 According to the latest updates, from the U.S Drug Enforcement Administration, Lilita Infante267 a special agent said in an interview that since 2013 there has been a tremendous growth of transactions in illicit activities but the significant factor is that its ratio has decreased by 80%. By illicit activities she mean, it has been changed by price speculation. Infante also completed by saying that in order for them to identify people ‘blockchain’ data really helps them trace illegal activities. She mentioned that cryptocurrencies should keep using it.268

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264 The Financial Stability Oversight Council is associated with identifying the risks involved to financial stability of the US< https://www.treasury.gov/initiatives/fsoc/about/Pages/default.aspx> (accessed on 30.08.2018)


267 Member of the Cyber Investigation Task Force

The UK and EU governments are concerned in cracking down on Bitcoin as it is being used for tax avoidance and money laundering. They are thinking to bring some changes in the legislation for example; (1) in order to bring Bitcoin in line it is necessary to modify anti-money laundering and counter terrorism financial legislation, as the Treasury said. By introducing such legislation, traders will be required to reveal their identity, simply putting an end to this anonymity hype (which is regarded as the special feature of this currency) that has made it eye-catching for illegal business. (2) Necessary to have online portals where bitcoins traded must carry out due diligence on consumers and report any apprehensive transactions.269

The Internal Revenue Service (IRS) purchased software, which helps them to track everybody who uses bitcoin. Law enforcements major concern is not only criminals’ dealing with illegal activities but also who uses bitcoin to conceal their income and evade paying their taxes. This software can track each and every movement done from one users wallet to another and ultimately it can also track when the users will exchange it into other currencies. It has been claimed by IRS that in 2015 only 802 people confirmed their losses or profits status in Bitcoin (according to a contract obtained by The Daily Beast).270

Several governments have issued AML and Know Your Customer (KYC) guidelines to identify users carrying out Bitcoin transactions. Also to ensure that KYC rules are applied at the time of transactions.

The Canadian government to launch their very first Blockchain-based ETT271, and also a platform for “securities clearing and settlement”.272

271 Exchange Traded Fund
At present, Bitcoin regulations are unsettled but the there are various approaches being taken by the Global regulators and the authorities of different jurisdictions in regards to the Regulation of Bitcoin.

Conclusion

In today’s time, one of the most contentious innovations is cryptocurrencies. It is a currency, which is not backed by any central authority. The first cryptocurrency made, and most extensively used is Bitcoin. A decentralized peer-to-peer virtual currency not backed by any trusted third party. It is famous and has gained much attention due to its anonymous nature, low transaction fees, and its use in black markets and as a financial tool to profit from its huge variations in the price level. The supporters of Bitcoin are of the view that it can ultimately become the future of money – ‘currency without sovereigns’ and will be acceptable in the entire world. However, some who are against Bitcoin think that it’s a new trend of making money and becoming rich, and at the end, the bubble will surely burst.

In my opinion I don’t think Bitcoin will take over the world anytime soon because of its disadvantages, but I appreciate the fact that it’s providing people with number of options, as compared with what banks have been providing. Bitcoin is considered bad because of several reasons some of which are, its decentralized feature, which makes it easy for criminals to execute their evil endeavors, massive fluctuation in prices, technological issues, illegal use, acceptance factor, no consumer protection, tax avoidance, and no legal and regulatory frameworks but on the other side it is good from an investment point of view. All these problems can be solved by framing appropriate policies and guidelines in regards to the use of Bitcoin. A regulatory structure that makes sense, protect the interest of consumers and investors and limit the use of bitcoins in illegal marketplace should be a logical next step. At present, there is a long road ahead of Bitcoin before it becomes a globally accepted form of currency as every country has it’s own rules and regulations. There is no uniformity on a global level. The technology will need to improve, be more appropriate, safer and the restrictions will

need to fall out. No form of currency has been left from being used in illegal activities; Bitcoin is no different in this aspect. There are majority of people who use Bitcoin legally just like the ones who use other forms of currency legally.274 It can be concluded that Bitcoin has reached mass awareness if not mass acceptance and it might be the future of money. “Just because something doesn’t do what you planned it to do doesn’t mean it’s useless”.275 ‘The innovation of every technology comes with few legal and regulatory issues therefore, it is very important to comprehend the new technology in well-timed and suitable regulatory framework is established so that the world does not miss out from a gigantic opportunity’.276

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