

THE LEGAL AND REGULATORY ISSUES
SURROUNDING CRYPTOCURRENCY

by

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ABSTRACT

Cryptocurrency and Bitcoin is a topic seen consistently in today's media publications; however, the average citizen does not truly understand what it is and how it works. In addition, due to its innovative nature, cryptocurrency presents many legal and regulatory issues that the US federal government does not know how to deal with. This thesis seeks to help provide an overview of what is cryptocurrency and how it works in the market; while, highlighting two key legal issues surrounding cryptocurrency. First, this paper addresses how cryptocurrency should be classified under US law and makes the case for defining it as a commodity. Secondly, this paper discusses the growing amount of cryptocurrency scams throughout the US and the conditions that allow these scams to take place. Ultimately, from the analysis of these two problems, recommendations are made to the US federal government on how they should combat these problems in the most efficient way. These solutions include legally classifying cryptocurrency as a commodity, allowing the Commodity Futures Trading Commission to oversee and audit cryptocurrency exchanges, and adopting Cryptocurrency Security Standard as the minimum cyber security standard that all cryptocurrency companies should use when protecting and storing consumers' Bitcoin.

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INTRODUCTION

If you were to open a Wall Street Journal or turn on the TV and watch CNBC, there is a high probability that there will be a headline that mentions either Bitcoin or cryptocurrency. Over the past few years, cryptocurrency has taken the world by storm and has presented consumers with a whole new way to exchange currency, make transactions, and invest, that is different from other currencies or securities in the market. Because of the new and innovative nature of cryptocurrency, many government officials across the globe and Fortune 500 CEOs have made statements about what they believe the long-term output is of Bitcoin and how beneficial or not it is in society. Although many people have heard of cryptocurrency before, very few understand the intricacies behind cryptocurrency and what purpose it truly plays in the financial markets.

For this thesis, I am going to explore the interworking of cryptocurrency and provide an in-depth analysis of how cryptocurrencies ought to be understood and classified. In addition, I am going to analyze the legal and regulatory issues that surround it and how it operates within the current US legal framework. Finally, based on my analysis of the current regulatory state of cryptocurrency, I will compile a list of suggestions for the United States government to outline a progressive framework that can adapt to new financial instruments such as cryptocurrency.

WHAT IS CYRPTOCURRENCY/BITCOIN?

Before analyzing the legal and regulatory issues surrounding cryptocurrency, it is essential to understand exactly what cryptocurrency is and what makes it different from other securities or currencies. For the sake of simplicity, I am going to use Bitcoin when describing cryptocurrency because it is the most commonly used and readily available. Even though the description is Bitcoin specific, most, if not all, cryptocurrencies work in a similar fashion.

Bitcoin, created in 2009 by an anonymous programmer or group, was the first digital currency not tied to a government or central bank ever invented. What the anonymous programmer or group made was the software that Bitcoins can be generated from and the network where all transactions could take place. Bitcoin, similar to the US dollar is a fiat currency meaning the value of the currency is generated from the belief people have that the currency has value and can be used as a means of exchange. Unlike US currency, Bitcoin is a fixed cap currency meaning the software will only allow for a fixed number of Bitcoins to be generated, meaning that Bitcoin can never experience inflation. Additionally, Bitcoin is entirely digital meaning that it exists only as codes on a computer, which makes it impossible to counterfeit as no two Bitcoins can have the same code.

From some of the characteristics above, cryptocurrency has similarities to currencies the world has seen in the past; however, for the most part it is completely different than any currency ever created. What truly makes Bitcoin and cryptocurrency unique is not just its characteristics, but also how it works in the market. Due its heavy roots in computer science and programming, the technicalities behind how Bitcoin software works are beyond even people heavily connected in the cryptocurrency space; however, even just knowing a simplistic explanation of it can highlight truly what makes Bitcoin unique and why it is presenting so many regulatory issues.

HOW IS BITCOIN INTRODUCED AND WORK IN THE MARKET?

The entire Bitcoin network of generation and transactions are all done through the Bitcoin software on a peer-to-peer network of computers, which means that there is no central server that hosts all activity rather it is spread across thousands of personal computers around the world. As long as you are logged in to the Bitcoin software, your computer is being used to help facilitate the vast number of Bitcoin transactions and activity. First, the way that Bitcoin is

introduced in the market is through a process called “mining” in the Bitcoin software. People who own industrial grade computers and servers, called miners, use this high-tech equipment to unlock Bitcoins from the software. In order to unlock a Bitcoin, a miner has to use their computer to solve a certain number of math problems and approve a certain number of transactions. Once the threshold of solved math problems and approved transactions are met, the miner receives a Bitcoin and can then sell it on the open market. The unique part about the Bitcoin mining process is that depending on the volume of activity happening on the software, the more transactions have to be approved and math problems have to be solved in order to unlock a Bitcoin. The reasoning behind this is to not only to keep the Bitcoin system afloat by providing an incentive for miners to consistently approve transactions, but it also steadies the flow of Bitcoin being introduced in the market and ensures it can be drawn over a long period of time as the adoption of Bitcoin becomes more popular. This process described is most commonly known as the block chain and is considering the biggest technologic revelation to come from Bitcoin, as it has created a self-sufficient system that provides incentives for individuals to approve transactions and to host all the activity on their own personal computers.

Once receiving a Bitcoin from reaching the threshold of solved math problems and approving a certain number of transactions, miners can then sell their Bitcoin on the open market. In order to do this, a miner sells his Bitcoin to an exchange, which is a website that facilitates the buying, selling, and storage of Bitcoin. Unlike stocks and other securities that can only be sold on a handful exchanges world-wide, there are thousands of Bitcoin exchanges where Bitcoin can be traded because of the low upstart cost for a website. Additionally, there are not regulatory agencies that oversee exchanges, so there is no body limiting the creation of them.

In order for a transaction to happen using Bitcoin, the buyer of a good or service must first buy Bitcoin from an exchange and store it in a digital wallet service, which stores a user's Bitcoin and is usually tied to the exchange. Then, the buyer would type in the seller's wallet address and would send the Bitcoin to them. That transaction would then be added to the list of transactions that a miner has to approve to unlock a Bitcoin, thus creating the self-sufficient cycle.

WHY ARE PEOPLE USING BITCOIN?

So now after understanding exactly how the Bitcoin system works, many ask why do people then use Bitcoin? The answer to this is threefold as Bitcoin presents specific advantages compared to other currencies. First, transactions done in Bitcoin are significantly safer than any other digital transaction. The reasoning behind this is because the private information associated with the transactions is cut up into thousands of different pieces and is spread across the entire peer to peer network. This means that in order to steal someone's information from a Bitcoin transaction, you would have to hack thousands of computers across the globe to piece it together, which would be virtually impossible. Second, Bitcoin transactions are faster than transactions done by credit or debit card. The reason is because Bitcoin has thousands of miners who are largely incentivized to approve as many transactions as possible, as their reward is predicated off of approving. This is different from a typical credit card transaction as credit card companies have a limited staff that are approving transactions and are not incentivized on a per transaction basis like Bitcoin. Third, people buy Bitcoin because it is a hedge against uncertainty in the market and possible economic crisis. Similar to how gold acts as a hedge against other precious metals, many people buy Bitcoin because it is an item that has value, but it is tied to no government and is not affected by typical economic factors, such as economic crisis or changes in value due to

governmental policy. Similarly, even if people are not buying it to hedge economic risk, the price of Bitcoin has continued to rise and fluctuate significantly, which presents an investment opportunity for many consumers.

Although Bitcoin presents many advantages compared to other currencies, there is a main disadvantage that has caused hesitancy amongst consumers about fully adopting the currency. As mentioned above, the price of Bitcoin has been significantly volatile which has presented a great investment opportunity for consumers; however, because of that volatility, many businesses and consumers are scared to accept Bitcoin due to the risk the value of it could depreciate. Just to put in perspective the volatility of cryptocurrency, at the beginning of 2017 Bitcoin was worth about two thousand dollars, whereas at the end of 2017 Bitcoin was worth close to twenty thousand and has now dropped back down to eight thousand. Because of this, many consumers are not using Bitcoin as a means of exchange, such as the US dollar, rather they are using it a speculative asset hoping that the price of it will soar over time.

WHAT IS THE US GOVERNMENT DOING IN REGARD TO THE RISE OF CRYPTOCURRENCY?

As described above, Bitcoin and cryptocurrency is much different than any other financial instrument in the market, thus it presents many legal and regulatory issues because current laws do not cover or are tailored to the way in which it functions. Similar to how the United States government had to deal with many of the issues surrounding the rise of stock trading in the early twentieth century, the US government does not currently know how it should treat cryptocurrency in the legal realm and does not know how to regulate it effectively. As of April of 2018, Congress has not passed a single bill addressing cryptocurrency and leaves it up to the states to create their own regulatory framework. However, as of April 2018, only three states

so far, New York, California, and North Carolina, have create a regulatory and legal framework on how they are going to treat cryptocurrency (Higgins, 2018).

In addition to the US government leaving decisions surrounding cryptocurrency to the states, it has also allowed federal agencies to determine if cryptocurrency falls under their purview. Although this strategy intention was possibly to create a simplistic, clear-cut strategy that would allow the US federal government to oversee cryptocurrency, in reality, it has done the exact opposite as multiple governmental organizations have claimed that they should oversee cryptocurrency thus making it even more confusing for companies in the cryptocurrency industry. For example, the Internal Revenue Service (IRS), the Securities Exchange Commission (SEC), and the Commodities Futures Trading Commission (CFTC) all claim cryptocurrency falls under their purview by using different district court cases that support their jurisdiction and legally defining cryptocurrency to fit what their agency oversees. By allowing multiple government agencies to claim jurisdiction over cryptocurrency, it risks overregulating the cryptocurrency industry and businesses not wanting to operate within the space because of the confusion due to red tape from multiple governmental agencies.

WHAT ARE THE LEGAL AND REGULATORY ISSUES SOURROUNDING CRYPTOCURRENCY?

When evaluating the lack of federal laws passed addressing cryptocurrency and the risk of overregulation by allowing multiple agencies to have jurisdiction over cryptocurrency, the US government is not positioning itself to help the growth of the industry, nor the protecting consumers operating within it. As mentioned above, there is a handful of issues Surrounding cryptocurrency that have arisen due to cryptocurrency's uniqueness as a financial instrument and the US federal government's laid-back stance on regulation. Specifically, there are two key legal

and regulatory issues that the cryptocurrency industry is facing that the US government has failed to address or has taken the wrong approach in addressing it. First, the United States government has not developed a legal classification for what cryptocurrency falls under, which is essential in determining what regulatory body or agency should oversee cryptocurrency activities. The only steps the US government has taken towards legally defining cryptocurrency has been a set of district court cases that have arrived on vastly different interpretations about what cryptocurrency should be classified as and has failed to create legal precedence on the issue. A legal classification is the most pressing issue within the cryptocurrency industry because without it, businesses will not be able to make predictions on the outlook of the industry and will be timid to engage in the space due to the risk that it could be heavily regulated. A legal classification would give cryptocurrency exchanges and businesses wanting to use cryptocurrency the necessary clarity on how exactly the US government is going to treat it and would allow them to make well informed decisions about whether they want to take part in cryptocurrency.

Secondly, due to the infancy of the industry, there are people taking advantage of the lack of regulation and oversight in the industry to harm consumers through various scams and schemes. Specifically, the cryptocurrency industry has seen a large amount of fraudulent exchanges and hackings of wallet services that have caused consumers to lose billions of dollars since the industries inception. Although the regulatory problems facing the cryptocurrency industry are clearly defined, the solutions are not, so a thoughtful analysis needs to go into solving these two problems as it will shape the industry moving forward.

CLASSIFICATION OF CRYPTOCURRENCY

When evaluating what legal classification cryptocurrency should fall under, there are three different classifications it could be considered. Cryptocurrency can be considered either a security, currency, or commodity as these are the three different classifications that the US district courts have ruled cryptocurrency under, make the most since on how cryptocurrency is used and have been the classification given by various government organizations. When evaluating what legal classification cryptocurrency should fall under, it is important to look not only at the court cases that support each classification, but the legal definitions that define each classification because of the conflicting decisions of the different court cases. In addition, studying how Bitcoin and cryptocurrency. By taking into account all three of these factors, a legal classification can be determined for cryptocurrency and the threat of overregulation can be solved.

Bitcoin as a Security

The first classification to look at for how Bitcoin has been classified in the past is as a security. For the sake of clarification, the *Investment Company Act of 1940* in Section 2 defines a security as “any note, stock, treasury stock, security future, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security (including a certificate of deposit) or on any group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a “security”, or any certificate of interest or participation in

temporary or interim certificate for, receipt for, guarantee of, or warrant or right to or purchase, any of the foregoing” (1940).

When analyzing this definition, at no point does it ever mention cryptocurrency or Bitcoin, as it was introduced significantly later than the inception of this definition; however, the definition does contain some intentional vagueness that allows for Bitcoin to be classified as a security. This can be seen in a case that took place in Texas, *SEC v. Shavers*, where a district court federal judge ruled that Bitcoin was in fact defined as a security. In this case, Shavers was accused of creating a Ponzi scheme by telling his customers that he could make them a guaranteed rate of return of seven percent each week off of cryptocurrency trading. As Shavers client based continued to grow, he was routing the money coming in from new customers to pay the previous guaranteed returns to his original customers, which eventually caused his operation to go bankrupt. The SEC sued him stating that Shavers knowingly misled the investors in his company to believe that guaranteed profits could be generated from Bitcoin trading. Shavers legal team, in response to this, filed to dismiss the case because they stated that Bitcoin was not a true form or currency and therefore any investment made with it was not subject to any federal securities regulation (*SEC v. Shavers*, 2014).

However, the judge ruled in favor of SEC stating that Bitcoin fell under the definition of a security outlined in both the *Securities Act of 1993* and the *Securities Exchange Act of 1934*, by saying that Bitcoin, in this instance, was being used a security, specifically an investment contract (*SEC v. Shavers*, 2014). The judge ruled this way because he said Bitcoin fit the criteria of an investment contract, which is listed as one of the many forms of a security (*SEC v. Shavers*, 2014). In the *Securities Exchange Act of 1934* and later clarified in *SEC v. Howey*, the criteria listed to define what is considered an investment contract, which is known as the Howey

Test, is, “an investment of money, in a common enterprise, and with expectation that profits will be derived from the efforts of the promoter or a third party” (SEC v. Howey, 1946). When evaluating whether Bitcoin fits under these three criteria of an investment contract, the court determined that Bitcoin, in fact, completed the first criteria as Bitcoin can be used to purchase goods or services, which makes an investment of money. Secondly, the court found that common enterprise existed between Shavers and his clients because they were relying on his knowledge and expertise to gain profits from buying Bitcoin. Finally, there was an expectation of profits as Shavers had promised them a fixed return if they allowed him to invest their money into Bitcoin. Because Bitcoin fit into these three criteria, it was considered an investment contract in this case, which is a form of security.

Although this is one of the first cases that took a definitive stand on what Bitcoin and cryptocurrency should be classified as, it does have some limitations that may suggest that Bitcoin cannot be defined as security in every case. When looking at the three criteria used to define a security contract, it can be seen that many of the characteristics that qualified Bitcoin as an investment contract in the SEC v. Shavers case were more situational factors of how Bitcoin was being used by Shavers, rather than qualities that are inherent to Bitcoin. When redoing the Howey Test for truly how Bitcoin functions in the market, Bitcoin does fit the first prong of the Howey Test because it is an investment of money as you have to exchange US dollars or other currency to obtain it. However, Bitcoin does not fit the second part of the Howey Test as the investment of money is not in a common enterprise as a common enterprise is “an enterprise in which the fortunes of the investor are interwoven with and dependent upon the efforts and success of those offering or selling the investments of third parties” (US Legal, N/A). By looking at the definition of what is a common enterprise, it can be seen that Bitcoin does not fall under

this classification as the price of Bitcoin is not determined from the efforts of the miner or the software that is generating the currency, rather it is the volume at which the currency is being traded that determines the market price. Additionally, because Bitcoin cannot be considered a common enterprise, it cannot fit the third leg of the Howey Test because profits cannot be derived from the efforts of the promoter as there is no entity within the Bitcoin system or software that actions influence the value of Bitcoin.

All things considered, it is a very tough to make a case to classify Bitcoin as a security. Although at first glance, Bitcoin could fit the US legal definition of a security, due to its intentional vagueness, and has the support of the *SEC v. Shavers* case; ultimately, it does not stand up to the Howey Test when evaluating how Bitcoin operates within the marketplace. Although in *SEC v. Shavers* the judge was able to determine that Bitcoin fit the Howey Test, this was used only in a situational context and did not take into context the mechanics of how Bitcoin in the market as a whole, thus the judge was able make a case for it fitting the last two prongs of the Howey test. Knowing this, Bitcoin should not be considered a security, nor should be regulated by the Securities Exchange Commission as it would not fall under their purview if it is not considered a security.

Bitcoin as a Currency

The next classification that Bitcoin could be considered as is a currency, which would seem like the most logical conclusion as cryptocurrency contains the word currency. However, there are some limitations that make it hard to determine whether Bitcoin is truly a currency, even if the average consumer would assume it would be classified as one. When looking at the legal definition, defined in *California Bankers Association v. Shultz*, currency is “coin and currency of the United States or any other country, which circulate in and are customarily used

and accepted as money in the country in which issued” (California Bankers Association v. Shultz 1974). Under this definition, it is clear that Bitcoin currently cannot be classified as a currency because Bitcoin is neither a currency of “the United States or any other country” nor backed by any government or created by one. In addition, Bitcoin is not necessarily customarily accepted or used in the United States or other countries. Although there are businesses within the US and elsewhere that accept Bitcoin as a means of exchange, this is a very small minority and it is very inconsistent on what type of companies accept it. Even though Bitcoin does not fit under the current definition of what is considered a currency in the US, many might attest that this is because when the definition was created, specifically in 1974, the idea of a cryptocurrency could not have been thought of. To ensure that cryptocurrency and Bitcoin is receiving a fair evaluation and not ruled out due to an outdated interpretation of currency, Bitcoin must undergo a common three-pronged economist test of a currency; whether a currency/money is used as a medium of exchange, is a unit of account, and has a store of value.

When evaluating if a currency is considered money, many economists use three simple guidelines or characteristics that hold true for all currencies and can determine if something is a currency. First, economists say that currency must be used as a medium of exchange. Looking at Bitcoin, there are several major companies, such as Overstock and Dell, that except Bitcoin as a form of payment and thousands of private vendors that accept it as well. Secondly, money/currency has to be used as a unit of account. This characteristic is the hardest to justify for Bitcoin because although people do accept Bitcoins as a form of payment, the price of Bitcoin fluctuates so much that it makes it hard to clearly state how much an item is worth in Bitcoin. Theoretically, once public perception surrounding cryptocurrency stabilizes and there is a clearer outlook on it, the price of Bitcoin should stabilize; however, till that happens, it is very

hard to consider Bitcoin an unit of account. Finally, economists state that a currency has to have a store of value, meaning that value can be retained for the long-term and is a liquid asset. Once again, there are some complications with whether Bitcoin fits under this assumption as the future of Bitcoin's price is uncertain. Although most signs point toward cryptocurrency being around for the long term, there is a chance that Bitcoin is never accepted by the masses, causing it to become intrinsically worthless.

Although Bitcoin struggles to meet both the threshold of what the US defines as a currency and what economists accept as a currency, there is still a case to be made that Bitcoin should be considered one as there is a federal court case that states its classification as a currency/money. In *Ulbricht v. United States*, most famously known as the Silk Road scandal, Ross Ulbricht was charged with creating a black market that operated entirely on the internet and used Bitcoin as the main means of exchange to buy and sell goods on the black market. Although the case is more famous for its groundbreaking precedent on the government's ability to seize large amounts of online data, it still had large ramifications on the classification of cryptocurrency as Ulbricht's defense team tried to throw out the money laundering charges by claiming Bitcoin could not be classified as currency/money. This put the judge in a pivotal position as she had to determine whether cryptocurrency is classified as currency to precede with the case. Ultimately, the judge ruled that Bitcoin was in fact a currency as it was used the main medium of exchange in all the financial transactions that took place on the Silk Road. In addition, she said in her closing opinion in regard to Bitcoin being considered a currency that, "Sellers using Silk Road are not alleged to have given their narcotics and malicious software away for free - they are alleged to have sold them... The money laundering statute is broad enough to encompass use of Bitcoins in financial transactions. Any other reading would—in

light of Bitcoins' sole raison d'etre—be nonsensical” (United States v. Ulbricht 2014). Judge Katherine Forest went a step further in her opinion as well stating that both the Internal Revenue Service and the Financial Crimes Enforcement Network had no jurisdiction over cryptocurrency, even though the both of these organizations had come to the conclusion that cryptocurrency should be classified as property; which the defense team used a justification why cryptocurrency was not in fact currency. As a result, the defensive objection to the charges were thrown out and the proceedings continued.

When looking at Judge Forest opinion on the classification, there are some flaws with her reasoning as she is using the economist test listed above to justify her decision on why cryptocurrency should be considered a currency, but she fails to make a case on how it fits all three prongs. Although the main justification behind her decision is Bitcoin is being used as a medium of exchange, which is true in this instance, she fails to justify the other two characteristics that is a currency must also be an unit of account and a store of value. Knowing this, it weakens the credibility as to why Bitcoin should be considered exclusively a currency because she only proves that it fulfills one of the three thresholds. In addition, her opinion is very similar to the opinion issued in the *SEC v. Shavers* case because the classification ruling of Bitcoin in both of these cases is heavily dependent on how the defendant was using cryptocurrency in each context. Similar to how Shavers was using Bitcoin as an investment contract to guarantee client profits, Ulbricht was using Bitcoin as the medium of exchange for all of his illicit transaction, which is indicative of Bitcoin’s present use. Although there are some businesses and individuals that do except Bitcoin, most people who own Bitcoin are not using it as a means of exchange, rather a speculative investment or a hedge against economic risk. This means that Bitcoin classified as a currency holds more water than classified as a security as some

people do use cryptocurrency as a means of exchange; however, it is still not the best classification as it fails to meet both the United States and economists definition of a currency and the court case backing it uses a case specific details to determine its classification.

Bitcoin as a Commodity

Although many would be surprised to ever consider Bitcoin as a commodity since commodities are most closely associated with physical goods, such as gold and oil, the strongest case lies with classifying it as one. First, starting with the legal definition, a commodity is defined as a “useful thing; an article of commerce; a moveable and tangible thing produced or used as the subject of barter or sale” (Sonderregger 2015). When evaluating whether Bitcoin fits this definition, it is very clear Bitcoin’s current usage in the marketplace falls in place with the characteristics presented in the definition. First, Bitcoin is considered a useful thing because it can be used to not only to buy different goods or services but can be used as a hedging tool to counter economic risk. Secondly, Bitcoin is both a moveable and tangible thing. Although Bitcoin is completely digital, there is still a unique code assigned to each Bitcoin making it tangible and these Bitcoins can be moved between one another to complete transactions. Finally, Bitcoin can be used as a subject to barter or sale as it has been used as a means for exchange in the past.

In addition to fitting the legal definition of a commodity, Bitcoin also fits within how the Commodities Exchange Act (CEA) categorizes the different types of commodities (Sonderregger 2015). Within the Commodities Exchange Act, there are three different categories commodities can fall under. First, there are agricultural commodities which are commodities such as corn or wheat. Second, there are excluded commodities which include financial interests, price indices, currencies, and other financial instruments. Third, are exempt commodities which is a catch all

category which includes precious metals and oil. The best part about the way in which the Commodities Exchange Act categorizes commodities is that the two main uses of Bitcoin fall under the two different categories within the act. Since most people either use Bitcoin as a means for exchange or a speculative asset that they hope gains value over time, this falls under both the excluded and exempt commodities section, thus strengthening its case why it should be considered a commodity.

Not only does Bitcoin fall perfectly in line to what the US government and Commodities Exchange Act defines and categorizes as a commodity, but it also has a recent court case that helps support its classification as a commodity. In the case Commodities Future Trading Commission (CFTC) v. McDonnell et al, the CFTC was accusing McDonnell's company CabbageTech and CoinDrop of engaging in deception and fraud in Bitcoin markets (CFTC v. McDonnell 2018). McDonnell, similar to Shaver, started companies claiming they would offer Bitcoin trading advice to consumers and would manage their Bitcoin portfolio for a fee. However, McDonnell never invested or provided any advice to consumers that paid him, instead stole the money. In response to this, the CFTC sued him. Although the case is still going through court as it just started in January 2018, Judge Jack B. Weinstein ruled on a preliminary injunction that benefits the case of cryptocurrency being classified as a commodity. In order for the CFTC to bring this case against McDonnell and his employees, the CFTC had to prove that "(1) virtual currency may be regulated by the CFTC as a commodity and (2) the CEA permits the CFTC to exercise jurisdiction over fraud in connection with commodities that do not directly involve futures or derivative contracts" (Skadden 2018). When addressing the first criteria, Judge Weinstein ruled that the CFTC could indeed regulate Bitcoin as it fit the definition of a commodity "both in economic function and in the language of the statute" (CFTC v. McDonnell,

2018). Secondly, Judge Weinstein ruled that the CEA does permit that the CFTC has right to exercise jurisdiction in fraud cases similar to this one because “the CEA’s anti-manipulation and fraud provisions under Section 6(c) and CFTC regulations implementing those provisions that prohibit employing a fraudulent scheme “in connection with ... *a contract of sale of any commodity in interstate commerce*”” (Skadden, 2018). By ruling in favor of the CFTC in both of the questions, this sets a significant legal precedent that not only defines cryptocurrency as a commodity but allows the CFTC to have jurisdiction over it as well.

Although there are court cases that have accompanied each presented classification, the CFTC v. McDonnell case is the most significant for several reasons. First, the CFTC v. McDonnell case takes into account not only how cryptocurrency is being used in the case, but also cites how cryptocurrency is being used in the market. When Judge Weinstein made his decision on whether it falls into a commodity, he specifically stated that it not only fit the definition on paper, but it also fit it in economic function as well. In comparison, the other cases only sought to classified cryptocurrency within the terms of the case and when compared to the associated legal definition, specifically in the US v. Ulbricht case, both failed to meet all criteria the definition presented in economic function. Secondly, the CFTC v. McDonnell case postdates any of the other cases presented above. Although this might not be important for when comparing some court cases, this is especially important when evaluating cutting edge innovations, such as cryptocurrency, because with recentness comes more information on its economic use and function within the market place, which is essential to determining its classification. When looking at the SEC v. Shavers and US v. Ulbricht cases, both took place in 2014, whereas with Judge Weinstein making his decision on the initial injunction for CFTC v.

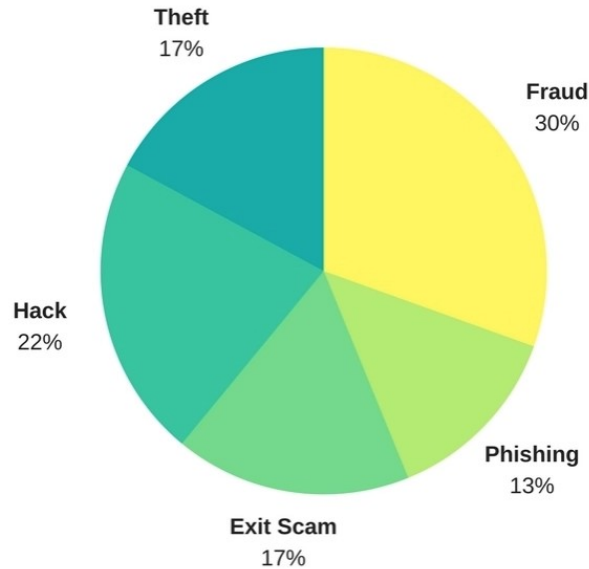
McDonnell in 2018, he had the advantage of understanding how cryptocurrency is currently being used in the market.

Beyond perfectly fitting the definition of a commodity and having the backing of the strongest case on cryptocurrency in the US, Bitcoin classified as a commodity fulfills the final “eye test” to prove that the US government should classify it as such. Currently, for the majority of people, Bitcoin is used as a speculative tool rather than a means for exchange (Schwartz, 2014). People are attracted to Bitcoin not because it is another form to do transactions in, rather they want to capitalize on the large price swings and hope that Bitcoin’s value appreciates over time. When looking at it as a speculative tool, Bitcoin has an analogous relationship with gold and in many ways acts like it. Similar to why people buy gold to put their money in an asset not tied to a governments actions and with the hope that the value will rise over time, Bitcoin holds a similar role as many people use it to hedge against economic disasters caused by government monetary policy or simply to capitalize on its large price swings. Seeing the similarities between both gold and Bitcoin helps give cryptocurrency even more legitimacy why it should ultimately be considered a commodity by the US government because it shows not only does it fit best under the title of a commodity in the legal sense, but also fits in a functional sense as well.

ISSUES SURROUNDING BITCOIN EXCHANGES AND WALLET SERVICES

When describing in the section above about why people are using Bitcoin, one of the main advantages to it was transactions conducted in Bitcoin are safer than any other digital transaction because the personal information used in transactions are divided across thousands of computers world-wide. Although the transactions themselves are very secure, the exchanges, where people can buy or sell Bitcoin, and digital wallets where Bitcoins are stored in are far from safe. In the first fifty-nine days of 2018, already \$1.36 billion dollars have been lost due to

Bitcoin or cryptocurrency scams (Sedgwick 2018). As seen in Figure 1.1 majority of the scams that take place is due to frauds, hacks, or theft.



2018's major scams by category

Figure 1.1 Scams by Category (Sedgwick 2018)

The reason why scams happen so much surrounding Bitcoin is twofold. First, the exchanges, where Bitcoin is bought and sold, do not have to prove legitimacy of operations, meaning that anyone create a Bitcoin exchange (Kirby 2014). This proves to be a large target for scammers because they can easily create a website posed a cryptocurrency exchange and can easily steal people's money and personal information when they try to use the exchange. Secondly, the digital wallet services, which are usually tied to exchanges and store consumers' Bitcoins, are constantly being hacked as hackers can receive a large pay day if they are able to crack the encryption key on the wallet (Sedgwick 2018). Currently, there is no legal minimum standard for how much a wallet service has to protect your cryptocurrency nor is there any government agency, similar to the FDIC, that insures the safety of consumers' cryptocurrency. On top of that, digital transactions that happen involving cryptocurrency are already hard to

trace, due to the fact it is split across thousands of computers. With these factors combined, if a consumer's Bitcoin is hacked out of a digital wallet, then it is virtually impossible to get back and there is no legal remedy to track down the hacker.

UNITED STATES FEDERAL GOVERNMENT RESPONSE TO CRYPTOCURRENCY SCAMS

Although cryptocurrency scams have already become a huge problem within the US, the federal government has done little to nothing to stop cryptocurrency scams. What is most concerning about this issue is not just the fact that over one billion dollars has already been stolen in the first three months of 2018, but the fact that this issue is going to grow exponentially larger as the cryptocurrency industry continues to grow. Instead of taking action, the US government has delegated the responsibility of consumer protection to the states. Out of all 50 states, only three states so far, California, North Carolina, and New York, have taken steps to fight against cryptocurrency scams (Wu and Meredith, 2015). However, when looking at each state's cryptocurrency consumer protection laws, only New York has created a comprehensive solution that has seen some success within their state.

New York's BitLicense Program

Introduced and implemented in 2015, the New York BitLicense program seeks to address the issue of fraudulent cryptocurrency exchanges. The program does this by making cryptocurrency exchanges wanting to operate within New York prove legitimacy of operation by making them produce their financial statements showing legitimacy of operation (Wu and Meredith, 2015). This strategy has proven effective as no illegitimate exchanges have been allowed to operate in New York since its inception in 2015. However, there are some major drawbacks to the BitLicense program that has caused New York to reconsider the structure of the

program. As of 2017, the BitLicense program has only approved three different exchanges to operate within the state of New York (Castillo, 2017). Considering there are hundreds, if not thousands, of exchanges that exist worldwide, it is abysmal that the BitLicense program takes so long to approve exchanges. On top of the long wait times, George Frost, an executive Bitstamp, estimated that his exchange spent over one hundred thousand dollars in application, legal, and compliance fees, just to ensure that they can even be considered for approval (Perez, 2015). Not added into that figure is the cost of compliance once approved by the New York state government to ensure an exchange has the correct documents to prove the legitimacy of operation. This can be costly, especially for Bitcoin exchanges, because most of them are startup business and do not have the excess capital to spend on compliance fees.

Even with its drawbacks, the New York BitLicense was the first great step to ensuring that consumers could be protected from cryptocurrency scammers in the United States. Many of the drawbacks mentioned are very fixable items on a larger scale because the federal government and agencies can put forth more funding and manpower towards the program, which can eliminate long application times and lower compliance costs. Although the BitLicense program has limited the number of scams happening within the state of New York, without the US government's commitment to a nationwide effort there will still continue to be billions of dollars each year lost due to cryptocurrency scams.

RECOMMENDATIONS

After evaluating two of the main legal issues surrounding cryptocurrency, there are several recommendations that the United States should heavily consider to not only help the growth of the cryptocurrency industry but to protect consumers' safety at the same time. When looking at potential regulations, there is three main guidelines that lawmakers must follow to

ensure that regulations placed on cryptocurrency are the most effective. First, the regulation must provide clarity to how the United States government is going to legally treat cryptocurrency moving forward. Currently, in the cryptocurrency market, there is a lot of uncertainty surrounding the US' response to its operation, which is one of the main factors of why the price of Bitcoin fluctuates so much. Regulatory clarity would not only cause the price of Bitcoin to stabilize, but it would also allow cryptocurrency businesses to understand the exact standards they will be held to. Secondly, regulations should not seek to overregulate cryptocurrency. One of the main fears, which the effects of it can be seen now, is that every government agency will try to regulate cryptocurrency, thus making it difficult to comply with all government laws and regulations. To stop this from happening, the United States government should seek to implement minimal regulations that address the most pressing problems and craft new legislation once new problems arise. Lastly, the US government should pursue regulations that cost as little as possible due to the infancy of the cryptocurrency industry. Although most analysts and experts expect the cryptocurrency industry to continue to grow in one capacity or another, there is always a chance that the industry crashes; meaning, it would be a waste of tax payer money if the US government is investing large amount of money towards a dying industry.

Define Cryptocurrency as a Commodity

One of the easiest yet most effective regulations that the US federal government can implement is simply defining by law that cryptocurrency should be treated as a commodity. Not only has it been proven in this thesis that defining cryptocurrency as a commodity makes the most sense, there would be several benefits from implementing this recommendation. First, it would give business operators and consumers in the space the clarity needed to understand exactly how cryptocurrency is going to be treated by the government and what regulatory agency

will oversee it. Secondly, the Commodity Futures Trading Commission will oversee the regulation of cryptocurrency if it is defined as a commodity, which would be the best agency to oversee cryptocurrency, due to their experience of regulating a various number of items. The CFTC not only has experience overseeing and regulating a wide variety of items, such as gold and oil, they also have experience auditing various exchanges, which is something the cryptocurrency space is lacking and is currently needed. Additionally, the CFTC falls under the CEA, which can be beneficial when prosecuting Bitcoin scammers. This has already been seen in the CFTC v. McDonnell case as the main reason the CFTC could sue McDonnell's company in the first place was that he was violating the CEA. Finally, by allowing cryptocurrency to be classified as a commodity, it will stabilize the price of Bitcoin because one of the main reasons the price fluctuates is due to the large amounts of uncertainty surrounding how the US government will treat cryptocurrency.

Implement BitLicense Program within the CFTC

With the CFTC overseeing Bitcoin and other cryptocurrencies after it is classified as a commodity, the CFTC should seek to implement a BitLicense program similar to New York. Although New York has seen a lot of downsides to implementing the BitLicense program, having it under the CFTC's purview would fix many of its downfalls. First, the CFTC would be able to address the problem of having a slow acceptance pace as the CFTC has significantly more employees than the New York State Department of Financial Services that have experience in examining and auditing various exchanges. Every year, the CFTC audits dozens of commodities exchanges across the US, so it would not be out of their expertise to evaluate whether certain cryptocurrency exchanges are legitimate. Secondly, the CFTC could eliminate many of the compliance and application costs that exchanges operating in New York are facing.

Because they are a large governmental agency that is not in need of additional funds, they would be able to lower the application fees and could reduce the cost of compliance by lessening the amount of work each exchange has to provide year to year.

Although many operators within the cryptocurrency market fear regulation because they see it as a restriction on their unfettered freedom, reforms like BitLicense are essential for two reasons. First, even though one of the attractions towards cryptocurrency is that it operates like the "wild west", some basic form of regulation is essential to protect consumers from malicious activity. Currently, consumers have no way of telling between a legitimate and illegitimate cryptocurrency, which ultimately affects the future outlook of cryptocurrency because if people continue to get scammed by faulty exchanges or hackings, then they will have no incentive to continue using cryptocurrency, thus making obsolete. The BitLicense program is the perfect solution to this issue because it does not encroach on any user of cryptocurrencies personal freedom and does not alter how they use cryptocurrency; however, it does allow consumers to have peace of mind about the safety of their currency.

Secondly, passing a nation-wide BitLicense program would help stabilize the price of cryptocurrencies across the board, having a similar effect to classifying it as a commodity, because it will decrease uncertainty of safety surrounding the currency. Looking at the price of Bitcoin in scenarios when exchanges were hacked or were found to be fraudulent, the price of Bitcoin plummets after the news of fraud because people become skeptical if their cryptocurrency is safe. Specifically, in 2016, Bitfinex, a cryptocurrency exchange was hacked, and one hundred twenty thousand Bitcoins were stolen, which is the equivalent of sixty million dollars at the time (Bovaird, 2016). Upon the release of this news, the price of Bitcoin plummeted twenty percent, just showing the magnitude one case of fraud can have on the

cryptocurrency markets. This scenario shows that programs, such as BitLicense, are needed because it makes consumers feel safer and will reduce the fluctuations of price due to security concerns.

Use the Cryptocurrency Security Standard (CCSS) to protect consumers from hacks

In addition to implementing a BitLicense program, the US federal government needs to address the other side of the cryptocurrency safety issue, which is protecting consumers' digital wallets from being hacked. Currently, there is no minimum standards or guidelines in the US that tell cryptocurrency companies how much they have to protect users' data and currency. This is a major issue because consumers are not experts in cybersecurity and will not be able to discern which wallet service provides the most security for their cryptocurrency. However, most policy makers are not experts in cryptocurrency nor cybersecurity, so even Congress determining what the minimum standard should be is near impossible. To solve this issue, Congress should seek a third-party opinion, specifically from the Cryptocurrency Certification Consortium (C4), to develop minimum security guidelines for cryptocurrency companies. In 2015, the C4 developed a proposal for governments world-wide called the Cryptocurrency Security Standard (CCSS) which was ten standardized approaches to what security standards companies should use and how to identify vulnerable security areas within a cryptocurrency company (Higgins, 2015). The C4 is a very qualified lobbyist group to give these recommendations because many people that serve on their board are the biggest players within the cryptocurrency industry or people who have developed their own cryptocurrencies themselves.

Unlike the BitLicense program, implementing the CCSS would be a very non-controversial measure in the Bitcoin industry. Many of the largest exchanges and digital wallet services have been calling for these reforms for years because they recognize the importance of

customer safety, in relation to how it affects the long-term outlook of cryptocurrency. Although this might add some additional costs to start ups that are trying to build their exchange or wallet service, this would ultimately be a positive reform that would give consumers the feeling of security and would ensure that businesses are taking every possible step to protect their customers' information. Implementing the CCSS would cost the US federal government nothing, yet it will save consumers billions of dollars each year.

CONCLUSION

All in all, the growth of cryptocurrency throughout the United States is going to present many new problems we have never faced before; however, by gaining an understanding of cryptocurrency and implementing easy, low cost reforms, the government can best prepare itself to face any issues that may arise. Although Bitcoin is considered very new and has produced innovations that the world has never seen before, it in many ways it acts similar to items that already exist, such as gold, which allows systems in place to help regulate the currency. By classifying Bitcoin and cryptocurrency as a commodity, this opens up a whole realm, such as the CFTC and the CEA, that will help the success of cryptocurrency moving forward by providing clarity around how the US is going to regulate it. Coupling the legal classification with the consumer protection measures listed above will provide the US government with the perfect regulatory base because it does not regulate cryptocurrency out of existence but will provide benefits to all parties involved.

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