

## Speculative Tech: The Bitcoin Legal Quagmire & the Need for Legal Innovation

Paul H. Farmer Jr.

Follow this and additional works at: <http://digitalcommons.law.umaryland.edu/jbtl>

 Part of the [Administrative Law Commons](#), [Antitrust and Trade Regulation Commons](#), [Banking and Finance Law Commons](#), [Business Law, Public Responsibility, and Ethics Commons](#), [Commercial Law Commons](#), [Comparative and Foreign Law Commons](#), [Computer Law Commons](#), [E-Commerce Commons](#), [Economic Theory Commons](#), [Internet Law Commons](#), [Law and Economics Commons](#), [Law and Society Commons](#), [Legislation Commons](#), [Public Affairs, Public Policy and Public Administration Commons](#), [Science and Technology Law Commons](#), [Science and Technology Studies Commons](#), [Securities Law Commons](#), and the [Technology and Innovation Commons](#)

---

### Recommended Citation

Paul H. Farmer Jr., *Speculative Tech: The Bitcoin Legal Quagmire & the Need for Legal Innovation*, 9 J. Bus. & Tech. L. 85 (2014)  
Available at: <http://digitalcommons.law.umaryland.edu/jbtl/vol9/iss1/6>

This Notes & Comments is brought to you for free and open access by the Academic Journals at DigitalCommons@UM Carey Law. It has been accepted for inclusion in Journal of Business & Technology Law by an authorized editor of DigitalCommons@UM Carey Law. For more information, please contact [smccarty@law.umaryland.edu](mailto:smccarty@law.umaryland.edu).

# Speculative Tech: The Bitcoin Legal Quagmire & the Need for Legal Innovation

## I. INTRODUCTION

THE DREAD PIRATE ROBERTS is only mostly dead.<sup>1</sup> The latter half of 2013 was an eventful time for Bitcoin. The Federal Bureau of Investigation took down Silk Road, the infamous online drug market, and arrested its owner, the Dread Pirate Roberts.<sup>2</sup> Regulatory agencies and courts began to weigh in on the Bitcoin debate.<sup>3</sup> Bitcoin is no longer confined to a virtual anarchist community and this rise in use and value begs the question: how should the American legal system define and incorporate this technological advancement?

A Bitcoin is a newly developed type of digital currency that has no physical form.<sup>4</sup> They were first generated in 2009 using cryptographic technologies and function through a system of peer-to-peer networks.<sup>5</sup> Once Bitcoins are “mined” by an individual’s computer using specific software, they can be “spent” and placed

---

© 2014 Paul H. Farmer, Jr.

\* J.D. Candidate, University of Maryland Francis King Carey School of Law, May 2014; B.S. Political Science, Clemson University, May 2011. I would like to thank the entirety of the *Journal of Business & Technology Law* for their support and feedback throughout the publication process. I would also like to thank my friends for their continued support and inspiration, without which this comment would not be possible. Finally, a special thanks and dedication to my family, especially my late father, Paul H. Farmer Sr., whose inspiration and example are overshadowed by none.

1. Noel Randewich, *New Silk Road drug bazaar opens a month after FBI bust*, REUTERS (Nov. 7, 2013, 3:41 AM), <http://www.reuters.com/article/2013/11/07/us-crime-silkroad-idUSBRE9A608I20131107> (the new Silk Road site administrator took the same pseudonym, “Dread Pirate Roberts,” as the original Silk Road site administrator). The pseudonym is based upon a character from the film *The Princess Bride*. THE PRINCESS BRIDE (Act III Communications 1987).

2. Randewich, *supra* note 1.

3. See *infra* Part III.2.

4. Reuben Grinberg, *Bitcoin: An Innovative Alternative Digital Currency*, 4 HASTINGS SCI. & TECH. L.J. 159, 160 (2012).

5. See *infra* Part II.

into online circulation.<sup>6</sup> Individuals can run code on their computers to “mine,” accept, use, and store coins in an e-wallet.<sup>7</sup> Since 2009, the concept seems to have caught on, with Bitcoins being traded on currency exchanges and drawing a lot of interest from government and financial sectors.<sup>8</sup>

Proponents tout Bitcoins as the future of world financial markets and some relish in the fact that governments do not back the new currency or other legal entities, allowing for almost complete anonymity in financial transactions.<sup>9</sup> Advocates of mainstream market use emphasize that Bitcoins are highly liquid and have significantly lower transaction costs, allowing for micropayments.<sup>10</sup> Yet, because governments do not recognize Bitcoins, they are unlikely to become a universally accepted form of currency and may instead be deemed a form of counterfeit competing with government-backed currencies.<sup>11</sup> Though there might be a legitimate and legal reason to desire anonymity, this also opens up the potential for transactions of a more nefarious nature: money laundering, tax evasion, sale of illicit drugs, and the trafficking of child pornography.<sup>12</sup>

The purpose of this comment is to discuss the legal definition that should be attributed to Bitcoins, based upon their intended and actual use. In Part II, this comment will look at the technical background of Bitcoins and how the system works.<sup>13</sup> In doing so, it will analyze how Bitcoins are generated, how the network operates, how exchanges are conducted, and why Bitcoins are an important technological and financial innovation.<sup>14</sup> Then, this comment will provide legal background and analysis on the repercussions of labeling Bitcoins strictly as currency.<sup>15</sup> Next, it will discuss the potential for Bitcoins to be defined as a security pursuant to the broad definition of the term.<sup>16</sup> Finally, it will discuss the need for defining Bitcoins pragmatically and the further need for innovative policies to compliment innovative technologies.<sup>17</sup>

---

6. See *infra* Part II.

7. See *infra* Part II.

8. Olga Kharif, *Bitcoin Climbs to Record on Wider Acceptance, China Trade*, BLOOMBERG (Nov. 8, 2013, 6:38 PM), <http://www.bloomberg.com/news/2013-11-06/bitcoin-climbs-to-record-on-wider-acceptance-china-trade.html> (reporting a record high value of \$265 per Bitcoin); Lulu Yilun Chen, *Bitcoin Spawns China Virtual IPOs as U.S. Scrutiny Grows*, Bloomberg (Aug. 21, 2013, 6:33 AM), <http://www.bloomberg.com/news/2013-08-20/bitcoin-spawns-china-virtual-ipos-as-u-s-scrutiny-grows.html>.

9. See Grinberg, *supra* note 4, at 160–61.

10. See Grinberg, *supra* note 4, at 161.

11. See Grinberg, *supra* note 4, at 160–61.

12. See Grinberg, *supra* note 4, at 161.

13. See *infra* Part II.

14. See *infra* Part II.

15. See *infra* Part III.A.

16. See *infra* Part III.B.

17. See *infra* Part IV.

## II. THE TECHNICAL BACKGROUND

The concept of an online, decentralized currency has existed since the inception of the Internet as a public resource.<sup>18</sup> There have been various attempts since the 1990s to create online currencies, but all those prior to Bitcoin failed for several reasons.<sup>19</sup> In 2009, Satoshi Nakamoto<sup>20</sup> posted a research paper to a cryptography listserv providing the concept and algorithm for what he called Bitcoin.<sup>21</sup> Nakamoto described, and ultimately implemented, a process involving a network of computers running special software that would each compete to solve cryptographic puzzles containing the data from the computation of Bitcoin transactions.<sup>22</sup> Each computer would be considered a “miner” and each miner would be awarded Bitcoins for each puzzle solved.<sup>23</sup> Bitcoins could then be exchanged between miners and others willing to accept them using the peer-to-peer network created and sustained by the CPU power of these miners.<sup>24</sup>

### A. Bitcoin Generation

Bitcoin are similar to a computer file that can be visualized as a coin on a desktop.<sup>25</sup> They are generated and awarded through a process called mining.<sup>26</sup> Mining, on an individual scale, requires<sup>27</sup> a computer running the program, “bitcoin miner,” and a connection to the Bitcoin network. Once connected, the computer uses its processing power to compute the Bitcoin encryption function and Bitcoins are awarded to the computer that deciphers the puzzle and constructs the proper

18. Benjamin Wallace, *The Rise and Fall of Bitcoin*, WIRED MAGAZINE (Nov. 23, 2011, 2:52 PM), [www.wired.com/magazine/2011/11/mf\\_bitcoin/](http://www.wired.com/magazine/2011/11/mf_bitcoin/).

19. See Wallace, *supra* note 18 (discussing the failed attempts at other online currency proposals). A system called “Ecash” failed in part because it relied on existing financial infrastructures, and other attempts, like bit gold, RPOW, and b-money, just failed to catch on. *Id.*

20. Most likely a pseudonym. Tim Worstall, *Ted Nelson Says That Bitcoin’s Satoshi Nakamoto Is Shinichi Mochizuki*, FORBES (May 5, 2013, 10:47 AM), <http://www.forbes.com/sites/timworstall/2013/05/19/ted-nelson-says-that-bitcons-satoshi-nakamoto-is-shinichi-mochizuki/>. Nakamoto’s profile indicated that he lived in Japan, was using an email from a free German service, and all Google searches turned up no relevant information. See Wallace, *supra* note 18.

21. See Wallace, *supra* note 18; see also Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (2009), available at <http://www.bitcoin.org/bitcoin.pdf>.

22. See generally, Nakamoto, *supra* note 21 (presenting the process in detail).

23. See *infra* Part II.B.

24. See *infra* Part II.B.

25. See Wallace, *supra* note 18.

26. See Wallace, *supra* note 18.

27. Andy Greenberg, *Crypto Currency*, FORBES (Apr. 20, 2011, 6:00 PM), <http://www.forbes.com/forbes/2011/0509/technology-psilocybin-bitcoins-gavin-andresen-crypto-currency.html>; see also J.P., *Virtual Currency: Bits and Bob*, The Economist (Jun. 13, 2011, 8:30 PM), <http://www.economist.com/blogs/babbage/2011/06/virtual-currency>.

block.<sup>28</sup> Miners are then incentivized to contribute CPU power in exchange for their own Bitcoins.<sup>29</sup>

The system itself is designed to automatically limit the number of Bitcoins in existence at any given point.<sup>30</sup> Miners initially received a total of 50 Bitcoins for every proper block and, as the computational problems become more difficult and the number of transactions increases, the payouts are cut in half.<sup>31</sup> Specifically, the payout is cut in half with every 210,000 blocks, resulting in a pre-determined Bitcoin limit of twenty one million.<sup>32</sup>

The true computing and energy requirements of mining for Bitcoins are not as simplistic as this explanation, requiring hardware and electricity far beyond the normal capabilities of a personal computer.<sup>33</sup> However, once a Bitcoin has been mined or purchased it can be stored via a virtual wallet on the desktop of a computer.<sup>34</sup> Online storage facilitates transactions because the security protocols of the Bitcoin network ensure the proper functioning of the Bitcoin system.<sup>35</sup>

### *B. The Network*

The Bitcoin peer-to-peer network that allows for miners to generate Bitcoins also serves as a public ledger for all Bitcoin transactions.<sup>36</sup> A timestamp server records the time of creation of each Bitcoin and any other Bitcoin transaction within the network.<sup>37</sup> The full record of transactions is called a block chain, a

---

28. See Wallace, *supra* note 18.

29. See Wallace, *supra* note 18.

30. Francois R. Velde, *Bitcoin: A Primer*, The Federal Reserve Bank of Chicago, Number 317, at 2 (2013), available at [http://www.chicagofed.org/digital\\_assets/publications/chicago\\_fed\\_letter/2013/cfddecember2013\\_317.pdf](http://www.chicagofed.org/digital_assets/publications/chicago_fed_letter/2013/cfddecember2013_317.pdf) (blocks are added at a rate of six times per hour).

31. *Id.* Overtime the mining process becomes unprofitable for the individual miner, but every transaction has the option of paying a transaction fee that moves an individual transaction into the next available block. *Id.* The fee goes to the miner who adds the block to the chain. *Id.*

32. *Id.* This means that the number payout will go from 50 to 25, 25 to 12.5, and so on. Wallace, *supra* note 18. The predetermined limit is designed to result in a predictable and tamper proof rate that is argued to prevent the problem of inflation within the bitcoin market. *Id.* (“...the predetermined release of the digital currency kept the [B]itcoin money supply growing at a predictable rate, immune to printing-press-happy central bankers and Weimar Republic-style hyperinflation.”).

33. See Velde, *supra* note 30, at 3 (“Pro[]ducing one bitcoin per day at current levels of difficulty requires a machine worth about \$3,000 and about a dollar’s worth of electricity per day.”).

34. See J.P., *supra* note 27.

35. See *infra* Part II.C. (explaining transactional protocols through public-key encryption).

36. Robert W. Wood, *Bitcoin Soars While Liberty Reserve Draws Guilty Plea*, FORBES (Nov. 8, 2013, 3:01 AM), <http://www.forbes.com/sites/robertwood/2013/11/08/bitcoin-soars-while-liberty-reserve-draws-guilty-plea/>.

37. See Nakamoto, *supra* note 21, at 2.

sequence of records composing a virtual ledger.<sup>38</sup> The computing power delivered to the network by the miners is used to generate the blocks of the chain and keep track of Bitcoin transactions.<sup>39</sup> A useful analogy is to think of the entire network as a handwritten public ledger comprised of sentences, chapters, and volumes.<sup>40</sup> Every transaction is a sentence and each block is a chapter making a “catalogue of a sequence of transactions.”<sup>41</sup> The chapters are combined into separate volumes and block chains making up the public ledger.<sup>42</sup>

In a traditional system, like those implemented through online banks and entities like PayPal, the third party keeps track of all of the transactions on their own servers.<sup>43</sup> The public ledger of the Bitcoin network allows records to be kept without the third party, while the “cryptographic proof” maintained in the ledger allows individuals to engage in transactions without oversight.<sup>44</sup> The intent of Bitcoins is based in the removal of a central third party that has control over, and the ability to manipulate, the entire system.<sup>45</sup>

### C. Public-key Encryption

In order to maintain user privacy, all transactions are done through the use of public-key encryption.<sup>46</sup> The encryption generates two different, but related, keys for each network user — one private and one public.<sup>47</sup> The user retains one key and the other is made viewable by those initiating transactions.<sup>48</sup> The private key is used to access funds and approve payments, while the public key is used to receive payments and as the means of record keeping for all transactions compiled in the

---

38. See Velde, *supra* note 30, at 2. See also, *How Bitcoin Works*, [https://en.bitcoin.it/wiki/How\\_bitcoin\\_works](https://en.bitcoin.it/wiki/How_bitcoin_works) (last visited Jan. 14, 2013), and *Block Chain*, [https://en.bitcoin.it/wiki/Block\\_chain](https://en.bitcoin.it/wiki/Block_chain) (last visited Nov. 14, 2013) (explaining blocks and block chains).

39. See Velde, *supra* note 30, at 2; see also, *How Bitcoin Works*, *supra* note 38; *Block Chain*, *supra* note 38.

40. Nikolei M. Kaplanov, *Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation*, 25 LOY. CONSUMER L. REV. 111, 118–19 (2012).

41. *Id.* at 118.

42. *Id.* at 119.

43. See Grinberg, *supra* note 4, at 168 (discussing the existence and methods of online payment systems like PayPal and credit card companies).

44. Nakamoto, *supra* note 21, at 1. The Bitcoin network has an inherent defense against counterfeit of the transactional record requiring the same amount of computing power of the entire network combined to introduce a fake record. Jacob Aron, *Bitcoin Online Currency Gets New Job in Web Security*, NEWSIDENTIST (Jan. 17, 2012), <http://www.newscientist.com/article/mg21328476.500-bitcoin-online-currency-gets-new-job-in-web-security.html>.

45. Nakamoto, *supra* note 21, at 1.

46. J.P., *supra* note 27.

47. Investopedia, *How Bitcoin Works*, FORBES (Aug. 1, 2013, 12:25 PM), <http://www.forbes.com/sites/investopedia/2013/08/01/how-bitcoin-works/>.

48. J.P., *supra* note 27.

blocks.<sup>49</sup> If user A has a public key of X, user B has a public key of Y, and they engage in a transaction, it would be recorded as X to Y and not A to B. User A would use their private key to approve the transaction and user B would use theirs to access what was exchanged.

#### D. Means of Exchange

The public ledger system keeps track of all transactions that occur between individuals, as well as those that take place through market exchanges.<sup>50</sup> Individuals that have mined Bitcoins or received them from another user have the ability to move their Bitcoins around like sending an email.<sup>51</sup> Those who wish to acquire Bitcoins without mining have the option of using exchanges to purchase them with traditional currencies, or to be connected directly with an individual for trading.<sup>52</sup> These exchanges also allow speculation in the Bitcoin market by providing a trading platform for futures and options contracts specifically on Bitcoins, or based in Bitcoins.<sup>53</sup> Bitcoin casinos are also a growing enterprise that facilitates the transfer of Bitcoins from individuals into the market.<sup>54</sup>

#### E. Why Bitcoins Matter

An authoritative third party does not control the Bitcoin network.<sup>55</sup> The network operates peer-to-peer, and limits third party control through the use of an inherently public network.<sup>56</sup> No single authority has control over the network – it depends entirely upon the continued support and maintenance of the miners that contribute their computer power.<sup>57</sup> Furthermore, the sheer size of the network of miners helps to prevent unauthorized manipulation or implantation of data in the

---

49. *Id.*; Nakamoto, *supra* note 21, at 6.

50. J.P., *supra* note 27.

51. See Wallace, *supra* note 18. One of the first Bitcoin transactions occurred between the United Kingdom and Florida, when bitcoins were exchanged for a pizza delivery. *Id.*

52. See Sara Yin, *Which Bitcoin Exchange Can You Trust?*, PCMAG (June 20, 2011, 2:11 PM), <http://www.pcmag.com/article2/0,2817,2387279,00.asp>; see also MT.GOX, <https://mtgox.com/> (last visited Nov. 16, 2013).

53. *Futures Market*, ICBIT BITCOIN EXCHANGE, <https://icbit.se/futures> (last visited Nov. 16, 2012).

54. Jon Matonis, *Bitcoin Casinos Release 2012 Earnings*, FORBES (Jan. 22, 2013, 11:35 AM), <http://www.forbes.com/sites/jonmatonis/2013/01/22/bitcoin-casinos-release-2012-earnings/>. 2012 proved to be a profitable year for bitcoin casinos that released earnings significantly higher than expected. Casinos benefited from the fact that the computer algorithms that make Bitcoins possible also make it possible to have provably fair casino games online. Mike Flacy, *Bitcoin Casino on Track to Earn Nearly One Million Per Year*, DIGITAL TRENDS (Jan. 23, 2013), <http://www.digitaltrends.com/web/bitcoin-accepting-casinos-on-track-to-make-one-million-a-year/>.

55. Investopedia, *supra* note 47.

56. See J.P., *supra* note 27.

57. See Nakamoto, *supra* note 21, at 3.

system.<sup>58</sup> This security, coupled with the ability of exchanges to pinpoint and correct abnormalities in Bitcoin trading, keeps Bitcoins in the safe hands of the network.<sup>59</sup>

Public-key encryption increases the anonymity of Bitcoin users.<sup>60</sup> The public key is only a reference to the location of the Bitcoins as they are transferred from key to key, not a representation of the individual user.<sup>61</sup> The network itself does not disclose account information of users and creates the possibility of anonymity; however, the use of virtual wallet software, a requirement for holding Bitcoins, makes complete anonymity impossible for casual users.<sup>62</sup> While the virtual wallet system prevents total anonymity for the casual user, the use of Bitcoins as payment through anonymous networks makes complete anonymity more likely.<sup>63</sup>

Bitcoins have the potential to reduce the costs of transactions that occur online.<sup>64</sup> Generally, many online payments are made through the use of credit cards or services such as PayPal.<sup>65</sup> There are automatic transaction costs associated with these transactions.<sup>66</sup> Businesses that accept credit cards are required to pay a fee equivalent to a percentage of the total transaction, or, in some circumstances, a flat fee.<sup>67</sup> Problems arise when online transactions are small, making the fee charged by

58. See Aron, *supra* note 44. The size of the network makes it difficult for unauthorized transactions to occur because of the way in which each miner is, in a sense, responsible for a yay or nay vote on the validity of a transaction. See Velde, *supra* note 30, at 3. A potential hacker would have to gain control of over half the network to counterfeit a transaction. Velde, *supra* note 30, at 3.

59. See Yin, *supra* note 52.

60. See *supra* Part II.C.

61. See J.P., *supra* note 27.

62. See Betsy Isaacson, *Silk Road Crossing: Shopping on the Internet's Massive Marketplace for Illegal Drugs*, HUFFINGTON POST (Jan. 2, 2013, 2:17 PM), [http://www.huffingtonpost.com/betsy-isaacson/silk-road-illegal-drugs-online\\_b\\_2340477.html](http://www.huffingtonpost.com/betsy-isaacson/silk-road-illegal-drugs-online_b_2340477.html) (Bitcoin allows for purchases in the “Deep Web” to occur); see also Velde, *supra* note 30, at 3.

63. See Velde, *supra* note 30, at 3; see also Randewich, *supra* note 1 (discussing how Silk Road perpetuated anonymity of buyers and sellers by operating on the Tor network). Tor works through “onion routing.” Christopher Riley, *The Need for Software Innovation Policy*, 5 J. TELECOMM. & HIGH TECH. L. 589, 607 (2007). “Onion routing is a technique that involves the directing of messages (including web traffic and email) from their source to their destination via a sequence of proxies (called onion routers) that reroute messages in an unpredictable path.” Ira S. Rubinstein et. al., *Data Mining and Internet Profiling: Emerging Regulatory and Technological Approaches*, 75 U. CHI. L. REV. 261, 275-76 (2008). Anonymity is attained because each router can read “only where the data immediately came from and where the data are immediately going.” *Id.* at 276.

64. Grinberg, *supra* note 4, at 170 (discussing the ability of bitcoins to reduce transaction costs online via micropayments).

65. Grinberg, *supra* note 4, at 168.

66. See *Micropayments*, PAYPAL, [https://www.paypalobjects.com/IntegrationCenter/ic\\_micropayments.html](https://www.paypalobjects.com/IntegrationCenter/ic_micropayments.html). (last visited Nov. 16, 2013).

67. See SQUARE, <https://squareup.com/pricing> (last visited Dec. 15, 2013) (explaining that merchants will be assessed a 2.75% fee per transaction).



the payment service greater than the actual transaction itself.<sup>68</sup> Bitcoins limit transaction costs because there is no third party provider proscribing such costs.<sup>69</sup> As a result, the use of Bitcoins for online transactions would, theoretically, be less expensive than using other methods of payment.<sup>70</sup> This would allow for online micropayments to take place more effectively because the transaction costs would not outweigh the payment made.<sup>71</sup>

### III. LEGAL DISCUSSION

Bitcoins are self-defined as a digital currency.<sup>72</sup> In the United States, it remains a struggle to properly define Bitcoins, and the novelty of Bitcoins, their network, and their use by individuals makes it necessary to analyze them, not just through the obvious lens of a currency, but also through those other financial instruments that they are akin to.<sup>73</sup> Such an analysis should contribute to the most pragmatic and beneficial labeling of Bitcoins for legal use in the United States.

Bitcoins are a global phenomenon and countries are currently deciding how to handle and define them on an individual basis.<sup>74</sup> For example, the central banking authority in Thailand recently outlawed the trading of Bitcoins, pending a formal review.<sup>75</sup> The German Federal Ministry of Finance classified Bitcoin as a financial instrument operating as private money, using the term “Rechnungseinheit.”<sup>76</sup> The most practical aspect of the German designation is that it allows the German

68. See Grinberg, *supra* note 4, at 170. These small transactions are referred to as micropayments. Robert D. Fram et. al., *Altered States: Electronic Commerce and Owning the Means of Value Exchange*, 1999 STAN. TECH. L. REV. 2, 56 (1999) (“Payments for microtransactions in very small amounts, typically less than one cent”).

69. See Nakamoto, *supra* note 21, at 1.

70. See Grinberg, *supra* note 4, at 170.

71. See *id.*

72. BITCOIN, <http://bitcoin.org/en/> (last visited Nov. 16, 2013) (the explanatory video on the page defines Bitcoin as a digital currency). This comment differentiates between the terms “virtual currency” and “digital currency,” and chooses to use the term “digital currency” as it more aptly refers to Bitcoins and not to currencies used within virtual environments, video games.

73. See Kashmir Hill, *Bitcoin Companies and Entrepreneurs Can't Get Bank Accounts*, FORBES (Nov. 15, 2013, 3:23 PM), <http://www.forbes.com/sites/kashmirhill/2013/11/15/bitcoin-companies-and-entrepreneurs-cant-get-bank-accounts/> (reporting that the lack of regulatory guidelines has led banks to refuse accounts to Bitcoin companies).

74. See John Phillips, *Could China Make or Break Bitcoin?*, CNBC (Nov. 15, 2013, 3:53 AM), <http://www.cnbc.com/id/101200996> (discussing the rise in Bitcoin prices in conjunction with fears of U.S. government regulation and the lack thereof in China).

75. Matt Clinch, *Bitcoin Banned in Thailand*, CNBC (July 30, 2013, 6:20 AM), <http://www.cnbc.com/id/100923551>.

76. Saumya Vaishampayan, *Bitcoins are Private Money in Germany*, WALL ST. J., The Tell (blog), available at <http://blogs.marketwatch.com/thetell/2013/08/19/bitcoins-are-private-money-in-germany/>. Rechnungseinheit translates to “unit of account.” *Id.* The German Federal Ministry of Finance, in making their classification, stated that Bitcoin did not classify as e-money, functional currency, or foreign currency. *Id.*

government to tax Bitcoin trading as short-term capital gains, which opens up the possibility of instituting a sales tax on its use as a means of exchange.<sup>77</sup>

The following section will provide the legal background and analysis on the issue of defining Bitcoin as a currency or a security. This section will first address Bitcoin as a currency, with specific attention to the potential ramifications that such a label would bring in the legal and regulatory contexts.<sup>78</sup> The remainder of the section will focus on Bitcoin as a potential security based upon the applicability of the “family resemblance” test for notes and the *Howey* test for investment contracts.<sup>79</sup>

*A. Bitcoins are Used as a Currency but Cannot be Properly Designated as Such.*

Bitcoins were originally intended for and sometimes used as a digital currency.<sup>80</sup> Currency is “an item [] that circulates as a medium of exchange.”<sup>81</sup> Theoretically, if a group of people started accepting chocolate bars in exchange for other items, then the chocolate bars would be a form of currency. The use of Bitcoins as a means of exchange makes it a currency at its most basic level.<sup>82</sup> The creators of Bitcoin intended them to be an alternative medium of exchange, as indicated by the currency moniker; however, the bridge that connects Bitcoins as a means of exchange to what we colloquially refer to as money is one over troubled waters.<sup>83</sup>

As a concept, money is traditionally defined as a medium of exchange, a unit of account, and a store of value.<sup>84</sup> A U.S. dollar is money because it serves all three of these functions, not just that of a currency. The legal definition of money is far more muddled. Black’s Law Dictionary defines money as “[t]he medium of exchange authorized or adopted by a government as part of its currency.”<sup>85</sup> The Uniform Commercial Code defines money as “a medium of exchange currently authorized or adopted by a domestic or foreign government.”<sup>86</sup> The Federal Election

77. *Id.*

78. *See infra* Part III.A.

79. *See infra* Part III.B.

80. Velde, *supra* note 30, at 1. Bitcoin is a fiduciary currency – it has no intrinsic value and what value it has is derived from the belief that others will accept it. *Id.* at 2–3. It is not a commodity-based currency like gold or bank notes redeemable in gold. *Id.* at 2.

81. BLACK’S LAW DICTIONARY 265 (9th Ed. 2009).

82. *See* Paul Vigna, *Bitcoin Couple Travels the World Using Virtual Cash: World-Wide Odyssey Spanned Three Continents and Proved One Can Live on Bitcoin Alone*, WALL ST. J. (Nov. 15, 2013), <http://online.wsj.com/news/articles/SB10001424052702303789604579196171277465460> (chronicling a couple attempting to travel the world using Bitcoin as their only method of payment).

83. *See* Zachary Warmbrodt, *Bitcoin gets ready for the government*, POLITICO, Nov. 14, 2013, <http://www.politico.com/story/2013/11/bitcoin-gets-ready-for-the-government-99893.html> (discussing the increased government interest in Bitcoin and the fact that Bitcoin entrepreneurs are lawyering up).

84. Richard W. Rahn, *A Constant Unit of Account*, 30 CATO JOURNAL 521, 522 (2010).

85. BLACK’S LAW DICTIONARY 695 (9th Ed. 2009).

86. U.C.C. § 1-201(b)(24) (2013).

Commission defines money as “currency of the United States or of any foreign nation, checks, money orders, or any other negotiable instruments payable on demand.”<sup>87</sup> The common theme in these definitions is that, in order for something to be money, it has to be recognized by some government through authorization or adoption. A U.S. dollar is legal tender, a synonym for the legal definition of money, because the United States Government backs it.<sup>88</sup>

Bitcoins are not backed by any government.<sup>89</sup> It is unlikely that any government will ever fully back Bitcoins, since they would serve as competition to whatever currency that particular government is already using.<sup>90</sup> This support would also go against the decentralized nature of Bitcoins.<sup>91</sup> As a result, attributing the label of “money” to Bitcoins is illogical. Yet, merely defining Bitcoins as “currency” still subjects them to the laws and scrutiny designed for money, or things competing with money.<sup>92</sup> This poses an unnecessary risk to Bitcoins as an innovation and creates the potential for haphazard regulation.<sup>93</sup> The remainder of this section explores the idea that the synonymous use of currency and money has created a legal and regulatory environment that is toxic for Bitcoin and that a permanent legal label of “currency” will increase this toxicity.<sup>94</sup>

### 1. *The Potential for Counterfeit*

As a currency, Bitcoin has the potential to be deemed a counterfeit and rendered illegal. The Constitution grants the federal government a facial monopoly over the creation, production, and issuance of money within the borders of the United States, pursuant to Article 1 Section 10.<sup>95</sup> Congress was given power over money to the exclusion of the states and has since enacted laws criminalizing the issuance of money in competition with the dollar.<sup>96</sup> One of the most recent examples of the government’s exercise of this power came in 2011, when Bernard von NotHaus was convicted of counterfeiting for his creation and marketing of the Liberty Dollar.<sup>97</sup> While Mr. von NotHaus’ conviction was specifically based on his creation of

---

87. 11 C.F.R. § 100.52(c) (2013).

88. See BLACK’S LAW DICTIONARY 623 (9th Ed. 2009).

89. Velde, *supra* note 30, at 3.

90. See Velde, *supra* note 30, at 3.

91. See Velde, *supra* note 30, at 3.

92. See *infra* Part III.A.1.

93. See *infra* Part III.A.2.

94. See *infra* Parts III.A.1, III.A.2.

95. U.S. CONST. art. 1 § 10. “No state shall . . . coin money.” *Id.*

96. See 18 U.S.C. § 336 (2006) (essentially making it illegal to circulate things in lieu of lawful money).

97. Grinberg, *supra* note 4, at 192–94.

physical coins, it serves as a serious reminder that the potential exists for alternative currencies circulating nationwide to come under counterfeit scrutiny.<sup>98</sup>

The most discussed law that serves as a counterfeit threat to Bitcoin is the Stamp Payments Act of 1862.<sup>99</sup> The Act, while unlikely to be interpreted as prohibiting Bitcoin, is an example of legislation attempting to ensure that no other domestic currency competes with the dollar.<sup>100</sup> The plain language of the act makes it a criminal offense to issue anything worth less than a dollar that competes with the legal currency of the United States.<sup>101</sup> The time period of the act and the physical nature of the enumerated list of financial instruments make it unlikely that the act would be applied to Bitcoins.<sup>102</sup> Disregarding this fact, Bitcoins are divisible to the point of being less than one dollar and are circulated in lieu of lawful money.<sup>103</sup> This leaves potential for application of the act, or at least the policy of prohibiting competing currencies.<sup>104</sup>

It would not be inconceivable or difficult for Bitcoins to receive counterfeit challenges, nor would it be impossible for such challenges to be successful.<sup>105</sup> The potential for blanket illegality is a detriment to the legitimacy of Bitcoin. An inflexible definition as a currency offers little defense to a counterfeit claim, other than the fact that the laws are outdated and were not originally drafted with such technology in mind.<sup>106</sup> There is a policy of preventing competition to the dollar and it would be difficult to argue that Bitcoins are not intended as such competition.<sup>107</sup>

---

98. Grinberg, *supra* note 4, at 192.

99. *See generally*, Grinberg, *supra* note 4, at 183–84 (discussing the application of the Stamp Payments Act of 1862 to Bitcoin).

100. *See* 18 U.S.C. § 336 (2006) (the plain language of the code makes it illegal to issue or circulate enumerated things to be used “in lieu” of lawful money).

101. *Id.*

102. Grinberg, *supra* note 4, at 187, 190 (arguing that the interpretation of the statute by the Supreme Court and the fact that the statute is 150 years old weighs against its enforcement with regards to Bitcoins).

103. Bitcoins are divisible to the eighth decimal place, meaning that it is possible to engage in a transaction worth .00000001 Bitcoins. *See* Velde, *supra* note 30, at 1. Because Bitcoins circulate in a digital, non-physical, form they could be considered to be circulating at an amount equal to the market value of a single Bitcoin multiplied by .00000001. This would mean that the value of a single Bitcoin would need to be \$100 million in order for Bitcoins to be circulating at a value at, or greater than, one dollar.

104. *See* Grinberg, *supra* note 4, at 183.

105. *See* Grinberg, *supra* note 4, at 183–90.

106. Grinberg, *supra* note 4, at 190.

107. *See* Grinberg, *supra* note 4, at 183. The use of Bitcoins in a transaction means that another currency, like the dollar, is not being used. The dollar is then competing with Bitcoin for use in transactions.

## 2. *FinCEN & FEC Discussion*

Earlier writings have speculated as to the response that Bitcoins would receive from regulatory agencies and the courts.<sup>108</sup> 2013 proved informative with preliminary guidance released from the Financial Crimes Enforcement Network (“FinCEN”) at the Department of the Treasury and the Federal Election Commission (“FEC”).<sup>109</sup> Their guidance further solidifies the problems with applying a currency definition to Bitcoins by reaching conclusions that inhibit the functioning of the Bitcoin network or by carving out exceptions that circumvent the currency issue.

In November 2013, a draft advisory memo was released from the Federal Election Commission providing preliminary guidance regarding the use of Bitcoins as campaign contributions.<sup>110</sup> According to the draft memo, Bitcoins do not fall within the definition of money used by the FEC and cannot be accepted as such by political campaigns.<sup>111</sup> However, the draft language has the FEC poised to allow Bitcoins as “in-kind contributions” because “anything of value” is acceptable as a contribution.<sup>112</sup> The draft also likens Bitcoins, with reference to supplementary advisory opinions, to non-monetary contributions “of value” including stocks or commodities.<sup>113</sup> It is notable that the FEC is willing to carve out an exception for Bitcoins, because such an exception is an illustration of the impracticability of defining Bitcoins as “money” and is an example of how an exception can be made for them.

On March 18, 2013, FinCEN issued guidelines regarding virtual currencies.<sup>114</sup> The purpose was to provide guidance on the application of money transmitting laws to virtual currencies.<sup>115</sup> While the guidelines did not mention Bitcoins specifically, the section on de-centralized virtual currencies appears applicable.<sup>116</sup>

---

108. See, e.g., Grinberg, *supra* note 4, at 204–06 (discussing current regulation, the potential for new regulation, and the need for a more in depth look at the regulatory scheme surrounding digital currency).

109. FIN. CRIMES ENFORCEMENT NETWORK, U.S. DEP’T OF THE TREASURY, APPLICATION OF FINCEN’S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES, FIN-2013-G001 5 (2013), [http://fincen.gov/statutes\\_regs/guidance/html/FIN-2013-G001.html](http://fincen.gov/statutes_regs/guidance/html/FIN-2013-G001.html) [hereinafter FinCEN]; Ellen L. Weintraub, Draft Advisory Opinion 2013-15, FED. ELECTION COMM’N 1 (Nov. 7, 2013), <http://saos.nictusa.com/aodocs/201315.pdf>.

110. Byron Tau, *FEC poised to allow Bitcoin campaign donations*, POLITICO, Nov. 7, 2013, <http://www.politico.com/story/2013/11/bitcoin-campaign-donations-draft-rule-99566.html>.

111. Weintraub, *supra* note 109, at 5–6.

112. Weintraub, *supra* note 109, at 5–6.

113. Weintraub, *supra* note 109, at 6.

114. FinCEN, *supra* note 109, at 5.

115. FinCEN, *supra* note 109, at 5.

116. See Jeremy Kirk, *Bitcoin exchange Mt. Gox registers with U.S. Treasury*, PCWORLD (July 1, 2013, 5:57 AM), <http://www.pcworld.com/article/2043360/bitcoin-exchange-files-with-us-treasury-regulatory-agency>.

Based upon the guidelines, an individual that mines a Bitcoin and exchanges it for other goods or services is not labeled a money transmitter.<sup>117</sup> However, an individual that mines a Bitcoin and exchanges it for real currency, as well as the individual that serves as an intermediary to that transaction, are labeled as money transmitters.<sup>118</sup> This label requires the individual, or entity, to register with the Secretary of the Treasury as a money transmitting business or service, or risk facing a potential civil or criminal penalty.<sup>119</sup> This means that Bitcoin exchanges, like Mt. Gox, and individual miners are subject to registration or a penalty.<sup>120</sup>

While the registration requirement appears logical on its face, especially for exchanges, the seemingly arbitrary designation of some miners as money transmitting businesses imposes an undue burden on the Bitcoin network. The way the guidelines are phrased, it would be reasonable to conclude that any miner that sells a mined Bitcoin is required to register.<sup>121</sup> Any Bitcoin “cash-out” by a miner if they are not registered could lead to criminal or civil penalties.<sup>122</sup> This adds a layer of registration to mining and increases the potential costs, creating a disincentive for the continued maintenance of the network.

The preliminary guidance by FinCEN and the FEC, and the potential for counterfeit, shows that the packaging of a circular Bitcoin into a square shaped definition, while potentially convenient, could prove to be toxic for Bitcoins continued existence. Potential illegality and increased risk could lead to higher maintenance costs and stifle Bitcoin development.<sup>123</sup> However, as the FEC has

---

html (Bitcoin exchange Mt. Gox registered with the Treasury pursuant to the guidelines). Bitcoins satisfy the “de-centralized virtual currency” definition presented by FinCEN in that Bitcoins “ha[ve] no central repository and no single administrator, and [] that persons may obtain [Bitcoins] by their own computing or manufacturing effort.” FinCEN, *supra* note 109, at 5.

117. FinCEN, *supra* note 109, at 5.

118. FinCEN, *supra* note 109, at 5.

119. FinCEN, *supra* note 109, at 5; 31 U.S.C. § 5330 (2001) (providing for a civil penalty for failure to register); 18 U.S.C. § 1960 (2006) (imposing a fine or up to five years in prison for operating a money transmitting business in violation of 31 U.S.C. § 5330 (2001)).

120. See Kirk, *supra* note 116.

121. FinCEN, *supra* note 109, at 5 (“[A] person that creates units of convertible virtual currency and sells those units to another person for real currency or its equivalent is engaged in transmission to another location and is a money transmitter.”).

122. See 31 U.S.C. § 5330 (2001) (providing for a civil penalty for failure to register); 18 U.S.C. § 1960 (2006) (imposing a fine or up to five years in prison for operating a money transmitting business in violation of 31 U.S.C. § 5330 (2001)).

123. See Hill, *supra* note 73 (uncertainty provides obstacles for Bitcoin entrepreneurs). The Bitcoin network relies on the community of miners to function, without the miners there would be no network and transactions would not be validated. See Velde, *supra* note 30, at 2. The risks involved create potential future costs because illegality means that all Bitcoin investment gives zero return to miners and holders. Furthermore, increased layers of regulation and “red tape” are a disincentive to mining because they make it inherently harder.

shown, Bitcoin does not necessarily have to be defined as money and an exception could help it stay sustainable.

### *B. Bitcoin as a Security*

In August 2013, United States Magistrate Judge Amos L. Mazzant signed off on a Memorandum Opinion in the United States District Court for the Eastern District of Texas that determined that the court had subject matter jurisdiction over a Securities Exchange Commission action against Trendon T. Shavers.<sup>124</sup> Shavers was accused of defrauding investors, but argued that his investments were not securities because Bitcoins are not money.<sup>125</sup> Judge Mazzant came to a different conclusion, determining that Bitcoins are “a currency or form of money” meaning that Shavers’ investments satisfied the test for securities.<sup>126</sup> This served as a first step in the recognition and regulation of Bitcoins by a federal court.<sup>127</sup> The curious aspect of the holding is that Shavers’ “investments” were the buying and selling of Bitcoins, which begs the question of whether the Bitcoins themselves were securities.<sup>128</sup>

The Securities Act of 1933 defines a security through an enumeration of financial instruments.<sup>129</sup> The instruments that are most apt for discussion with regard to Bitcoins are notes and investment contracts.<sup>130</sup> The nature of securities, in both their form and function, has resulted in a securities jurisprudence painted with a broad

---

124. SEC v. Shavers, 4:13-CV-416, 2013 WL 4028182 at \*2 (E.D. Tex. Aug. 6, 2013).

125. *Shavers*, 2013 WL 4028182, at \*1. Shavers “investments” involved the buying and selling of Bitcoins locally. *Id.* Shavers would take in Bitcoins from investors and then buy and sell Bitcoins in order to turn a profit. *Id.*

126. *Shavers*, 2013 WL 4028182, at \*2.

127. See Devin Coldeway, ‘Bitcoin is a currency’: Federal judge says the virtual cash is real money, NBC NEWS (Aug. 8, 2013, 3:47 PM), <http://www.nbcnews.com/technology/bitcoin-currency-federal-judge-says-virtual-cash-real-money-6C10874611> (discussing the court’s decision).

128. *Shavers*, 2013 WL 4028182, at \*1.

129. 15 U.S.C. § 77(b) (2006).

“The term ‘security’ means any note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, 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, certificate of deposit, or 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 subscribe to or purchase, any of the foregoing.”

*Id.*

130. Grinberg, *supra* note 4, at 195–97 (equating Bitcoins to notes and investment contracts conceptually).

brush.<sup>131</sup> Investment contracts and notes have their own judicially crafted elements for determining if they are securities.<sup>132</sup> The rationale of securities law is to ensure that anything that can be a security is regulated as such.<sup>133</sup> The remainder of this section explores the notion that the tests for notes and investment contracts, and their conceptual underpinnings, are applicable to Bitcoins, and, as a result, Bitcoins should potentially be defined as securities.

### *1. Notes & the Family Resemblance Test*

A note can be either a negotiable instrument or a security.<sup>134</sup> The determination of whether a note is a security is done through the family resemblance test.<sup>135</sup> “A note is presumed to be a ‘security,’ and that presumption may be rebutted only by a showing that the note bears a strong resemblance [] to one of the enumerated categories of instrument.”<sup>136</sup> The factors for determining the resemblance include: (1) examining the transaction to “assess the motivations that would prompt a reasonable seller and buyer to enter into it,”<sup>137</sup> (2) examining the “plan of distribution” of the instrument,<sup>138</sup> (3) examining the reasonable expectation of the investing public, with deference to this expectation over an economic analysis,<sup>139</sup> and (4) examining whether another factor, “such as the existence of another regulatory scheme significantly reduces the risk of the instrument.”<sup>140</sup>

---

131. *Reves v. Ernst & Young*, 494 U.S. 56, 60 (1990) (“In defining the scope of the market that it wished to regulate [through the Securities Acts], Congress painted with a broad brush.”).

132. Compare *SEC v. W.J. Howey Co.*, 328 U.S. 293 (1946) (providing the test for determining if an investment contract is a security), with *Reves*, 464 U.S. 56 (1990) (providing the test for determining if a note is a security).

133. *Reves*, 494 U.S. at 61 (Congress defined security in broad and general terms to ensure that anything that is considered a security can fall within the definition of the term).

134. See *Reves*, 494 U.S. at 67 (discussing the family resemblance test as it applies to the differentiation between notes). A Bitcoin is not a negotiable instrument because it is not an “unconditional promise or order to pay a fixed amount of money.” U.C.C. § 3-104(a) (2013).

135. See *Reves*, 494 U.S. at 64, 67.

136. *Reves*, 494 U.S. at 67. The “enumerated categories of instrument” is a list developed by the Second Circuit and applied by the Supreme Court in *Reves*. *Id.* at 65. A partial version of the list is as follows:

“the note delivered in consumer financing, the note secured by a mortgage on a home, the short-term note secured by a lien on a small business or some of its assets, the note evidencing a ‘character’ loan to a bank customer, short-term notes secured by an assignment of accounts receivable, or a note which simply formalizes an open-account debt incurred in the ordinary course of business (particularly if, as in the case of the customer of a broker, it is collateralized)”

*Id.* at 65 (quoting *Exch. Nat. Bank of Chicago v. Touche Ross & Co.*, 544 F.2d 1126, 1138 (2d Cir. 1976)).

137. *Reves*, 494 U.S. at 66.

138. *Id.* at 66 (quoting *SEC v. C.M. Joiner Leasing Corp.*, 320 U.S. 344, 353 (1943)).

139. *Reves*, 494 U.S. at 66.

140. *Id.* at 67.



Bitcoins do not meet the traditional definition of a note,<sup>141</sup> but the ‘family resemblance’ test is informative when applied. Considering the motivations of the buyers and sellers, the plan of distribution, the expectation of the investing public, and the existence of another regulatory scheme, it is unlikely that Bitcoins are note securities. However, the ‘family resemblance’ test makes it possible for Bitcoins to be securities that are not notes.

The published intent of Bitcoins is to be used as a medium of exchange, like a currency;<sup>142</sup> however, the actual uses and expectations of the investing public leads to the conclusion that Bitcoins are being used speculatively.<sup>143</sup> The wild fluctuations in the value of Bitcoins give them potential for speculative investing, with the idea being simply buy low and sell high.<sup>144</sup> Furthermore, supporters of Bitcoins promote them as an investment, and argue that buying into Bitcoins now, in anticipation of a value increase in the future, is a financially savvy decision.<sup>145</sup> Bitcoins are not currently a commonly accepted medium of exchange and those that purchase Bitcoins can only be expected to be doing so for amusement or speculative investing.<sup>146</sup> This satisfies the inquiries of prongs one through three and paints a broad description of what a security is considered to be.

The fourth prong of the ‘family resemblance’ test – whether some other regulatory scheme reduces the risk of the instrument, or other factor – is the most difficult for Bitcoin to overcome. As discussed above, a Bitcoin is generally considered a currency and has, thus far, been regulated as such.<sup>147</sup> However, the risks that Bitcoin present are outweighed by the greater risk presented to Bitcoin by currency-centric regulation.<sup>148</sup> Not only could such a defined regulatory scheme destroy Bitcoin, it has thus far been haphazardly applied through limitations and

---

141. A note is generally a ‘written promise by one party (the maker) to pay money to another party (the payee).’ BLACK’S LAW DICTIONARY 732 (9th Ed. 2009). While it could be argued that Bitcoins are written computer code, they do not serve as promises to pay.

142. See Nakamoto, *supra* note 21, at 1.

143. See Grinberg, *supra* note 4, at 197; see also \$22 Bitcoin investment brings Norwegian man fortune, BBC (Oct. 29, 2013, 6:00 PM), <http://www.bbc.co.uk/news/world-europe-24737671> (man’s purchase of \$22 worth of Bitcoins nets him about \$850,000 after four years).

144. Bitcoin distributions are done through Bitcoin exchanges where there is ‘common trading for speculation or investment.’ *Reves*, 494 U.S. at 66 (quoting *SEC v. C. M. Joiner Leasing Corp.*, 320 U.S. 344, 351 (1943)); see also Wallace, *supra* note 18.

145. See Agustino Fontevicchia, *Winklevoss Twins Say Bitcoin Market To Hit \$400B, Urge Regulators Not To Push Innovation To China*, FORBES (Nov. 12, 2013, 10:22 AM), <http://www.forbes.com/sites/afontevicchia/2013/11/12/winklevoss-twins-say-bitcoin-market-to-hit-400b-urge-regulators-not-to-push-innovation-to-china/>.

146. See Velde, *supra* note 30, at 4 (‘the uses of bitcoin as a medium of exchange appear limited, particularly if one excludes illegal activities.’).

147. See *supra* Part III.A.

148. See *supra* Part III.A.2.

exceptions.<sup>149</sup> At least a securities-centric regulatory model would not subject Bitcoin to the potential for being deemed counterfeit.<sup>150</sup>

## 2. Investment Contract

An investment contract can be understood as persons A, B, and C giving person D money, with the expectation that a profit will be returned to them. The Supreme Court defined an investment contract to be a “contract, transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or third party [.]”<sup>151</sup> and interpreted it as an instrument that reaches “novel, uncommon, or irregular devices, whatever they appear to be.”<sup>152</sup> In *W.J. Howey Co.*, the investment contract involved the purchase of citrus trees and management services for a share of the profits.<sup>153</sup> The Supreme Court reversed the Fifth Circuit’s opinion that there was no investment contract because the enterprise was “not speculative or promotional in character.”<sup>154</sup> This interpretation breaks down into four distinct elements that constitute the *Howey* test: the investment of money, common enterprise, expectation of profits, and substantially from the efforts of others.<sup>155</sup> If Bitcoins satisfy the *Howey* elements then they are investment contracts and, as a result, securities.

On their face, Bitcoins do not seem to be similar to citrus trees, but the application of the *Howey* test can result in a classification as an investment contract.<sup>156</sup> First, Bitcoins are acquired through mining or purchase.<sup>157</sup> At the present rate of generation it costs approximately \$2.50 to produce a single Bitcoin per day.<sup>158</sup> The cost of production, equivalent to a money value, should satisfy the first prong of the test because the “investment” is being put into the network itself, which ensures a future value. Furthermore, Bitcoin purchases in exchanges are an investment of actual money.<sup>159</sup> The nature of the network results in fewer and fewer

---

149. See *supra* Part III.A.2.

150. See *supra* Part III.A.1.

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

152. Maura K. Monaghan, *An Uncommon State of Confusion: The Common Enterprise Element of Investment Contract Analysis*, 63 *FORDHAM L. REV.* 2135, 2137 (1995) (quoting SEC v. *C.M. Joiner Leasing Corp.*, 320 U.S. 344, 351 (1943)).

153. *W.J. Howey Co.*, 328 U.S. at 295.

154. *Id.* at 301.

155. See Monaghan, *supra* note 142, at 2137. The courts have since read the “solely” out of the “from the efforts of others” requirement, creating a less restrictive standard more akin to replacing the term “solely” with “primarily” or “substantially.” See, e.g., SEC v. Glenn W. Turner Enters., Inc., 474 F.2d 476, 482 (9th Cir. 1973).

156. See *W.J. Howey Co.*, 328 U.S. at 295, 301.

157. See *supra* Part II.

158. Velde, *supra* note 30, at 3. \$2.50 is based upon a required computing machine at \$3,000, depreciated over five years, and one dollar worth of electricity. *Id.*

159. See *supra* Part II.D.

mined Bitcoins, meaning that, in the future, the predominant means of acquiring Bitcoins will be through the investment of money.<sup>160</sup> Fluctuation in the value of Bitcoins means that an individual that purchases a Bitcoin has the reasonable assumption that the price will either rise or fall. When purchased under such an assumption, a Bitcoin no longer satisfies the tendencies of money.<sup>161</sup> As a result, it is likely that the first prong of the *Howey* test is satisfied.

Second, because Bitcoins are not currently used as a common means of exchange, the majority of those who purchase and hold Bitcoins are doing so with an expectation of profit in the future.<sup>162</sup> If Bitcoins were to become a common means of exchange, then this line of reasoning is likely to falter. Until that time, the only other reason for purchasing is for future profit. It is unlikely that Bitcoins will become a common means of exchange, at least to the level of a common legal currency, based upon the competition this would present to such currencies. Therefore, it is likely the third prong of the *Howey* test is satisfied.

Third, because Bitcoins have no inherent value<sup>163</sup> and derive value based upon the continued efforts of developers and promoters, those who have “invested” in them are seeking profit solely from the efforts of a promoter or third party.<sup>164</sup> An investor in Bitcoins holds Bitcoins electronically and is assumed to place no further effort into them.<sup>165</sup> Those that develop the network and promote the further use and acceptance of Bitcoins are the ones who add value.<sup>166</sup> Therefore, the fourth prong of the *Howey* test is satisfied because those that invest in Bitcoins are doing so with the expectation that the continued work of those that promote Bitcoins and the Bitcoin network will make their Bitcoins profitable.<sup>167</sup>

Three potential tests have been applied by the courts in determining the satisfaction of the second prong of the *Howey* test.<sup>168</sup> The common enterprise of an investment contract has been determined through: horizontal commonality, narrow vertical commonality, and broad vertical commonality.<sup>169</sup> The horizontal commonality test requires a pooling of the investors’ contributions by a promoter

---

160. See *W.J. Howey Co.*, 328 U.S. at 295; see also *supra* Part II.

161. See *supra* Part III.A.

162. See Wallace, *supra* note 18; Velde, *supra* note 30, at 4; Fontevicchia, *supra* note 144 (the Winklevoss’ own a large holding in Bitcoins and are using them as an investment).

163. Velde, *supra* note 30, at 2 (Bitcoin is a fiduciary currency that has no intrinsic value).

164. See *supra* Part III.B.1.

165. See *supra* Part II.

166. See *supra* Part II. Bitcoin only has value because other’s accept it, but that acceptance would not exist without the P2P network. *Id.*

167. *W.J. Howey Co.*, 328 U.S. at 297–98.

168. James D. Gordon III, *Defining A Common Enterprise in Investment Contracts*, 72 OHIO ST. L.J. 59, 61 (2011).

169. *Id.* at 61.

and the distribution of profits and losses proportionally for commonality to exist.<sup>170</sup> Horizontal commonality is viewed as the most restrictive test.<sup>171</sup> The narrow vertical commonality test looks at the economic relationship between the investor and the promoter, requiring “that the investor’s profits be tied to the manager’s profits - i.e., they must rise and fall together.”<sup>172</sup> The broad vertical commonality test requires that the investors rely on the expertise of the promoter so “the investor’s fortunes depend on the promoter’s efforts.”<sup>173</sup> These three tests exist as a result of a fracture between the federal circuits on the issue and are best applied here collectively.<sup>174</sup>

Those that mine or purchase Bitcoins on an exchange can be considered investors and the Bitcoin network, dominated by a small group of programmers, can be considered the promoter.<sup>175</sup> In applying commonality, the “investors” would be giving their “money” to the “promoter” in the hopes that the value of the Bitcoins they have invested in will rise. As the market value of Bitcoins fluctuates, the price rises and falls, and the “investors” receive their gains and losses proportionately to the number of Bitcoins they have, which is their investment.<sup>176</sup> The profits of the investors would be tied to that of the “manager” because the management of the Bitcoin network is done through the computing power of the miners.<sup>177</sup> When Bitcoins increase in value, increasing the potential profit for the outside investor, the value of mining a Bitcoin increases.<sup>178</sup> In that same vein, Bitcoins would cease to exist without the continued maintenance and promotion by the mining community.<sup>179</sup> All of these factors support the conclusion that a common enterprise does exist, satisfying the second prong of the *Howey* test.<sup>180</sup>

Based upon the satisfaction of the elements of the *Howey* test and the incorporation of the “family resemblance” test, one can conclude that Bitcoins

170. *Id.*

171. *Id.* at 74.

172. *Id.* at 61.

173. *Id.*

174. Gordon III, *supra* note 168, at 61.

175. See Velde, *supra* note 30, at 3.

176. See David Wolman, *Bitcoin’s Radical Days Are Over. Here’s How to Take It Mainstream*, WIRED (Oct. 30, 2013, 6:30 AM), <http://www.wired.com/wiredenterprise/2013/10/bitcoin/> (noting the fluctuating prices of Bitcoins in the Bitcoin exchanges).

177. See *supra* Part II.A.

178. At present, a Bitcoin costs roughly \$2.50 to mine and is worth approximately \$400; therefore, the approximate return to mining one Bitcoin is \$397.50. Velde, *supra* note 30, at 3; Robert McMillan, *Bitcoin Boomtown: Digital Currency Tops \$400, Mining Rigs Sell for \$3M*, WIRED (Nov. 14, 2013, 3:47 PM), <http://www.wired.com/wiredenterprise/2013/11/400-bitcoins/>. As the value of Bitcoin moves beyond \$400 the potential return increases.

179. See Velde, *supra* note 30, at 2 (the process functions as a result of the miners). It logically follows that if miners disappear then there can be no transactions. If there are not transactions, then there can be no Bitcoins.

180. See *W.J. Howey Co.*, 328 U.S. at 298.

could be defined as securities.<sup>181</sup> Bitcoins can satisfy the requirements of *Howey* and the conceptual foundations of the “family resemblance” test are informative; therefore, Bitcoins could be defined as securities through the broad stroke of the securities acts and be spared the toxicity of a purely currency-centric definition.

### III. THE PRAGMATIC APPROACH TO TECHNOLOGICAL ADVANCEMENT

In recent months the conversation surrounding Bitcoins has focused on the rapid fluctuations in the price.<sup>182</sup> Some argue that Bitcoins are simply a bubble that has been popped and is now on its downward spiral.<sup>183</sup> Others maintain that Bitcoins are the future of the financial marketplace.<sup>184</sup> Regardless, Bitcoins are an innovative technological advancement and the laws that will ultimately regulate them should be just as innovative.<sup>185</sup> The fact that Bitcoins have traits that satisfy the legal elements of both a currency and a security, but fail as either one, means that simply labeling them one or the other would be inappropriate.<sup>186</sup> Therefore, the pragmatic approach is to classify Bitcoins as something new that does not necessarily conform to the definition of more antiquated terms and devise policy that is a reflection of this.

It is not inconceivable for Bitcoins to operate both as a currency and as a security.<sup>187</sup> Those that accept them as a medium of exchange use them like a currency and those that use them as a means for speculative investing use them like a security; in the same way one could accept stock certificates in exchange for a good or trade currencies on the foreign exchange market.<sup>188</sup> The problems arise because Bitcoins do not fall perfectly within one realm or the other; they are electronic financial instruments that have fatal flaws as either a currency or security.<sup>189</sup> Therefore, any classification of Bitcoins should reflect both its uses and its flaws.

Once Bitcoin, as a term, is properly defined and stripped of the currency moniker, proper policy should be crafted to instruct regulation of the Bitcoin

---

181. See generally, *Reves*, at 63–67 (working through and incorporating aspects of the *Howey* and family resemblance test).

182. See Matt Clinch, *Bitcoin Price Plunges as China Clampdown Escalates*, CNBC.COM (Dec. 18, 2013, 8:06 AM), <http://www.nbcnews.com/business/bitcoin-price-plunges-china-clampdown-escalates-2D11765766>.

183. See Jesse Colombo, *Bitcoin May Be Following This Classic Bubble Stages Chart*, FORBES (Dec. 19, 2013, 12:09 PM), <http://www.forbes.com/sites/jessecolombo/2013/12/19/bitcoin-may-be-following-this-classic-bubble-stages-chart/>.

184. See John Nugent, *The Bitcoin Boom*, FORBES (Dec. 17, 2013, 8:02 AM), <http://www.forbes.com/sites/riskmap/2013/12/17/the-bitcoin-boom/>.

185. See *supra* Part II.

186. See *supra* Part III.

187. See *supra* Part III.

188. See *supra* Part III.

189. See *supra* Part III.

market. The recent rise and fall of Bitcoin prices can be linked to negative policy announcements in other countries, most notably China.<sup>190</sup> The banning, or the constructive banning, of Bitcoins in foreign markets has increased skepticism in Bitcoin and driven the price down.<sup>191</sup> This serves as an example of the negative impact that unfortunate policy decisions can have on Bitcoins. As a result, American policy towards Bitcoins, and the laws and regulations that such policy promotes, should not be haphazardly crafted or based in antiquated terminology.<sup>192</sup> In short, the policies, laws, and regulations crafted for Bitcoins should be as new and innovative as Bitcoins themselves.

The only way that technological innovation like Bitcoins can survive and thrive is for our legal system to innovate at the same rate. During remarks to a group of educators in 2010 President Barack Obama stated, “[O]ur future depends on reaffirming America’s role as the world’s engine of scientific discovery and technological innovation.”<sup>193</sup> While President Obama’s remarks were geared towards education, their meaning can be applied here.<sup>194</sup> The “engine” is stymied if innovation is choked by a toxic and over-burdensome legal system, and emphasis should be placed on preventing such “engine” trouble. This is only possible if Bitcoins are afforded a new way of thinking and if innovative policies are crafted.

#### IV. CONCLUSION

There is no denying that Bitcoins are both remarkable and interesting. The technical aspects are as impressive as they are baffling (especially when lacking an advanced degree in computer science)<sup>195</sup> and the legal implications are tremendous.<sup>196</sup> In the United States, Bitcoins, as a digital currency, face legal<sup>197</sup> and regulatory<sup>198</sup> hurdles that may be insurmountable. They have the practical and conceptual potential to be recognized as a security,<sup>199</sup> but the best definition should be the one that promotes Bitcoins and allows them to flourish.<sup>200</sup>

---

190. See Colombo, *supra* note 183.

191. See Colombo, *supra* note 182.

192. See *supra* Part III.A.2.

193. Press Release, White House Office of the Press Sec’y, Remarks by the President on the “Educate to Innovate” Campaign and Science Teaching and Mentoring Awards (Jun. 6, 2010) *available at* <http://www.whitehouse.gov/the-press-office/remarks-president-educate-innovate-campaign-and-science-teaching-and-mentoring-awar>.

194. *Id.*

195. See *supra* Part II.

196. See *supra* Part III.

197. See *supra* Part III.A.1.

198. See *supra* Part III.A.2.

199. See *supra* Part III.B.

200. See *supra* Part IV.

The most apt conclusion is that the future of Bitcoins is still uncertain. As agencies continue to issue regulations and as Bitcoin-related controversies enter the courts, the story will continue to unfold. The United States Senate has held hearings on the subject<sup>201</sup> and it may be impossible to avoid the currency moniker entirely. However, the fact still remains that Bitcoin may not fit well into the paradigm of our current laws. The resiliency and inevitability of new technology is personified in the fact that the Dread Pirate Roberts is only “mostly dead,”<sup>202</sup> so perhaps it is time to carve out space for something new.

---

201. Ryan Tracy, *Bitcoin Comes Under Senate Scrutiny*, WALL ST. J. (Nov. 5, 2013, 1:30 PM), <http://blogs.wsj.com/washwire/2013/11/05/bitcoin-comes-under-senate-scrutiny/?mod=e2tw>.

202. Andy Greenberg, *'Silk Road 2.0' Launches, Promising A Resurrected Black Market For The Dark Web*, FORBES (Nov. 6, 2013, 11:15 AM), <http://www.forbes.com/sites/andygreenberg/2013/11/06/silk-road-2-0-launches-promising-a-resurrected-black-market-for-the-dark-web/>; Jennifer Booton, *Don't Expect Bitcoin to Die Off Anytime Soon*, FOXBUSINESS (Nov. 11, 2013), <http://www.foxbusiness.com/technology/2013/11/11/as-bitcoin-rallies-dont-expect-currency-to-die-off-anytime-soon/> (discussing the resiliency of Bitcoin and the increase in Bitcoin investment in the latter part of 2013).