
BITCOIN: THE UTOPIA OR NIGHTMARE OF REGULATION

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*He lends out money gratis and brings down the rate of usance here with us in Venice.*¹

–William Shakespeare

I. INTRODUCTION

The average person on the street knows nothing about Bitcoin.² A recent study from the Coin Center, noted that 65% of the public are

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¹ WILLIAM SHAKESPEARE, *MERCHANT OF VENICE*, act 1, sc. 3.

unfamiliar with Bitcoin and of those who were aware, 84% have never used it.³ Additionally, some respond that they only know about the secretive inventor and the failure of illegal exchanges.⁴ The supposed inventor, Satoshi Nakamoto—the “mysterious, pseudonymous inventor who whipped up Bitcoin and then vanished”—created Bitcoin’s algorithm problem-solution as a reference to the old game-theory chestnut called the Byzantine General’s Problem.⁵ The alternative currency became so popular since its inception that many businesses now utilize it and its technology in their operations.⁶ Brian Armstrong, CEO of Coinbase said “[s]ometimes I feel like running a Bitcoin company is like running a public company . . . everyone is focused on the price, and that causes short-term thinking.”⁷ Many people got into Bitcoin to make money by buying low and selling high.⁸ Others invested in Bitcoin because they saw its potential for rivaling other established currencies.⁹ There is no right or wrong answer, but both schools of thought are being employed for either the benefit of an individual or for society as a whole. Regulation of digital currency will usher in a new wave of investment, but it may be curtailed by the uncertainty that looms over the volatile nature of Bitcoin’s value. Even if Bitcoin falters, however, there is still great promise in the Blockchain technology due to its versatility.

This article will discuss, in Section II the history of cryptocurrency; Section III the cases that support classification of Bitcoin as currency and those that support its classification as a security; Section IV the current usage of both the currency and the technology that is critical to its operation; Section V international regulation of cryptocurrency, Section

² Daniel Roberts, *The Bitcoin Book Boom*, FORTUNE (Mar. 6, 2015), <http://fortune.com/2015/03/06/bitcoin-book-boom/>.

³ *Id.*

⁴ Mike Montgomery, *Bitcoin is Only the Beginning for Blockchain Technology*, FORBES (Sep. 15, 2015), <http://www.forbes.com/sites/mikemontgomery/2015/09/15/bitcoin-is-only-the-beginning-for-blockchain-technology/#1f80fc546f04>.

⁵ Scott Rosenberg, *There’s a Blockchain for That!*, BACKCHANNEL (Jan. 13, 2015), <https://backchannel.com/how-bitcoins-blockchain-could-power-an-alternate-internet-bb501855af67#.ff8fod3am>.

⁶ Cade Metz, *Everyone Says Bitcoin is Back. But it Never Really Left*, WIRED (Nov. 11, 2015), <http://www.wired.com/2015/11/bitcoin-is-back-but-it-never-really-left/>.

⁷ *Id.*

⁸ *How to Profit From Bitcoin*, FLIPPING INCOME (Feb. 2, 2017), <http://flippingincome.com/how-to-profit-from-bitcoin/>.

⁹ Metz, *supra* note 6.

VI what regulation of the cryptocurrency would look like. Lastly, Section VII will have closing remarks.

II. HISTORY OF CRYPTOCURRENCY

Merriam-Webster Online Dictionary defines money as something generally accepted as a medium of exchange, a measure of value, or a means of payment.¹⁰ The dictionary also gives examples that qualify as money such as officially coined or stamped currency, money of account and paper money.¹¹ Traditionally, society has been aware of and used physical money. However, less familiar is the concept of “money of account”; defined by Merriman-Webster as “a denominator of value or basis of exchange which is used in keeping accounts and for which there may or may not be an equivalent coin or denomination of paper money.”¹² Digital currencies fall within this definition of money. Additionally, Oxford Online Dictionaries defines Cryptocurrency as: “a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank.”¹³

A. History of Bitcoin

Bitcoin is a decentralized peer-to-peer network.¹⁴ This means the payments made by Bitcoin users to other Bitcoin users do not require any intermediary third-party like a bank or a credit card company.¹⁵ One of the most important aspects of Bitcoin involves the usage of the Blockchain. The Blockchain is a decentralized public ledger that is visible to all persons with access to a computer and the internet.¹⁶ The Blockchain is the entire record of all transactions since the creation of

¹⁰ *Money*, MERRIAM-WEBSTER ONLINE, <http://www.merriam-webster.com/dictionary/money> (last visited May 1, 2016).

¹¹ *Id.*

¹² *Money of Account*, MERRIAM-WEBSTER ONLINE, <http://www.merriam-webster.com/dictionary/money+of+account> (last visited May 1, 2016).

¹³ *Cryptocurrency*, OXFORD DICTIONARIES, http://www.oxforddictionaries.com/us/definition/american_english/cryptocurrency (last visited May 1, 2016).

¹⁴ Jeffrey Alberts & Bertrand Fry, *Is Bitcoin a Security?*, 21 B. U. J. SCI. & TECH., 1, 2 (2015) (quoting *Frequently Asked Questions*, BITCOIN.COM, <https://bitcoin.org/en/faq#what-is-bitcoin>).

¹⁵ *Id.* at 3.

¹⁶ *Id.*

Bitcoin and it is available to all persons who download the program.¹⁷ Mathematical problems are attached to small virtual boxes, and these boxes can further be sub-divided into other smaller boxes.¹⁸ At the smallest version of the box, there is a recorded transaction between a buyer and a seller.¹⁹ When a computer solves the mathematical problem assigned to the box, it confirms that a transaction occurred between a buyer and a seller.²⁰ Once a user finds the solution to the mathematical problem, the user is rewarded the prize – Bitcoin.²¹ This is known as cryptography (mining) and this network of boxes is referred to as the Blockchain.²²

Bitcoin can be acquired in two ways: either via purchase at an exchange or through mining.²³ The essential items needed to start investing in Bitcoin are a “virtual wallet,” mining software, and a computer to store these items.²⁴ Anthony Volastro of CNBC describes the mining process as finding the key to a lock in the Blockchain.²⁵ Again, mining is the process by which computers, and the processing units inside them, perform complex mathematical calculations that solve a problem on the Blockchains’ area.²⁶ Mining serves two purposes, it confirms the previous transactions in that ‘block’ and it issues the new Bitcoins at the completion of a block.²⁷ To mine, a user would download the required software such as GUIMiner.²⁸ Generally, the faster a user’s computer processor is determines how quickly the computer solves the problems.²⁹ Users can also purchase a dedicated mining unit that puts

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.* at 4.

²¹ *Id.*

²² *Id.* at 3–4.

²³ Anthony Volastro, *CNBC Explains: How to Mine Bitcoins on your Own*, CNBC (Jan. 23, 2014), <http://www.cnbc.com/2014/01/23/cnbc-explains-how-to-mine-bitcoins-on-your-own.html>.

²⁴ *Bitcoin Mining Guide-Getting Started with Bitcoin Mining*, BITCOIN MINING, <https://www.bitcoinmining.com/getting-started/> (last visited Jan. 28, 2017).

²⁵ Volastro, *supra* note 23.

²⁶ *Id.*

²⁷ *What is Bitcoin Mining?*, BITCOIN MINING, <https://www.bitcoinmining.com/> (last visited May 6, 2016).

²⁸ Volastro, *supra* note 23.

²⁹ *Id.*

less strain on their personal computers.³⁰ Alternatively for users with less advanced computers, they may join “pools,” where users collectively use their hash rates (processing speeds) to mine for the coins.³¹ The user must be aware however, of the Bitcoin to dollar ratio, as well as the cost of energy usage, that will factor into the potential profits a miner makes.³² Jeff Garzik of the Bitcoin payment processor Bitpay, says that “Bitcoin’s price tends to follow media cycles, not hardware or mining. The difficulty in mining is not the highest correlation in Bitcoin value.”³³ Outside forces such as an economic crisis and international regulation have a profound effect on the attractiveness of Bitcoin as an investment. For example, after the British exit from the European Union on June 23, 2016, the price of Bitcoin soared as the British Pound lost value.³⁴ Additionally, with the economic crisis in Venezuela, consumers and merchants have turned to Bitcoin for facilitating transactions as faith in the Bolivar dwindled.³⁵

The problem Bitcoin faced was that currency implemented a “fork,” where certain developers wanted to maintain the current system while a significant portion of the community wanted to develop a version called Bitcoin Classic, which deviated from the original Bitcoin Core.³⁶ A fork occurs when a development group uses the source programming and creates the parameters that fit their purpose.³⁷ Multiple other developers have created forks of Bitcoin, complete with different focuses and efficiencies.³⁸ That is the problem with a decentralized currency: there is no regulatory body that makes the major decisions affecting the currency. On the other hand, this lack of regulation is to be championed. The ability of the community to steer the currency in the direction it

³⁰ *See id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *See* Pete Rizzo, *Bitcoin Price Spikes to \$650 as Outlook Shifts for ‘Brexit’*, COINDESK (June 24, 2016), <http://www.coindesk.com/bitcoin-spikes-650-vote-shifts-brexit/>.

³⁵ Kamilia Lahrichi, *Growing Number of Venezuelans Trade Bolivars for Bitcoins to Buy Necessities*, GUARDIAN (Dec. 16, 2016), <https://www.theguardian.com/technology/2016/dec/16/venezuela-bitcoin-economy-digital-currency-bolivars>.

³⁶ Martin Hagelstrom, *Why Bitcoin’s Block Size is a Proxy War*, COINDESK (Mar. 12, 2016), <http://www.coindesk.com/bitcoin-block-size-proxy-war/>.

³⁷ *Id.*

³⁸ *See* Peter Smith & Kristov Atlas, *A Brief History of Bitcoin Forks*, BLOCKCHAIN (Feb. 26, 2016), <https://blog.blockchain.com/2016/02/26/a-brief-history-of-bitcoin-forks/>.

collectively sees fit is a freedom that ensures democratic opportunity for its users.

The philosophical difference between the Bitcoin Classic and the Bitcoin Core camps amounted to “decentralization vs. efficiency.”³⁹ The chief concern was whether to raise the block size (which is the memory size of a block on the Blockchain) from one megabyte to a size ranging from two to four megabytes.⁴⁰ The effect of increasing the block size would mean that more transactions could occur (thus more calculations and increasing the time it takes for a miner to theoretically be awarded Bitcoins).⁴¹ The disagreement also stemmed from where each group saw the future of the currency. The Classic group focused on using Bitcoin as a payment system that would challenge the current ones in place.⁴² This would cause lower fees in the financial market and transactions, but would handle more transactions.⁴³ This is important because the group foresees the future interest of the cryptocurrencies and by making these changes, the anticipated increase in transactions can be adequately handled. Whereas the Core group wanted to use a Lightning Network/system to facilitate these payments across the globe.⁴⁴ The Lightning Network is a pseudonym of the Blockchain network that would have modifications that support a faster transaction speed and volume.⁴⁵ The effect of maintaining the block size would allow for less transactions but a higher volume in the aggregate, which would lead to higher fees.⁴⁶

³⁹ Kyle Torpey, *Four Key Disagreements Between Bitcoin Classic and Bitcoin Core*, BITCOIN MAGAZINE (Mar. 4, 2016, 10:52 AM), [https://bitcoinmagazine.com/articles/four-key-disagreements-between-bitcoin-classic-and-bitcoin-core-four-key-disagreements-between-bitcoin-classic-and-bitcoin-core-1457106744](https://bitcoinmagazine.com/articles/four-key-disagreements-between-bitcoin-classic-and-bitcoin-core-four-key-disagreements-between-bitcoin-classic-and-bitcoin-core-four-key-disagreements-between-bitcoin-classic-and-bitcoin-core-1457106744).

⁴⁰ *Id.* See also Hagelstrom, *supra* note 36.

⁴¹ Hagelstrom, *supra* note 36.

⁴² See *id.*

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ LIGHTNING NETWORK, <http://lightning.network/how-it-works> (last visited Apr. 24, 2017).

⁴⁶ Hagelstrom, *supra* note 36.

B. Block halving

A block halving occurs after 210,000 blocks have been mined (roughly every four years; the last halving occurred on July 9th 2016) and the most current reward for mining a block has been reduced from 25 Bitcoins to 12.5.⁴⁷ The halving is a process that ensures all the blocks of Bitcoin on the Blockchain will be mined by 2140.⁴⁸ There are a total of 21 million Bitcoins to be mined and once the last Bitcoin is rewarded, there will be no more produced.⁴⁹ But there are risks and benefits to the halving.

Gone are the days when Bitcoin was considered a Ponzi Scheme.⁵⁰ The currency is expected to have an increase in price on the day of (or shortly after) the halving.⁵¹ From a purely economic stance, with the reward being halved, the supply of Bitcoin is being reduced. With a decrease in supply, demand rises, and as demand rises, the price increases to form an equilibrium. In addition, there has been evidence of multiple countries' interest in the currency and how their respective economies will be affecting the price of Bitcoin.⁵² More importantly, the price is likely to increase because of the exposure Bitcoin is finally receiving. As the number of retailers, small businesses, and even major banks invest in Bitcoin and the Blockchain, the volume of transactions is only going to rise.⁵³

⁴⁷ Allen Scott, *5 Reasons Why the Price of Bitcoin Will Rise in 2016*, BITCOIN.COM (Jan. 13, 2016), <https://news.bitcoin.com/5-reasons-bitcoin-price-will-rise-2016/>. See *Bitcoin Block Halving Reward Countdown*, BITCOIN BLOCK HALF, <http://www.bitcoinblockhalf.com/> (last visited May 11, 2016); Jacob Donnelly, *What is the 'Halving'? A Primer to Bitcoin's Big Mining Change*, COINDESK (June 12, 2016), <http://www.coindesk.com/making-sense-bitcoins-halving/>; see also Stan Higgins, *Live Blog: Bitcoin Halving 2016*, COINDESK (July 9, 2016), <http://www.coindesk.com/live-blog-bitcoin-halving/> (detailing that the 420,000th block on the Blockchain was mined by F2Pool at 12:48 PM on July 9th).

⁴⁸ Volastro, *supra* note 23.

⁴⁹ Evan Faggart, *What Happens to Bitcoin Miners When all Bitcoins are Mined?*, BITCOIN.COM (Aug. 15, 2015), <https://news.bitcoin.com/what-happens-bitcoin-miners-all-coins-mined/>.

⁵⁰ See Tuur Demeester, *2016 Could Be Bitcoin's Best Year Yet*, COINDESK (Dec. 28, 2015), <http://www.coindesk.com/2016-bitcoin-best-year/>.

⁵¹ See Scott, *supra* note 47.

⁵² See *id.*

⁵³ See *id.*

III. CASES THAT SUPPORT THE TREATMENT OF BITCOIN AS CURRENCY

In *United States v. Faiella*, the defendants were charged with operating an unlicensed money transmitting business in violation of 18 U.S.C. § 1960 and conspiracy to commit money laundering in violation of 18 U.S.C. § 1956(h).⁵⁴ This underground market used Bitcoin as the medium in transactions occurring on the Silk Road website.⁵⁵ Faiella challenged the first violation by asserting that Bitcoin does not meet the definition of “money” in § 1960, operation of a Bitcoin exchange does not constitute transmitting money under § 1960 and Faiella was not a money transmitter under § 1960.⁵⁶ The court rejected Faiella’s arguments for three reasons. It first considered the plain meanings of “money” and “funds”,⁵⁷ and determined that § 1960 applies not to “money,” but to “funds”⁵⁸ and because § 1960 defines “money transmitting” as “transferring funds on behalf of the public by any and all means”—the Court then determined that Silk Road transmitted money for the purposes of the statute.⁵⁹ The Court asserted that Bitcoin qualifies “as ‘money’ or ‘funds’ under the plain meaning definitions because Bitcoin can be easily purchased in exchange for ordinary currency, acts as a denominator of value, and is used to conduct financial transactions.”⁶⁰

Next, the Court also considered the legislative history of § 1960 and noted that its purpose was to prevent the movement of funds in connection with drug dealing.⁶¹ The Court reasoned that the Silk Road activities were properly classified as “transmitting” money as referenced in § 1960.⁶² The Government’s Criminal Complaint asserted that Faiella

⁵⁴ *United States v. Faiella*, 39 F. Supp. 3d 544, 545 (S.D.N.Y. 2014).

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.* (noting that Merriam-Webster Online defines “funds” as “available money” or “an amount of something that is available for use: a supply of something”) (citation omitted).

⁵⁸ *Id.*

⁵⁹ *Id.* at 546.

⁶⁰ *Id.* at 545. (citing *SEC v. Shavers*, No. 4:13-CV-416, 2013 WL 4028182, at *2 (E.D. Tex. Aug. 6, 2013) (“It is clear that Bitcoin can be used as money. It can be used to purchase goods or services. . . . [I]t can also be exchanged for conventional currencies. . . .”).

⁶¹ *Id.* at 545–46.

⁶² *Id.* at 546.

received cash deposits from his customers in exchange for Bitcoin.⁶³ The users of Silk Road did not have full control over the Bitcoins or their transfers related to their accounts. And because the Silk Road administrators could block the transfer of exchanged money, the Court determined that Faiella transferred the funds to others for profit.⁶⁴ Lastly, the court looked to the Financial Crimes Enforcement Network (FinCen) Guidances that classified virtual currency exchangers as “money transmitters” and determined that the defendant was not entitled to the exception in FinCen Guidances because the only “services provided are money transmission services.”⁶⁵

In *SEC v. Shavers*, the court described Bitcoin as “a decentralized digital currency that may be used to purchase goods and services online, or traded on online exchanges for conventional currencies, including the U.S. dollar.”⁶⁶ Shavers claimed to have invested his clients’ money alongside his own. The majority of his investing was online with minimal action conducted locally and Bitcoin Savings and Trust (BTCST), of which Shavers was a founding partner, made an unsecured loan to one of its largest borrowers who then promptly stole the funds.⁶⁷ The Court looked to Rule 10b-5 for guidance.⁶⁸ The Court postulated

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.* at 546–47 (quoting U.S. Dep’t of Treasury, Fin. Crimes Enf’t Network, FIN-2013-G001, Application of FinCEN’s Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (2013). See 31 C.F.R. § 1010.100(ff)(5) (2012) (“(A) Any person, whether or not licensed or required to be licensed, who engages as a business in accepting currency, or funds denominated in currency, and transmits the currency or funds, or the value of the currency or funds, by any means through a financial agency or institution, a Federal Reserve Bank or other facility of one or more Federal Reserve Banks, the Board of Governors of the Federal Reserve System, or both, or an electronic funds transfer network; or (B) Any other person engaged as a business in the transfer of funds.”).

⁶⁶ *SEC v. Shavers*, 2014 WL 4652121, at *1 (Fed. Dist. Sept. 18, 2014).

⁶⁷ *Id.* at *5.

⁶⁸ *Id.* at *8. See also 17 C.F.R. § 240.10b–5 (1951) (“It shall be unlawful for any person, directly or indirectly, by the use of any means or instrumentality of interstate commerce, or of the mails or of any facility of any national securities exchange,

(a) To employ any device, scheme, or artifice to defraud,

(b) To make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading, or

that Shavers knowingly and openly operated BTCST as a Ponzi scheme and a sham because he altered the return on investments and their safety.⁶⁹ Further, the ultimate fatal lending that led to the downfall of BTCST lacked the requirement documentation for recording the transaction.⁷⁰ The Court humorously mentioned that even if these records existed, it would have amounted to Shavers' admission of guilt.⁷¹ Lastly, because there were no physical records or registration statements of the BTCST secured transactions, Shavers was in violation of the Securities Act.⁷²

The common misconception is that Bitcoin is only useful either for its anonymity or its ability to be used in purchasing illegal items online. In *United States v. Ulbricht*, the court determined whether the defendant "conspired with narcotics traffickers and hackers to buy and sell illegal narcotics and malicious computer software and to launder the proceeds via Bitcoin."⁷³ To refute the charge of money laundering, the defendant asserted that he could not have engaged in money laundering because by using Bitcoin there is no "financial transaction."⁷⁴ The court discredited this argument because Bitcoin carries value, and the purpose and function of Bitcoin is to act as a medium of exchange and as legal tender.⁷⁵ The court also analyzed the classification of Bitcoin as money and its role in money laundering:

Congress intended to prevent criminals from finding ways to wash the proceeds of criminal activity by transferring proceeds to other similar or different items that store significant value. With respect to this case, the Government has alleged that Bitcoins have a value which may be expressed in dollars. (Ind. ¶ 3 (alleging that Ulbricht "reaped commissions worth tens of

(c) To engage in any act, practice, or course of business which operates or would operate as a fraud or deceit upon any person, in connection with the purchase or sale of any security.").

⁶⁹ *Shavers*, 2014 WL 4652121, at *8.

⁷⁰ *Id.* at *9.

⁷¹ *Id.*

⁷² *See id.* ("A prima facie case for violation of Sections 5(a) and 5(c) of the Securities Act, 15 U.S.C. § 77, may be established by showing a defendant: (1) offered or sold a security; (2) there was no registration statement on file with the Commission or in effect as to the security; and (3) the defendant used interstate transportation, or communication, or the mails in connection with the offer or sale. *SEC v. Spence & Green Chem. Co.*, 612 F.2d 896, 901-02 (5th Cir. 1980).").

⁷³ *United States v. Ulbricht*, 31 F. Supp. 3d 540, 547 (S.D.N.Y. 2014).

⁷⁴ *Id.* at 548.

⁷⁵ *Id.*

millions of dollars, generated from the illicit sales conducted through the site").) There is no doubt that if a narcotics transaction was paid for in cash, which was later exchanged for gold, and then converted back to cash, that would constitute a money laundering transaction. See, e.g., *United States v. Day*, 700 F.3d 713, 718 (4th Cir. 2012). One can money launder using Bitcoin. The defendant's motion as to Count Four is therefore denied.⁷⁶

These cases all show that the courtroom is finally catching up to technology. Classifying the currency as a form of value that is acceptable for trading and holding security is one of the chief goals that many in the community have wanted to achieve. While Bitcoin is truly made up of two components, Blockchain and the actual Bitcoin itself, the effects of one cannot be discussed without the other.

IV. USE OF CRYPTOCURRENCY

A. Blockchain usage

The Blockchain is a secure system that is distributed against many different computers, and is essentially tamper-proof, allowing for secure communication between individuals.⁷⁷ It is chiefly used to verify the transactions between Bitcoin users in terms of trading.⁷⁸ To think of Bitcoin without Blockchain is to think of email without the browser.⁷⁹

One of the benefits of Blockchain technology includes reliability; the fact that many users come together and share in that section of the Blockchain allows for the interchanging of each node (a physical location that broadcasts the information network).⁸⁰ Furthermore, the Blockchain record cannot be changed; once an item has been added, the record remains on the chain permanently.⁸¹ In fact, the most important potential usage is the ability to reference and view these records easily.⁸² It may be broadly applied to current file and record searching systems presently implemented.

⁷⁶ *Id.* at 570.

⁷⁷ Paul Levy, *Finally, Interesting Uses for Blockchain that goes Beyond Bitcoin*, PHYS.ORG (Dec. 7, 2015), <http://phys.org/news/2015-12-blockchain-bitcoin.html>.

⁷⁸ *Id.*

⁷⁹ See Rosenberg, *supra* note 5.

⁸⁰ David Schatsky & Craig Muraskin, *Beyond Bitcoin*, DUPRESS (Dec. 7, 2015), <http://dupress.com/articles/trends-blockchain-bitcoin-security-transparency/>.

⁸¹ *Id.*

⁸² *Id.*

IBM and Samsung have already adopted the technology to build Ethereum, a Blockchain based framework that will enable transaction processing and coordination of Internet-based devices.⁸³ The hope is that this project will foster communication between various devices and the cryptographic security, on which Blockchain relies, will help mitigate the security issues on the devices and their interconnectivity.⁸⁴

The roadblocks to Blockchain are more than technical. Retail banks and other established institutions make money from the friction in the system, on fees and on the float they get by holding money for the several days it takes for transactions to transfer.⁸⁵ Additionally, the technology is in its infancy, being less than a decade old, and it changes quite frequently.⁸⁶

With the multitude of businesses investing in Blockchain and using Bitcoin as a form of exchange, what does it mean for the future of transactions? Firstly, Blockchain will not replace the regular form of transaction currently available.⁸⁷ However, banks such as Barclays, JPMorgan, and Deutsche Bank believe that the technology has a place in the transactional world.⁸⁸ The technology can be used for record keeping purposes in insurance companies; recording the issuance of bonds, interest calculation, coupon payment and matriculation processes; carrying securities in digital form; maintaining voting systems; and recording artwork collections.⁸⁹ However, Deutsche Bank believes that the technology can be extremely damaging to banks:

On one level, this is a wake-up call to the banking industry. Buying and selling across the globe with a cryptocurrency requires no identification, no bank account and no credit card. It pays no foreign exchange fees or banking charges, meaning you could be a bitcoin billionaire without ever having spoken to a bank.⁹⁰

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ Paresh Dave, *Does Bitcoin's Underlying Technology Have Other Uses? Investors Think So*, L.A. TIMES (Aug. 9, 2015), <http://www.latimes.com/business/la-fi-cutting-edge-block-chain-20150809-story.html>.

⁸⁶ Schatsky & Muraskin, *supra* note 80.

⁸⁷ Dave, *supra* note 85.

⁸⁸ Arjun Kharpal, *Why Bitcoin's Tech Could Change Everything for Banks*, CNBC (Dec. 31, 2015, 11:12 AM), <http://www.cnbc.com/2015/12/31/blockchain-what-the-big-banks-say-about-the-tech.html>.

⁸⁹ *Id.*

⁹⁰ *See id.*

Additionally, and perhaps most importantly is the possibility of recording contracts and titles onto the Blockchain's record. Alex Marquez, managing director of corporate development at the United States Automobile Association (USAA), noted that "creating efficiencies" are what intrigued USAA into researching the technology.⁹¹ If for example, there is a contract, the immutable nature of the contract is bolstered by recording it on the Blockchain, enhancing trust in the parties involved.⁹² Further, since the Blockchain cannot be altered, the paper trail and false claims regarding material issues would be limited.⁹³ Regarding titles, extensive recordkeeping, and property records, when the title is being transferred following the purchase of a house and the title is recorded on the Blockchain, the title can be transferred without the need for title insurance, thereby reducing the costs and risks for homebuyers.⁹⁴

The downside to this "mad rush" to adopt the technology is that implementing the ideas and technology would be both costly and harmful.⁹⁵ Many of these companies have to first research the technology to find whether it can be a good fit in their industry and market. Second, they have to consider how it would affect their product and their interaction with customers and potential investors. Third, they also have to consider whether implementing the technology would mean the elimination of jobs conducted by humans. Although it may be a good investment on the company's end to reduce salary expenses, the potential backlash in the public may not be worth adopting the technology.

B. Bitcoin usage

Bitcoin provides a unique benefit for its users: the technology can be used to send money to all areas of the globe for a fraction of the cost

⁹¹ Penny Crosman, *Why Banks are Testing Bitcoin's Blockchain (without Bitcoin)*, AM. BANKER (June 1, 2015, 3:07 PM), <http://www.americanbanker.com/news/bank-technology/why-banks-are-testing-bitcoins-blockchain-without-bitcoin-1074622-1.html?zkPrintable=1&nopagination=1>.

⁹² *See id.*

⁹³ *See id.*

⁹⁴ *See id.*

⁹⁵ *See generally* Mike Gault, *Let's Be Honest About the Problems with Blockchain and Finance*, TECH CRUNCH (Feb. 3, 2016), <https://techcrunch.com/2016/02/03/lets-be-honest-about-the-problems-with-blockchain-and-finance/> (discussing potential problems arising from the use of blockchain).

compared to other money transfer systems such as Western Union and MoneyGram.⁹⁶ To be truly competitive, these companies would have to alter their pay structure and make attractive alterations to the taxing of customers.⁹⁷ For example, a recent article in Fortune magazine analyzed the cost to send money or Bitcoins to various countries via a Western Union transfer and via the Bitcoin money transfer startup ZipZap.⁹⁸ Using the ZipZap service, users would purchase the Bitcoin via linking their individual wallets to ZipZap and generate a barcode on the user's smartphone.⁹⁹ Then the user takes the barcode to a merchant at an affiliate location, who scans and collects the payment from the user.¹⁰⁰ Upon payment, within minutes the user receives the Bitcoins in their wallet from an exchange partnered with ZipZap.¹⁰¹ The user is then free to transfer this Bitcoin from their wallet to their family members or friends across the globe for a nominal mining fee that is a fraction of the cost that MoneyGram or Western Union charges.¹⁰² In certain African regions, the cost of transferring the money, via MoneyGram or Western Union, is 6% of the transfer value.¹⁰³ Despite lower transactions costs, a concern about Bitcoin's use as a transfer mechanism for money is that the price of Bitcoin is volatile.¹⁰⁴ This is alleviated somewhat by the quick transaction timing and local availability to transform the Bitcoin into funds. Other than a volatile price there are also other barriers that prevent Bitcoin from being a "viable" transfer mechanism, such as the lack of regulation and peer-to-peer structure as compared to Western Union's ownership of the transfer wires and a complete compliance

⁹⁶ Primavera De Filippi, *We Must Regulate Bitcoin. Problem Is, We Don't Understand It*, WIRED (Mar. 1, 2016, 1:09 PM), <https://www.wired.com/2016/03/must-understand-bitcoin-regulate/> (last visited May 5, 2016).

⁹⁷ David Z. Morris, *Does Western Union Need to Watch Out for Bitcoin*, FORTUNE (Feb. 10, 2014, 4:40 PM), <http://fortune.com/2014/02/10/does-western-union-need-to-watch-out-for-bitcoin/>.

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.* Cf. Erik Voorhees, *The True Cost of Bitcoin Transactions*, MONEY AND ST. (Feb. 11, 2017), <http://moneyandstate.com/the-true-cost-of-bitcoin-transactions/> (discussing the cost of Bitcoin transactions and how miner's fees, time and risk of uncertainty play into the transactions costs).

¹⁰⁴ *Id.*

system.¹⁰⁵ These potential concerns are largely overstated, however, because the peer-to-peer approach used by Bitcoin ensures the structure and longevity of the entire record system. Should the banking system face a major crisis or banks decide to raise fees and customers decide to find an alternative, the peer to peer network of Bitcoin is an attractive route.

OpenBazaar is a new peer-to-peer platform that aims to challenge Ebay's monopoly hold on the Internet auction realm.¹⁰⁶ Many are concerned that OpenBazaar will become the new Silk Road, the infamous illegal market that used Bitcoin to purchase narcotics, weapons and child abuse content.¹⁰⁷ However, that is not the case with OpenBazaar. Although there is no central authority that regulates Bitcoin cryptocurrency, the transactions can still be traced accurately from the wallets that generated the transactions.¹⁰⁸ In fact, the OpenBazaar source code is interesting in that it incorporates the peer-to-peer network utilizing encryption to protect the users of the program.¹⁰⁹ Additionally, to alleviate the fear of anonymity and to cooperate with authorities when requested, the IP addresses of suspect users may be ascertained, so long as users do not mask their IP address using a virtual private network (VPN).¹¹⁰ Further and most importantly, is the purpose behind the program/idea. By using Bitcoin as the "middleman," banks and credit card companies are effectively cut out of the transaction, thereby leaving only the buyer and the seller.¹¹¹ The creators of this platform neither earn nor siphon money from any transaction.¹¹² Brian Hoffman, one of the chief purveyors of OpenBazaar, plans to increase the security of the program – aiding the anonymity of the buyer and the seller.¹¹³

¹⁰⁵ *See id.*

¹⁰⁶ Thomas Fox-Brewster, *OpenBazaar is Not the Next Silk Road—It's an Anarchist eBay on Acid*, FORBES (Mar. 16, 2016, 9:35 AM), <http://www.forbes.com/sites/thomasbrewster/2016/03/16/openbazaar-silk-road-dark-web-drugs-ebay/#5303b4cc6604>.

¹⁰⁷ *Id.*

¹⁰⁸ *See id.*

¹⁰⁹ *See id.*

¹¹⁰ *See id.*

¹¹¹ *Id.*

¹¹² *See id.*

¹¹³ *Id.*

Should the program become a playground for criminals, OpenBazaar creators should not be held liable.¹¹⁴ They have only created the platform and not the illegal activity. The heart of the code, Hoffman says, is “agnostic.”¹¹⁵ It does not have a moral bias and this “distinction allows for sale and trade of goods legally in one jurisdiction that may actually be illegal in others but does not intentionally enable users to conduct illegal trade and encourage that.”¹¹⁶ The program is a tool, not a business.¹¹⁷

But the comparisons between this program and the Silk Road will continue to gain momentum as a few hours after the test launch of OpenBazaar at least two vendors made postings related to drug sales.¹¹⁸ It will be interesting to see how the “laissez-faire” behavior of Hoffman and his team will clash with the government intervention to curb illegal activity in the future. That involves constitutional and criminal law issues not within the scope of this article.

C. Exchanges and their usage

Contrary to *Faiella*, there are legitimate and legal cryptocurrency exchanges. Coinbase was opened in January 2014 and allows for legal trading of digital currencies.¹¹⁹ It was heralded as the first regulated Bitcoin exchange.¹²⁰ In response to the fluctuation of cryptocurrency prices and the rising interest of the currency, the IRS released guidelines related to the currency and taxes.¹²¹ Previously, only “techie” were the ones who made self-imposed regulations or used the currency.¹²² Currently, many of the biggest supporters of Bitcoin regulation got into the currency and its usage because of its decentralized nature.¹²³

¹¹⁴ *See id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Stan Higgins, *Hours After Launch, OpenBazaar Sees First Drug Postings*, COINDESK (Apr. 6, 2016, 3:45 PM), <http://www.coindesk.com/drugs-contraband-openbazaar/>.

¹¹⁹ Daniel Roberts, *Yes, Regulation is Coming to Bitcoin*, FORTUNE (Mar. 24, 2015), <http://fortune.com/2015/03/24/bitcoin-regulated-exchanges-winklevoss-coinbase/>.

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

Businesses such as Coinbase want to promote the ease of sending, receiving, and storing money.¹²⁴ The problem is whether Bitcoin will become a mainstream currency rather than a trading commodity.¹²⁵ Sure, Bitcoin can be used to purchase yachts, houses, and cars,¹²⁶ but it is still not broadly adopted as a form of currency in the U.S.¹²⁷ As companies and small businesses embrace the technology, the flexibility of the currency allows for riskier investments and the chance for major profits.

V. BITCOIN REGULATION OVERSEAS

Regulation in the international community is varied. For example, Japan's cabinet has officially recognized virtual currencies, including Bitcoin, as real money.¹²⁸ Digital currencies will also be recognized as "asset-like-values" that can be used in the place of money.¹²⁹

In India, the technology is starting to be implemented, but very slowly. The founder of BTCXIndia – a Bitcoin wallet, Mupparaju Siva Kameswara Rao, mentions that while Bitcoin can solve some of the economic issues in India, the struggles of implementing regulatory practices and the lack of guidance may be a barrier to the wide-spread adoption of the currency.¹³⁰ However, the needs of the population that do not own a bank account or debit card may be catered to when the technology is implemented.¹³¹ The Bank of India endorsed the use of Blockchain technology:

With its potential to fight counterfeiting, the "blockchain" is likely to bring about a major transformation in the functioning of financial markets,

¹²⁴ Metz, *supra* note 6.

¹²⁵ *Id.*

¹²⁶ Evander Smart, *15 Amazing Things You Can Buy with Bitcoin Today*, COINTELEGRAPH (Aug. 1, 2015), <http://cointelegraph.com/news/15-amazing-things-you-can-buy-with-bitcoin-today>.

¹²⁷ *See* Metz, *supra* note 6.

¹²⁸ Shivdeep Dhaliwal, *Japan Officially Recognizes Bitcoin and Digital Currencies as Money*, COINTELEGRAPH (May 2, 2016), <https://cointelegraph.com/news/japan-officially-recognizes-bitcoin-and-digital-currencies-as-money>.

¹²⁹ James Moreau, *Japan's Cabinet Passes Bills to Officially Recognize Digital Currencies As Real Money*, CRYPTOCOINS NEWS (Apr. 3, 2016), <https://www.cryptocoinsnews.com/japans-cabinet-passes-bills-officially-recognize-digital-currencies-real-money/>.

¹³⁰ *India's Bitcoin Use Set to Surge in 2016*, RED HERRING (Sept. 11, 2015), <http://www.redherring.com/finance/indias-bitcoin-use-set-surge-2016/>.

¹³¹ *Id.*

collateral identification (land records for instance) and payments system. As against this, the “blockchain” technology is based on a shared, secured and public ledger system, which is not controlled by any single (“central”) user and is maintained collectively by all the participants in the system based on a set of generally agreed and strictly applied rules.¹³²

In Australia, the concern by the Australian Digital Currency and Commerce Association is to protect the customer in this highly unregulated market.¹³³ “Consumer protection is extremely important [but] letting it get too far and destroying the industry is not a smart move,” ADCCA chief executive Nicholas Giurietto said.¹³⁴ Oddly, if the concern is to protect the consumer, the ADCCA is going in the opposite direction when it says it does not want more government regulation of the currency.¹³⁵ Australia faces the problem that Bitcoin exchanges can be set up quite easily and face no real regulation of the proposed “exchange.”¹³⁶ Martin Davidson of Bitcoin Group is concerned that too many people are using these Bitcoin exchanges to store their money rather than making simple exchanges of the currency.¹³⁷ Davidson’s concern is warranted because if these exchanges are unregulated and have shady business practices, and then fail, the consumer bears the risk of non-payment and the loss of their investment.

There is positive movement by the Australian government, as a recent discussion paper released by the Honorable Scott Morrison MP Treasurer, attempts to provide solutions that will “improv[e] [the] efficiency and service delivery and radically changing how businesses and consumers interact” within the country.¹³⁸ The purpose of these changes was to remove the “double-taxation” of digital currencies under the Goods and Services Tax (GST), to promote innovation of the technology and its uses and to maintain or improve the country’s

¹³² JP Buntinx, *Reserve Bank of India Publicly Endorses Blockchain Technology*, BITCOINIST (Dec. 28, 2015, 3:27 AM), <http://bitcoinist.net/reserve-bank-of-india-publicly-endorses-blockchain-technology/>.

¹³³ Georgia Wilkins, *Bitcoin Faces Calls for Tougher Regulation Amid Igot Scandal*, THE SYDNEY MORNING HERALD (Apr. 12, 2016), <http://www.smh.com.au/business/banking-and-finance/bitcoin-faces-calls-for-tougher-regulation-amid-igot-scandal-20160412-go44xo.html>.

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *See id.*

¹³⁷ *Id.*

¹³⁸ SCOTT MORRISON, GST TREATMENT OF DIGITAL CURRENCY, loc. v (2016) (ebook).

competitiveness in the global community.¹³⁹ The paper first classifies and identifies digital currency, which incorporates Bitcoin. The classification includes:

(a) a digital or non-tangible unit of account, (b) the currency not being denominated in other forms of currency, (c) the currency is a commonly used medium of exchange, (d) the ability of the currency to be exchanged for real-world activities and products, (e) reliance on cryptographic technology to validate the transactions and (f) the lack of centralized control or centralized validation of the currency through a “distribution ledger.”¹⁴⁰

Morrison even commented that to avoid the double taxation the Australian government should “treat digital currencies as either input taxed or treat them as equivalent to ‘money’ for GST purposes.”¹⁴¹ The basic premise is that eliminating this double taxation of the currency, will facilitate an explosion of growth in the use of Bitcoin by companies in the country.¹⁴² There is caution though, as adoption of either of these methods may result in the preferential treatment of the digital currency over the current system.¹⁴³

Any conversation about cryptocurrency exchanges must also mention the Chinese exchange and investment. Although China does not have any regulation related to the cryptocurrency, the government has imposed restrictions on investment by its citizens.¹⁴⁴ Unfortunately, the restriction limits Chinese investors from accessing international markets and exchanges.¹⁴⁵ In fact, the Chinese government’s manipulation of its currency has recently led to large Bitcoin trading as the alternative investment.¹⁴⁶ Additionally, because of the large population, the mining pools in China are significantly larger than those of other areas and countries in the world, attributing to the fact that it is the largest volume producer of Bitcoins in the world.¹⁴⁷ BitMex (Bitcoin Mercantile

¹³⁹ *Id.* at 5.

¹⁴⁰ *Id.* at 7.

¹⁴¹ *Id.* at 8.

¹⁴² *See id.*

¹⁴³ *Id.*

¹⁴⁴ Gautham, *China, Driving the Bitcoin Wagon with BitMex and Others*, NEWSBTC (Dec. 5, 2015, 11:30 PM), <http://www.newsbtc.com/2015/12/05/china-driving-bitcoin-wagon-with-bitmex/>.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *See id.*

Exchange), will soon provide investors the opportunity to invest in stocks, currencies and commodities in China.¹⁴⁸

VI. WHAT DOES BITCOIN NEED TO DO TO GARNER MORE SUPPORT AND ATTENTION?

What does overseas regulation mean for regulation in the US market? The U.S. can, and perhaps should, formally announce the adoption of cryptocurrency as currency. This would cause a burst of support and investment.¹⁴⁹

Perhaps Bitcoin and its sister currencies may be considered as a security. Under the *Howey* test, the Supreme Court in 1945 established factors to determine whether an investment was to be considered as a security for the purposes of exchanging money.¹⁵⁰ The four prongs of the *Howey* test ask: whether a person in a transaction (1) invests his money, (2) in a common enterprise and is (3) led to expect profits solely from the efforts by a (4) third party.¹⁵¹ This would align with the decision in *Shavers*.¹⁵² Currently, any person can invest their money in Bitcoin by purchasing the currency at any exchange and may even acquire it by “transforming” other cryptocurrencies into Bitcoin.¹⁵³ Third-parties that generate profits from a traditional transaction are removed. For example, in a Bitcoin exchange, there is no tangible third party.¹⁵⁴ However, because many investors have generated interest in the market and have placed their Bitcoin in the exchange, the collective price to dollar ratio increases based on their interest.¹⁵⁵

¹⁴⁸ *Id.*

¹⁴⁹ See generally Roberts, *supra* note 2 (discussing how investing in bitcoin operates on the “greater fool theory”).

¹⁵⁰ SEC v. *Howey Co.*, 328 U.S. 293, 298–99 (1946).

¹⁵¹ *Id.*

¹⁵² SEC v. *Shavers*, No. 4:13–CV–416, 2013 WL 4028182, at *1–2 (E.D. Tex. Aug. 6, 2013).

¹⁵³ *How Can I Buy Bitcoins?*, COINDESK (Oct. 28, 2015), <http://www.coindesk.com/information/how-can-i-buy-bitcoins/>.

¹⁵⁴ Perianne Boring, *Bitcoin Basis for the ‘76 Percenters’ Who Don’t Have a Clue What It Is*, FORBES (Feb. 22, 2014, 9:00 AM), <http://www.forbes.com/sites/perianneboring/2014/02/22/bitcoin-basics-for-the-76-percenters-who-dont-have-a-clue-what-it-is/#791464472fc2>.

¹⁵⁵ See Venzen Khaosan, *What Affects the Bitcoin Price?*, CRYPTOCOINS NEWS (Sept. 25, 2014), <https://www.cryptocoinsnews.com/affects-bitcoin-price/>.

VII. WHAT DOES REGULATION LOOK LIKE?

The main question is how would regulation work for a decentralized currency? Assuming the currency has longevity, Bitcoin users face a safety issue. Users who keep Bitcoin in a wallet or exchange run the risk of having their accounts/wallets hacked and their coins stolen.¹⁵⁶ There is also the concern of the exchange failing as seen in *Faiella* and *Shavers*.¹⁵⁷ This is the first solution either the community or the regulatory body must solve: how to prevent the loss of Bitcoins in wallets and exchanges. Then, as an extension, how to maintain said security against the constant improvement of hackers and malicious groups from penetrating the security defenses. It may be costly to educate users on how to better secure their computers and data from hacking. On the other hand, many of these programs are free and user friendly. This issue can be alleviated from the user end by maintaining active malware systems and programs, but that is not a complete safeguard. Until that can be addressed adequately, a push for mainstream usage is stifled.

Assuming a user has their Bitcoin hacked and stolen, there is no guarantee providing them with a refund or return of any of their investment.¹⁵⁸ This is contrary to the Federal Deposit Insurance Corporation (FDIC) insurance that protects each depositor up to \$250,000 in a participating bank.¹⁵⁹ In contrast, Bitcoin holders have no protections for their losses in a digital robbery. Future regulation must include assurances similar to the FDIC protections for bank depositors that mitigate the loss in a hacking situation. This would be a win-win situation for banks and depositors alike, as the banks can receive the deposit amount of Bitcoins, leverage the coins and earn interest on the currency, and still ensure that the depositor has a safe place for their money. Users may have an issue with this process because it breaks the anonymity of the whole transaction. A depositor would likely have to

¹⁵⁶ See Mary Grams, *Top Ten Bitcoin Issues: World Peace, Wild West, or Both?*, THOMSON REUTERS (Oct. 2014), <http://legalsolutions.thomsonreuters.com/law-products/news-views/corporate-counsel/top-ten-bitcoin-issues-world-peace-wild-west-or-both> (last visited May 10, 2016).

¹⁵⁷ See *United States v. Faiella*, 39 F. Supp. 3d 544, 546 (S.D.N.Y. 2014); *SEC*, 2013 WL 4028182, at *1–2.

¹⁵⁸ Grams, *supra* note 156.

¹⁵⁹ See *Deposit Insurance FAQs*, FDIC (June 3, 2014), <https://www.fdic.gov/deposit/deposits/faq.html>.

present some form of identification that would be tied to their individual accounts. Anonymity is a chief reason why many users have invested in or bought their Bitcoin. Further, extending FDIC insurance to Bitcoin deposits benefits banks, which some Bitcoin users would prefer to avoid.

Another important use for Bitcoin includes salary payment.¹⁶⁰ Normally, the IRS does not care where income originates, it must be reported on the recipient's tax return.¹⁶¹ Once the IRS considers Bitcoin a form of taxable income, then tax regulation of Bitcoin may proceed. In 2014, the IRS released Notice 2014-21, which gave guidance to this very issue.¹⁶² The Notice considers virtual currency as property and thus as subject to general tax principles and tax liability.¹⁶³ This treatment of Bitcoin as property applies to the Bitcoin holders who have acquired the currency through mining, requiring it to be included in gross income reported on the Bitcoin miner's personal tax return.¹⁶⁴ A miner would have a basis calculated on the value of the Bitcoin at the time the awarded Bitcoin comes into the minter's possession.¹⁶⁵ As such, by virtue of having the tax basis in a mined Bitcoin, the Notice is instructive that a gain or loss, via a transfer of the Bitcoin, may be calculated and reportable on a tax return.¹⁶⁶ Thus, a simple way to ensure taxation of Bitcoin is already in place.

North Carolina, however, has taken a step in the direction of excluding certain Bitcoin related business from regulation under its General Statutes § 53-208.2 and § 53-208.3.¹⁶⁷ The Money Transmitter Act (MTA) requires all persons engaged in the business of money transmission to obtain a license.¹⁶⁸ Money transmission is defined as "the sale or issuance of payment instrument or stored value" or "the act of engaging in the business of receiving money or monetary value for transmission within the United States or to locations abroad by any and

¹⁶⁰ See Grams, *supra* note 156.

¹⁶¹ *Id.*

¹⁶² I.R.S. Notice 2014-21, I.R.B. 2014-16 (Apr. 14, 2014).

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ N.C. GEN. STAT. §§ 53-208.2(a)(11)(b), 53-208.2(a)(12), 53-208.3(a) (2015); *Money Transfer Frequently Asked Questions*, N.C. COMM'R OF BANKS, <http://www.nccob.gov/Public/financialinstitutions/mt/mtfaq.aspx> (last visited May 10, 2016).

¹⁶⁸ § 53-208.3(a).

all means, including payment instrument, wire, facsimile, or electronic transfer.”¹⁶⁹ And monetary value is defined as “[a] medium of exchange, whether or not redeemable in money.”¹⁷⁰ Taken together, this generally covers anyone in a business that accepts or sends Bitcoin as a form of payment, requiring them to be registered in North Carolina with a license. However, the Article does not apply to broker-dealers as defined under Federal or State law.¹⁷¹

If Bitcoin were to achieve the status of a security, in the future, brokerage firms would not have to register for a money transmitter’s license in North Carolina, and thus would not have a barrier to entering the marketplace. Since there is no barrier to entry, the lack of regulation as a money transmitter will result in more competition. Interestingly, the Blockchain technology is not regulated under the MTA, thus providing an enticing option for businesses to research, adopt and implement the technology in their operations.¹⁷² Thus, businesses that would use the technology to record keep and store contracts do not have to register with North Carolina, so long as the technology does not involve the exchange of Bitcoin.¹⁷³

Generally, the requirements for these licenses may deter businesses from operating in the state. Certain states require that the business: (1) pay a license fee of about \$500; (2) pay annual or bi-annual renewal fees; and (3) disclose the owner’s or business’ net worth; run background checks; and require a surety bond as security.¹⁷⁴ These all have a deterrent effect on businesses that use Bitcoin or utilize the Blockchain in their operations. Perhaps some businesses consider the necessary information as invasive or the cost of the fees and bonds too expensive. However, much of the information that is required for licensing is not dissimilar to the requirements for the formation of a corporation.¹⁷⁵

¹⁶⁹ § 53-208.2(a)(11).

¹⁷⁰ § 53-208.2(a)(12).

¹⁷¹ § 53-208.4(a)(5).

¹⁷² See *Money Transfer Frequently Asked Questions*, *supra* note 167.

¹⁷³ *Id.*

¹⁷⁴ Brian Ruehlman, *The Quick Guide to Money Transmitter Licenses*, SURETY BOND INSIDER (July 29, 2015), <https://www.suretybonds.com/blog/the-quick-guide-to-money-transmitter-licenses/10871>.

¹⁷⁵ MODEL BUS. CORP. ACT § 2.02 (2006).

Further, the bond requirement ranges from \$1,000 to \$1,000,000,¹⁷⁶ but the cost of the bond can be secured for as little as 1% of the value.¹⁷⁷

Earlier, this article addressed the positive nature of international exchanges and respective regulations.¹⁷⁸ However, there are still many decisions made by the international community that both affect the value of Bitcoin and the regulations within the respective countries. In 2013, China had banned their banks and payment companies from exchanging Bitcoin,¹⁷⁹ and as China has the highest trading volume of any country, this action caused a massive price drop that year.¹⁸⁰ The reserve Bank of India then warned investors of the risks of investing in Bitcoin and that caused businesses that used Bitcoin to see a decrease in their operations.¹⁸¹ In 2014, Russia implemented a ban that outright blocked the websites and exchanges that used the currency or technology.¹⁸² This ban was finally lifted by the Russian court,¹⁸³ and many Russian entrepreneurs and businesses can now deal freely with Bitcoin and the technology.¹⁸⁴

The United Kingdom has warned that the banking system in its lands might fail if Bitcoin is adopted.¹⁸⁵ The Bank of England's Deputy Governor, Ben Broadbent, opined that a new cloud based system of holding cash, supported by encryption for the accounts, would be

¹⁷⁶ Compare *id.*, with Vic Lance, *State Regulation Changes the Game for Bitcoin Sellers in New Hampshire*, COINDESK (Mar. 19, 2016), <http://www.coindesk.com/state-regulation-changes-the-game-for-bitcoin-in-new-hampshire/>. See also Ashley Grimes, *Stricter Federal and State Regulations for Virtual World Currency Transactions*, GRIMES LAW PLLC, <http://www.grimeslawaz.com/technology-and-licensing/money-transmitter-licensing/> (last visited May 11, 2016).

¹⁷⁷ Lance, *supra* note 176.

¹⁷⁸ See *infra* Part V.

¹⁷⁹ See Grams, *supra* note 156.

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² Nuno Menezes, *Russia Lifts Bitcoin Ban*, NEWSBTC (May 22, 2015), <http://www.newsbtc.com/2015/05/22/russia-lifts-bitcoin-ban/>.

¹⁸³ Allen Scott, *In Victory for Crypto Community, Russian Court Lifts Ban on Bitcoin Sites*, COINTELEGRAPH (May 16, 2015), <http://cointelegraph.com/news/in-victory-for-crypto-community-russian-court-lifts-ban-on-bitcoin-sites>.

¹⁸⁴ See Menezes, *supra* note 182.

¹⁸⁵ See Grams, *supra* note 156.

attractive to customers but would cut the bank's ability to lend money.¹⁸⁶ Broadbent, a former Goldman Sachs economist, also mentioned that Bitcoin is in no position to replace the Euro or the Pound Sterling.¹⁸⁷ And while the Blockchain technology could be used to shift the securities and bond market onto a centralized ledger system, thereby removing the cost of intermediaries that muddle the transaction, there may be a significant cost to such an adoption.¹⁸⁸

"Shifting deposits to the central bank, and away from the leveraged commercial banking sector, has two important implications. On the one hand, it would probably make them safer," he said. "Currently, retail deposits are backed mainly by illiquid loans, assets that can't be sold on open markets; if we all tried simultaneously to close our accounts, banks wouldn't have the liquid resources to meet the demand. The central bank, by contrast, holds only liquid assets on its balance sheet. The central bank can't run out of cash and therefore can't suffer a 'run'. On the other hand, taking deposits away from banks could impair their ability to make the loans in the first place. Banks would be more reliant on wholesale markets, a source of funding that didn't prove particularly stable during the crisis, and could reduce their lending to the real economy as a result."¹⁸⁹

What Broadbent has perhaps not considered is that Bitcoin may regulate itself at some point in the future. If enough of the community decides one path, a clear and defined Bitcoin that does not leave room for forking, it may be the answer to this regulatory issue. Bitcoin does not have to replace the current financial system totally; it may, however, expose how outdated the technology is that banks use. In fact, its adoption will have the benefit of reducing the costs and fees customers must pay towards banks, as banks would have to make themselves more attractive to depositors.

VIII. CONCLUSION

There are two sides to every coin. And Bitcoin is no different. The global giant in cryptocurrency was once tarnished by the darkness of the underground Silk Road. But as the years have passed since its inception in 2009, the currency has still maintained a positive light in the eyes of

¹⁸⁶ Phillip Inman, *Could a Bitcoin-style Monetary System Spell the End for Britain's Banks?*, THE GUARDIAN (Mar. 2, 2016), <http://www.theguardian.com/money/2016/mar/02/bitcoin-digital-currency-britain-banks>.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*

¹⁸⁹ *Id.*

many. While the coin currency is affected by the global community, it still has a positive base of people who remain loyal to its core.

Those who believe in its application will invest and utilize the technology to its fullest potential, making breakthroughs in areas that we have not yet begun to imagine. But the regulation of the currency may be the saving grace for an uncertain time in the financial marketplace. As the public fears a repeat of the market crash of 2008, an alternative must be found to keep banks and other lenders accountable in their duties. Such regulation would show faith in the consumer, provide competition for the banks and reduce the costs of risk-taking for businesses and investors.

But Bitcoin and its technology is not without its flaws: the price is volatile, the community is divided as to the direction it must take, and lest we forget, the amount of coins is finite, and the last coin will be mined sometime in 2140. That is perhaps where the technology is ingenious. The various forkings of Bitcoin could prove to be the best thing that has ever happened to the financial world. Even so, the underlying Blockchain's purpose and usage is an attractive alternative to the current marketplace at present. It will be interesting to see whether the global community inflicts harsh regulation that stifles the "freeness" of Bitcoin or whether the restrictions make Bitcoin readily and fairly accessible to all consumers.