

Volume 66 | Issue 2

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2015

# Digital Metal: Regulating Bitcoin as a Commodity

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## Recommended Citation

Mitchell Prentis, *Digital Metal: Regulating Bitcoin as a Commodity*, 66 Case W. Res. L. Rev. 609 (2015)

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— Note —

DIGITAL METAL:  
REGULATING BITCOIN AS A  
COMMODITY

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INTRODUCTION

The time has come for regulators to settle upon a system of oversight for Bitcoin.<sup>1</sup> When the fledgling online payment network debuted

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1. Throughout this Note, I will use "Bitcoin," with a capital "B," as a proper noun to refer to the network of computers, users and software that allows

in 2009, a single bitcoin was worth about a half a cent.<sup>2</sup> Since then, the value of bitcoins has skyrocketed, resting around \$400 as of December 2015,<sup>3</sup> but reaching as high as \$1,200 in the fall of 2013.<sup>4</sup> As the value of individual bitcoins has increased, so has public interest in the new technology.<sup>5</sup> Over 1.4 million people in the United States, and over 5.5 million in the world, have downloaded the Bitcoin software,<sup>6</sup> and millions of dollars' worth of bitcoins are exchanged every day.<sup>7</sup> This growing interest has led investors to develop improved infrastructure and to offer ancillary services, in order to ease the public's use of Bitcoin and to encourage the continued growth of the Bitcoin economy.<sup>8</sup>

Whether you believe that Bitcoin is the payment system of the future or an outright scam, it is undeniable that Bitcoin continues to gain traction and prominence in the global economy.<sup>9</sup> Bitcoin simplifies

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the Bitcoin economy to function. Conversely, I will use "bitcoin," with a lowercase "b," to refer to the individual files that are the unit of measure in the Bitcoin economy and are exchanged across the Bitcoin network.

2. Reuben Grinberg, *Bitcoin: An Innovative Alternative Digital Currency*, 4 HASTINGS SCI. & TECH. L.J. 159, 164 (2012).
3. *Bitcoin Price Index*, COINDESK, <http://www.coindesk.com/price/> [<https://perma.cc/L3JD-X4NU>] (last visited Dec. 21, 2015).
4. Maureen Farrell, *Bitcoin Now Tops \$1,200*, MONEYBEAT (Nov. 29, 2013, 12:04 PM), <http://blogs.wsj.com/moneybeat/2013/11/29/bitcoin-now-tops-1200/> [<https://perma.cc/MSN9-NBUQ>].
5. See Mala Mukunda, *Bitcoin Price Rise in Line with Adoption, Investment, Interest*, IHB (June 5, 2014), <https://ihb.io/2014-06-05/news/bitcoin-price-rise-line-adoption-investment-interest-7055> [<https://perma.cc/3GJP-G4BR>].
6. *Download Statistics: All Files*, SOURCEFORGE, <http://sourceforge.net/projects/bitcoin/files/stats/map?dates=2009-01-01+to+2015-03-10> [<https://perma.cc/4DRP-4V79>] (last visited Dec. 21, 2015) (reflecting data as of Mar. 10, 2015).
7. *BitStamp (USD)*, BITCOIN CHARTS, [https://bitcoincharts.com/markets/bitstampUSD\\_trades.html](https://bitcoincharts.com/markets/bitstampUSD_trades.html) [<https://perma.cc/J5TA-4XW6>] (last visited Dec. 21, 2015).
8. See, e.g., Chris Isidore, *First U.S.-Based Bitcoin Exchange Opens*, CNNMONEY (Jan. 26, 2015, 10:24 AM), <http://money.cnn.com/2015/01/26/investing/bitcoin-exchange-coinbase/> [<https://perma.cc/7TB7-W7V8>] (noting that investors have contributed \$106 million to operate a Bitcoin exchange in the United States); see also Caleb Chen, *Winklevoss Bitcoin Trust ETF Files for 1M Shares on NASDAQ; More to be Revealed in January*, CRYPTOCOINSNEWS (Jan. 1, 2015), <https://www.cryptocoinsnews.com/winklevoss-bitcoin-trust-etf-files-for-shares-nasdaq-more-to-be-revealed-in-january/> [<https://perma.cc/X2PV-XPBQ>] (discussing plans for a Bitcoin ETF, which would allow any investor to invest in Bitcoin via the NASDAQ stock exchange).
9. See Alanna Petroff, *Bitcoin Reshaping Future of Money*, CNNMONEY (Dec. 10, 2013, 10:24 AM), <http://money.cnn.com/2013/12/10/technology/bitcoin->

online purchases and lowers the transaction costs of making online payments,<sup>10</sup> replicating for users the ease and security of in-person, cash purchases.<sup>11</sup> Due to Bitcoin's complex and still young technology, however, regulators have been hesitant to issue guidance and provide oversight to the nascent Bitcoin economy.<sup>12</sup> This lack of regulation has led many to rob and abuse the Bitcoin system, costing consumers millions of dollars.<sup>13</sup>

As it becomes easier for ordinary people to invest in, and use, Bitcoin, the United States needs to develop a regulatory framework to manage Bitcoin. But, before a robust regulatory system can be developed to protect consumers, regulators need to settle upon what, *exactly*, Bitcoin is. Until Bitcoin is definitively categorized, regulatory efforts will be inconsistent, inefficient, and, likely, contradictory.

In this Note, I will argue that Bitcoin should be categorized and regulated as a commodity. This treatment would be consistent with the economic behavior of Bitcoin's users and would provide a clearer regulatory path for Bitcoin's future. Additionally, categorizing Bitcoin as a commodity would provide increased clarity to existing regulatory efforts. Part I of this Note will briefly discuss the basic technological underpinnings of the Bitcoin system. Part II will quickly survey the current regulatory landscape around Bitcoin. Part III will examine Bitcoin's identity crisis and explain why Bitcoin should not be categorized as a currency or a security—the two other categories vying for Bitcoin's inclusion. Part IV will explain why Bitcoin is a commodity,

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currency-fred-wilson/ [https://perma.cc/PD8M-XV7G] (“Love it or hate it, Bitcoin is here to stay.”).

10. See Derek A. Dion, Note, *I'll Gladly Trade You Two Bits on Tuesday for a Byte Today: Bitcoin, Regulating Fraud in the E-Conomy of Hacker-Cash*, 2013 U. ILL. J.L. TECH. & POL'Y 165, 182 (2013).
11. See Nikolei M. Kaplanov, Comment, *Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation*, 25 LOY. CONSUMER L. REV. 111, 116 (2012).
12. See Stan Higgins, *Congressman Stockman: It's Too Early to Regulate Bitcoin*, COINDESK (Dec. 5, 2014, 11:05 PM), <http://www.coindesk.com/congressman-stockman-too-early-bitcoin-regulation/> [https://perma.cc/E3EE-AXUW] (discussing a proposed bill that would prevent any Bitcoin regulation for five years because the technology is “still in its early stages”).
13. *E.g.*, Alistair Charlton, *Bitcoin Traders Robbed as Mt. Gox Exchange Attacks Continue*, INT'L BUS. TIMES (Apr. 12, 2013, 12:46 PM), <http://www.ibtimes.co.uk/bitcoin-exchange-ddos-attacks-continue-traders-robbed-456466> [https://perma.cc/9JY7-MHF6] (discussing a phishing scheme at a bitcoin exchange); see also Tim Hornyak, *One Year Later, We're No Closer to Finding MtGox's Missing Millions Worth of Bitcoins*, PCWORLD (Mar. 4, 2015, 6:38 AM), <http://www.peworld.com/article/2892892/one-year-later-were-no-closer-to-finding-mtgoxs-missing-millions.html> [https://perma.cc/4YVD-9WAV] (noting that, at current Bitcoin prices, the stolen bitcoins are worth about \$180 million).

and Part V will examine the legal advantages of treating Bitcoin as a commodity. Finally, Part VI will examine how treating Bitcoin as a commodity can provide needed consumer protection regulation in the Bitcoin economy.

## I. BITCOIN'S BASICS

### A. *Bitcoin's Goal and Purpose*

In 2009, a computer programmer, working under the name Satoshi Nakamoto, released a paper called “Bitcoin: A Peer-to-Peer Electronic Cash System,” giving birth to the Bitcoin network.<sup>14</sup> The goal of Bitcoin was to provide a network where “pseudonymous entities” could transfer value online, using a decentralized medium, free from government interference.<sup>15</sup> The central advantage that Bitcoin sought to provide users was the ability for “two willing parties to transact directly with each other without the need for a trusted third-party’ or intermediary (or central issuer or payment system), where the basis of the transaction’s security is ‘cryptographic proof instead of trust.’”<sup>16</sup>

Bitcoin achieved its goal through the creation of a computer network that verifies exchanges as they happen. Every time a transaction occurs, the system reports the transaction to all other computers in the network. Because all transactions are reported to the network, a transferor cannot fake a transaction by not actually sending anything to the transferee.<sup>17</sup> A Bitcoin transaction can only be successfully completed if the rest of the computers in the network verify that the transaction actually happened.<sup>18</sup> Prior to Bitcoin, secure online transactions could only be conducted with the help of a third party, like a bank or PayPal, ensuring that funds were transferred when they were claimed to be, and that no one was cheating the system.<sup>19</sup> The need for an intermediary to provide security for transactions increased the transactions’ costs.<sup>20</sup> In

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14. Kaplanov, *supra* note 11, at 115.

15. *Id.*

16. David Groshoff, *Kickstarter My Heart: Extraordinary Popular Delusions and the Madness of Crowdfunding Constraints and Bitcoin Bubbles*, 5 WM. & MARY BUS. L. REV. 489, 512–13 (2014) (quoting Ian Steadman, *Wary of Bitcoin? A Guide to Some Other Cryptocurrencies*, ARS TECHNICA (May 11, 2013, 9:51 AM), <http://arstechnica.com/business/2013/05/wary-of-bitcoin-a-guide-to-some-other-cryptocurrencies/> [<https://perma.cc/587D-BC5X>]).

17. *See* Dion, *supra* note 10, at 167–68 (discussing Bitcoin’s security mechanisms).

18. *See id.* at 167 (explaining how Bitcoin users validate transactions).

19. *See id.* (“Bitcoin was designed to reduce the transaction costs that are created when third parties validate transactions and mediate disputes.”).

20. *Id.*

the Bitcoin network, these kinds of intermediaries are no longer necessary, allowing transactions to be conducted more efficiently.<sup>21</sup>

Additionally, the Bitcoin system was designed to operate as a medium of exchange that existed without the interference of any centralized government or authority.<sup>22</sup> Instead of a medium of exchange backed by precious metal or government fiat, Bitcoin is not backed by anything and instead relies on the strength of its algorithms and the large computer network supporting its system to give it value.<sup>23</sup> This algorithm controls the supply of Bitcoin, causing bitcoins to be created and introduced into the market at an exponentially decreasing rate.<sup>24</sup> Bitcoin's software ensures that "there will never be more than 21 million bitcoins in circulation, which should occur around 2025."<sup>25</sup> This feature is attractive to some Bitcoin users because it removes the possibility of a central authority meddling with the monetary supply, in much the same way as a gold-backed currency functions.<sup>26</sup>

Today, Bitcoin users can spend their bitcoins on an ever-increasing array of goods and services.<sup>27</sup> Many retailers have begun accepting bitcoins for online purchases, including Dell, Overstock.com, and Microsoft.<sup>28</sup> Also, brick-and-mortar stores are beginning to accept bitcoins.<sup>29</sup> For instance, in Cleveland Heights, Ohio, several restaurants and retail stores, dubbed "Bitcoin Boulevard US," have begun accepting payment in bitcoins.<sup>30</sup>

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21. *Id.* at 182.

22. *Id.* at 167.

23. See Nicholas A. Plassaras, Comment, *Regulating Digital Currencies: Bringing Bitcoin Within the Reach of the IMF*, 14 CHI. J. INT'L L. 377, 383, 389–90 (2013) (contrasting Bitcoin and government backed currency).

24. Kaplanov, *supra* note 11, at 120–21.

25. *Id.* at 121 (citation omitted).

26. Grinberg, *supra* note 2, at 172.

27. See *Who is Accepting Bitcoin?*, COINREPORT, <https://coinreport.net/coin-101/accepting-bitcoin/> [<https://perma.cc/J6E9-GERX>] (last visited Dec. 26, 2015) (providing examples of where bitcoins can be used around the world).

28. *What Can You Buy with Bitcoin?*, COINDESK, <http://www.coindesk.com/information/what-can-you-buy-with-bitcoins/> [<https://perma.cc/ZQV9-LYRU>] (last visited Dec. 26, 2015).

29. See Sara Ashley O'Brien, *Retailers See Big Upside by Accepting Bitcoins*, N.Y. POST (Dec. 28, 2013, 9:10 PM), <http://nypost.com/2013/12/28/nyc-retailers-see-big-upside-by-accepting-bitcoins/> [<https://perma.cc/V4QL-XNCA>].

30. Chuck Soder, *Bitcoin Boulevard US: Merchants on Lee Road in Cleveland Heights expand acceptance of digital currency*, CRAIN'S CLEV. BUS. (Apr. 23, 2014, 3:02 PM), <http://www.crainscleveland.com/article/20140418/FREE/140419820/bitcoin-boulevard-us-merchants-on-lee-road-in-cleveland-heights> [<https://perma.cc/W4D6-J2G9>].

Finally, Bitcoin offers its users the prospect of conducting online transactions in an anonymous manner.<sup>31</sup> Because the system verifies its own transactions, and third parties are not necessary to confirm the identities of individuals, neither transacting party need know the identity of the other to trust that the transaction will take place. This anonymity is designed to mirror the level of anonymity found in cash transactions.<sup>32</sup> Bitcoin critics worry, however, that this feature may ease the transaction of illegal activity.<sup>33</sup>

*B. Bitcoin Transactions*

Bitcoins themselves are nothing more than computer files, like a word document or an .mp3; they “can be destroyed or lost just like cash.”<sup>34</sup> In order to send a bitcoin from one party to another, the transferor simply designates the address of the recipient, and sends the bitcoin across the Bitcoin network, similar to sending an email.<sup>35</sup> To secure these transactions, the Bitcoin network employs “public key encryption.”<sup>36</sup> Each Bitcoin user has two mathematically related keys associated with himself or herself: a public key and a private key.<sup>37</sup> The public key identifies the user on the network, and is visible to all other network members; it acts as the address for files to be sent to.<sup>38</sup> The private key is known only to the user and acts as the “password” to authorize the sending of bitcoins to other public key addresses.<sup>39</sup>

When a bitcoin is sent from one user to another, the bitcoin file is given a unique serial number.<sup>40</sup> The new serial number is generated

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31. Kaplanov, *supra* note 11, at 115.
32. See Stephen T. Middlebrook & Sarah Jane Hughes, *Regulating Cryptocurrencies in the United States: Current Issues and Future Directions*, 40 WM. MITCHELL L. REV. 813, 816 (2014) (“In particular, [cryptocurrencies] offer . . . the ability to cloak transactions with a level of anonymity that is currently found only with certain cash transactions.”).
33. *E.g.*, Dion, *supra* note 10, at 169 (“Bitcoin is ideal for those who seek to purchase illegal guns or drugs online, sponsor domestic or international terrorist agendas, or even hire a hit man in anonymity.”); see also Omri Marian, *A Conceptual Framework for the Regulation of Cryptocurrencies*, 82 U. CHI. L. REV. DIALOGUE 53, 59–64 (arguing that for a cryptocurrency to be viable, a system needs to be developed to disincentivize anonymous illegal activity).
34. Kaplanov, *supra* note 11, at 116.
35. Plassaras, *supra* note 23, at 384.
36. Kaplanov, *supra* note 11, at 117.
37. *Id.*
38. *Id.*
39. *Id.*
40. Nicholas Godlove, *Regulatory Overview of Virtual Currency*, 10 OKLA. J.L. & TECH. 71, \*9 (2014).

through a cryptographic process that combines the bitcoin's old serial number with the transferee's public key.<sup>41</sup> The new serial number is broadcast to all the other computers running the Bitcoin program, and those computers work to decode the new serial number against the public key that the bitcoin was transferred to.<sup>42</sup> This decoding process verifies the transaction and ensures that it actually took place, securing the transaction and system.<sup>43</sup>

Each time a transaction takes place, and the Bitcoin network successfully verifies a transaction, the transaction is logged into the Bitcoin "block-chain."<sup>44</sup> Each bitcoin has a block-chain associated with it, acting as a timestamp for each time it was transferred, and, since the entries are partially based on each transferee's public key, a record of who the transferee was each time the bitcoin was sent.<sup>45</sup> In order for a bitcoin to be transferred again, its block-chain must meet the standards of the network.<sup>46</sup> The chief purpose of the block-chain is to ensure that bitcoins cannot be "double-spent" or counterfeited.<sup>47</sup>

The block-chain allows the Bitcoin network to operate anonymously because the only identifier of each Bitcoin user is their public key.<sup>48</sup> So, while it is possible to track all of the transactions that a single user enacted, the user's identity is never disclosed.<sup>49</sup> Some have argued, however, that with advances in network mapping technology, the identities of users on the network could be extrapolated, if the identity of one or two other public keys on the network became known.<sup>50</sup>

### C. *Bitcoin Generation and Acquisition*

Bitcoins are acquired in two primary ways: mining and exchanges. Mining is the process that rewards Bitcoin users for running the Bitcoin software and keeping their computers in the Bitcoin network.<sup>51</sup> Verifying a Bitcoin transaction involves solving a very difficult algorithm

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41. *Id.*

42. *See id.* at \*22–23 (describing how third parties verify bitcoin transactions).

43. *See id.* at \*22.

44. Dion, *supra* note 10, at 168.

45. *Id.*

46. Kaplanov, *supra* note 11, at 118.

47. Dion, *supra* note 10, at 168.

48. Paul H. Farmer, Jr., *Speculative Tech: The Bitcoin Legal Quagmire & the Need for Legal Innovation*, 9 J. BUS. & TECH. L. 85, 91 (2014).

49. *Id.*

50. *See Godlove, supra* note 40, at \*11 (noting that law enforcement could work to "de-anonymize" bitcoin transaction through the block-chain).

51. Kaplanov, *supra* note 11, at 119.



problem, and all computers on the network race to verify the transaction first.<sup>52</sup> The computer that decodes the algorithm problem first is rewarded with bitcoins.<sup>53</sup> The Bitcoin network operates because individual users “donate” their computing power to verify transactions and build block-chains.<sup>54</sup> “Essentially, the value to the person who obtains bitcoins through mining is the value of his or her hardware needed to conduct the mining process plus the amount of time and energy spent.”<sup>55</sup> However, due to Bitcoin’s built-in limitation on the number of bitcoins in the system, the number of bitcoins that a computer receives as a reward decreases over time.<sup>56</sup>

The second way that a person could acquire bitcoins is through an exchange. Exchanges operate as online forums, where people sell their bitcoins, at a floating rate, for currency, and vice-versa.<sup>57</sup> Alternatively, some Bitcoin transactions happen in person, generally arranged through online message boards, where cash is exchanged in-person, and bitcoins are transferred after the fact.<sup>58</sup>

## II. BITCOIN’S CURRENT STATE OF REGULATION

While no comprehensive Bitcoin regulatory system presently exists in the U.S., several agencies have declared how they will treat Bitcoin. The Financial Crimes Enforcement Network (FinCEN), the IRS, and a federal district court have each attempted to categorize Bitcoin. None of these categorization efforts, however, have been consistent, doing little to settle the question of what Bitcoin is.<sup>59</sup>

### A. *FinCEN’s Treatment of Bitcoin*

In March 2013, FinCEN issued guidance “to clarify the applicability of the regulations implementing the Bank Secrecy Act (BSA) to persons

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52. Ruohe Yang, *When Is Bitcoin A Security Under U.S. Securities Law?*, 18 J. TECH. L. & POL’Y 99, 102 (2013).

53. Kaplanov, *supra* note 11, at 120.

54. *Id.*

55. *Id.* at 119.

56. *Id.* at 121.

57. *Id.* at 121–22.

58. *See id.* at 123.

59. *NASAA Panel Ponders Bitcoin’s Promise and Pitfalls*, 1448 BLUE SKY L. REP., Apr. 22, 2014, at ¶ 75,061 (noting that “most of the federal agencies have either ‘punted’ with respect to Bitcoin, or have taken somewhat inconsistent positions”).

creating, obtaining, distributing, exchanging, accepting, or transmitting” bitcoins and other virtual currencies.<sup>60</sup> The BSA is primarily aimed at preventing money laundering and requires “financial institution[s] and banks to record and report information about . . . customer transactions.”<sup>61</sup> The FinCEN guidance noted that, while its regulations “define currency . . . as ‘the coin and paper money of the United States or of any other country that [i] is designated as legal tender and that [ii] circulates and [iii] is customarily used and accepted as a medium of exchange in the country of issuance,’” it considered any “medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency” to be a “virtual currency,” and subject to regulation.<sup>62</sup> Regardless, FinCEN also indicated that, “defining bitcoin was not pertinent because whether it’s a currency, commodity, or security, there are similar regulations in place across the industry.”<sup>63</sup>

The FinCEN guidance divided those involved with Bitcoin and other virtual currencies into three categories: users, exchangers, and administrators.<sup>64</sup> In regards to Bitcoin, a user is “[a] person that creates units . . . and uses [them] to purchase real or virtual goods and services.”<sup>65</sup> Users are not subject to regulation by FinCEN and do not have to register as a “Money Services Business” (MSB).<sup>66</sup> In contrast, “a person that creates [bitcoins] and sells [them] to another person for real currency,” or “a person . . . [that] accepts [bitcoins] . . . from one person and transmits [them] to another person as part of the acceptance and transfer of currency, funds, or other value that substitutes for currency,” is an “exchanger,” subject to regulation, and must register as an MSB.<sup>67</sup> An administrator is defined “as a person engaged as a

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60. FIN. CRIMES ENF’T NETWORK, DEP’T OF THE TREAS., FIN-2013-G001, APPLICATION OF FINCEN’S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES (Mar. 18, 2013) [hereinafter FINCEN], [http://fincen.gov/statutes\\_regs/guidance/html/FIN-2013-G001.html](http://fincen.gov/statutes_regs/guidance/html/FIN-2013-G001.html) [<https://perma.cc/33WR-GS3L>]; see also Ryan W. Neal, *Bitcoin Competitors: What You Should Know About 6 Alternative Cryptocurrencies*, INT’L BUS. TIMES (Jan. 14, 2014, 5:53 PM), <http://www.ibtimes.com/bitcoin-competitors-what-you-should-know-about-6-alternative-cryptocurrencies-1540168> [<https://perma.cc/3YSQ-6T84>] (discussing other virtual currencies that are not as prominent or valuable as Bitcoin).

61. Kelsey L. Penrose, *Banking on Bitcoin: Applying Anti-Money Laundering and Money Transmitter Laws*, 18 N.C. BANKING INST. 529, 537 (2014).

62. FINCEN, *supra* note 60, at 1.

63. Penrose, *supra* note 61, at 542.

64. FINCEN, *supra* note 60, at 1.

65. *Id.* at 5.

66. *Id.*

67. *Id.*

business in issuing (putting into circulation) a virtual currency, and who has the authority to redeem (to withdraw from circulation) such virtual currency.”<sup>68</sup> Administrators must register as MSBs.<sup>69</sup> However, as Bitcoin does not have any central authority, the “Administrator” category does not apply.<sup>70</sup>

For those that use bitcoins to buy goods or services, FinCEN’s guidance means very little; these people are only considered “users” and are not subject to any regulation.<sup>71</sup> Also, for those involved in the Bitcoin mining process, FinCEN’s guidance indicates that as long as the miner only uses the bitcoins for his/her own purposes, he/she should not qualify as an MSB.<sup>72</sup> However, any Bitcoin business that seeks to facilitate the conversion of bitcoins into cash, like a wallet company or an exchange, does qualify as an “exchanger” and must register as an MSB.<sup>73</sup>

### *B. IRS Treatment of Bitcoin*

In its March 2014 guidance, the IRS took a slightly different approach to Bitcoin’s categorization. The IRS stated that it considered bitcoins to be “property,” and would tax them like any other appreciable property.<sup>74</sup> This means that when a taxpayer acquires a bitcoin, he takes initial basis in the individual coin, marking it at its current fair market value.<sup>75</sup> A taxpayer may consult any online exchange that reports the price of bitcoins as a function of supply and demand to determine the “fair market value” of the bitcoin; the taxpayer must also consistently use the same online exchange when marking the fair market value of any other bitcoins he acquires.<sup>76</sup> Mined bitcoins must also be valued at the time of receipt.<sup>77</sup> When a taxpayer disposes of a bitcoin, he must recognize any gain that is greater than his initial basis.<sup>78</sup>

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68. *Id.* at 2.

69. Penrose, *supra* note 61, at 539.

70. *Id.*

71. *Id.*

72. *Id.* at 540–41.

73. *Id.* at 539.

74. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 [hereinafter IRS].

75. *Id.*

76. *See id.* at 938–39 (stating that the calculation of fair market value must be done “in a reasonable manner that is consistently applied”).

77. Omri Marian, *Marian: Bitcoin and Notice 2014-21*, TAXPROF BLOG (Mar. 26, 2014), [http://taxprof.typepad.com/taxprof\\_blog/2014/03/marian-bitcoin.html](http://taxprof.typepad.com/taxprof_blog/2014/03/marian-bitcoin.html) [<https://perma.cc/KV95-HSXA>].

78. IRS, *supra* note 74, at 939.

Disposition of bitcoins also includes spending them to buy other property, and taxpayers could incur gain by buying property with appreciated bitcoins.<sup>79</sup>

The IRS's guidance also notes that bitcoins may be capital property in the hands of some Bitcoin users, and, if held for the necessary amount of time, may enjoy capital gains treatment.<sup>80</sup> To qualify a bitcoin as a capital asset, the taxpayer would have to not be holding the bitcoin as "stock in trade," or be a "dealer" of bitcoins.<sup>81</sup> Any gain from a bitcoin transferred after being held for more than a year would be considered a capital gain.<sup>82</sup> Conversely, if a taxpayer holds bitcoins as inventory in his business, the disposition of the bitcoins would be treated as ordinary gain or loss.<sup>83</sup>

In regards to reporting, the IRS has applied the same requirements to Bitcoin transactions as to any other property exchanges.<sup>84</sup> Any Bitcoin payment of more than \$600 must be reported to the IRS and the payee with a Form 1099.<sup>85</sup> While in theory this reporting mechanism makes sense, its application may be troublesome. Because of the anonymity of Bitcoin transactions, it may be difficult for a taxpayer to know whom to send the 1099 to, and whom the taxpayer should list as the payee, when he reports the payment to the IRS.<sup>86</sup> Clearer reporting mechanisms likely need to be developed in order to make taxing Bitcoin transactions a more straightforward proposition.

C. *SEC v. Shavers*<sup>87</sup>

In late 2013, the federal court had its first opportunity to examine the identity of Bitcoin.<sup>88</sup> Trendon Shavers, a Texas resident, began advertising and soliciting contributions to a venture called Bitcoin Savings

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79. See Marian, *supra* note 77 (“[D]isposition of Bitcoin in exchange for goods and services is taxable to the extent the value of Bitcoin has changed since the time it was acquired.”).

80. IRS, *supra* note 74, at 939.

81. I.R.C. § 1221(1) (2012).

82. *Id.* § 1222(3).

83. Marian, *supra* note 77.

84. IRS, *supra* note 74, at 939.

85. *Id.*

86. Marian, *supra* note 77.

87. No. 4:13-CV-416, 2013 WL 4028182 (E.D. Tex. Aug. 6, 2013).

88. Farmer, *supra* note 48, at 98.

and Trust (BTCST) in November 2011.<sup>89</sup> Shavers promised his investors returns of 1% daily interest, and collected over 700,000 bitcoins from his investors, valued at more than 4.5 million dollars.<sup>90</sup>

Once the SEC became aware of Shavers' scheme (likely as a result of investors losing more than a third of their principal investment) it quickly asserted, that, "Shavers made a number of misrepresentations to investors . . . and . . . defrauded [them]."<sup>91</sup> Shavers challenged the court's subject matter jurisdiction of the case, and whether his enterprise was a security subject to the SEC's regulation.<sup>92</sup> The Federal District Court for the Eastern District of Texas was then tasked with determining whether Shavers' BTCST was a security within the meaning of the Securities Act of 1933 and the Exchange Act of 1934.<sup>93</sup>

In order to determine whether BTCST was a security, the court examined whether BTCST was an "investment contract" under the Supreme Court's famous *Howey* Test.<sup>94</sup> In *Howey*, the Supreme Court held that "an investment contract . . . [is a] 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 a third party."<sup>95</sup> To apply this test, the district court determined that the contribution of bitcoins to a venture satisfied the "money" requirement of the *Howey* Test.<sup>96</sup> The court stated,

It is clear that Bitcoin can be used as money. It can be used to purchase goods or services, and as Shavers stated, used to pay for individual living expenses. . . . Therefore, Bitcoin is a currency or form of money, and investors wishing to invest in BTCST provided an investment of money.<sup>97</sup>

Once the court determined that Bitcoin fulfilled the money requirement, it found that Shavers' BTCST satisfied the rest of the *Howey* Test, and that Shavers was selling securities.<sup>98</sup>

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

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.* at \*2.

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

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

97. *Id.*

98. *Id.*

While the district court called Bitcoin a “currency,” other regulatory agencies have declined to adhere to the same characterization.<sup>99</sup> After the decision, FinCEN, for instance, indicated that categorizing Bitcoin was “outside its purview.”<sup>100</sup> The court’s decision in *SEC v. Shavers* has done little to settle Bitcoin’s categorization, and has caused some to question whether the court’s holding opens the door to bitcoins themselves being considered securities.<sup>101</sup>

### III. BITCOIN’S IDENTITY CRISIS

#### A. *Bitcoin Is Not a Currency*

Commentators often argue that Bitcoin is a currency and should be regulated as such.<sup>102</sup> Propelling this argument is the similarity between bitcoins and cash—namely that both can be used to purchase goods and transferred to exchange value.<sup>103</sup> While the functions of Bitcoin and traditional currency often overlap, it is inappropriate to treat Bitcoin as a currency because of the definition of currency.<sup>104</sup>

In the Code of Federal Regulations, the United States Department of the Treasury defines currency as, “[t]he coin and paper money of the United States or of any other country that is designated as legal tender and that circulates and is customarily used and accepted as a medium of exchange in the country of issuance.”<sup>105</sup> While this definition is very permissive in what could be considered a currency, the primary thrust of the definition requires that a government declare that a particular medium of exchange is its designated currency. Bitcoin cannot meet this definition, because no government has claimed Bitcoin as its official medium of exchange.<sup>106</sup>

If the hurdle of government recognition could be overcome or ignored, Bitcoin would still struggle to fit the definition of currency. Some have suggested that Bitcoin cannot be a currency because of its

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99. Penrose, *supra* note 61, at 542.

100. *Id.*

101. Farmer, *supra* note 48, at 98.

102. *E.g.*, Martin Tillier, *Accept That Bitcoin is a Currency and Stop Blaming the Victims of Crime*, NASDAQ (Feb. 10, 2015, 9:49 AM), <http://www.nasdaq.com/article/accept-that-bitcoin-is-a-currency-and-stop-blaming-the-victims-of-crime-cm442726> [<https://perma.cc/58HC-82B5>].

103. *See Shavers*, 2013 WL 4028182 at \*2 (calling Bitcoin a currency because it can serve the function of money).

104. Penrose, *supra* note 61, at 543.

105. General Definitions, 31 C.F.R. § 1010.100(m) (2014) (defining currency).

106. Godlove, *supra* note 40, at \*24.

inherent instability.<sup>107</sup> Because of the built-in limits on the number of bitcoins that can exist, the value of bitcoins will continue to fluctuate radically and trend towards deflation.<sup>108</sup> This price instability will likely make it difficult for Bitcoin to ever become the “customarily used and accepted medium of exchange” of any country.<sup>109</sup>

*B. Bitcoin Cannot be a Security*

Others have suggested that Bitcoin is a security.<sup>110</sup> The reason for this suggestion likely comes from popular discussions of buying bitcoins as investments and adding them to one’s portfolio.<sup>111</sup> Also, treating Bitcoin as a security is tempting because of the United States’ robust securities regulations, which are designed to protect investors from fraud and give investors enough information to make informed investments.<sup>112</sup> However, regulating Bitcoin under U.S. securities law would be inappropriate because Bitcoin does not share the essential attributes of a security.<sup>113</sup> One of the defining hallmarks of a security is that the security represents a claim against an entity or issuer.<sup>114</sup> As Bitcoin is not backed by anything, it is unclear what holding a bitcoin could give one a claim to.<sup>115</sup>

The Securities Act offers a long list of financial instruments that are subject to U.S. securities regulations, including, “any note, stock, . . . bond, . . . [and] investment contract.”<sup>116</sup> While many of the enumerated items are unique financial instruments, existing only in specific circumstances, the category of “investment contract” acts as a

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107. *Id.* at \*26.

108. *Id.*; Dion, *supra* note 10, at 188.

109. 31 C.F.R. § 1010.100 (2014).

110. *E.g.*, Yang, *supra* note 52, at 101 (arguing that Bitcoin “fits squarely into the domain of U.S. securities regulation”).

111. *E.g.*, Jack Tatar, *How to get bitcoins into your retirement account*, MARKETWATCH (June 9, 2014, 5:00 AM), <http://www.marketwatch.com/story/how-to-get-bitcoins-into-your-retirement-account-2014-06-09> [<https://perma.cc/A5VS-SFYL>].

112. *See* Yang, *supra* note 52, at 107 (arguing that one reason Bitcoin should be treated as a security is due to the “legal problems associated with similar virtual schemes that were met with unfortunate endings”).

113. Grinberg, *supra* note 2, at 195.

114. RICHARD SCOTT CARNELL, JONATHAN R. MACEY & GEOFFREY P. MILLER, *THE LAW OF FINANCIAL INSTITUTIONS* 130 (5th ed. 2013).

115. *See* Groshoff, *supra* note 16, at 530 (explaining that a defining characteristic of a security is that it represents a claim against the issuer of the security).

116. 15 U.S.C. § 77b (2012).

broad catchall.<sup>117</sup> If Bitcoin has any chance of being considered a security, it will be because it meets the requirements of an investment contract.<sup>118</sup>

In *SEC v. W.J. Howey Co.*,<sup>119</sup> the Supreme Court first articulated the standard for what constitutes an investment contract.<sup>120</sup> In this case, the Court sought to determine whether the sale of a portion of an orange grove, along with a service contract to maintain the grove, was an investment contract security.<sup>121</sup> The Court held that an investment contract is “a contract, transaction or scheme whereby a person [1] invests his money [2] in a common enterprise [3] and is led to expect profits solely from the efforts of the promoter or a third party.”<sup>122</sup> The Court determined that the sale of a piece of the orange grove was an investment contract, because the purchasers expected to make profits only as a result of the accompanying service contract tending the grove.<sup>123</sup>

Bitcoin likely satisfies the first prong of the *Howey* investment test and meets the requirement for an investment of money because bitcoins have value. This is essentially the holding of the court in the *Shavers* case, where the judge noted that bitcoins acted as money because things could be bought with them.<sup>124</sup> Furthermore, most Bitcoin users acquire their bitcoins by exchanging currency on an exchange, demonstrating a monetary investment.<sup>125</sup> Even those that acquire their bitcoins through the mining process may be considered as having made a monetary investment in Bitcoin.<sup>126</sup> The mining process requires the Bitcoin user to expend electricity and computing power to generate a bitcoin.<sup>127</sup> Some

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117. See Farmer, *supra* note 48, at 99 (“The rationale of securities law is to ensure that anything that can be a security is regulated as such.”).

118. Grinberg, *supra* note 2, at 196.

119. 328 U.S. 293, 294 (1946).

120. Groshoff, *supra* note 16, at 530.

121. *SEC v. W.J. Howey Co.*, 328 U.S. 293, 294 (1946).

122. *Id.* at 298–99.

123. *Id.* at 299–300.

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

125. Grinberg, *supra* note 2, at 196–97.

126. See Yang, *supra* note 52, at 109–10 (arguing that electricity and computing power—the two main resources used when mining bitcoins—have real monetary value, and are investments in the Bitcoin network); see also Farmer, *supra* note 48, at 101 (suggesting that the cost of the electricity used in mining a bitcoin may suffice as an “investment”).

127. Yang, *supra* note 52, at 109–10.



commentators have suggested that it costs roughly \$2.50 worth of electricity and computing power to mine a single bitcoin.<sup>128</sup>

While acquiring bitcoins is likely an investment of money, the Bitcoin system itself likely cannot meet the *Howey Test*'s second prong: the requirement of commonality.<sup>129</sup> Courts analyze commonality under several different standards; however, the two main lines of analysis consist of horizontal commonality and vertical commonality.<sup>130</sup> Horizontal commonality examines the relationship between all investors in an enterprise and whether all the investors' pooled funds are exposed to the same risks.<sup>131</sup> In contrast, vertical commonality examines the relationship between investors and the promoter, and how closely the investors' profits are tied to the promoter's efforts.<sup>132</sup>

The main difficulty in finding commonality within Bitcoin is determining what the "enterprise" itself is. Proponents of horizontal commonality have argued that, by buying a bitcoin, a person is taking a stake in how the Bitcoin system fares.<sup>133</sup> Presumably, if Bitcoin as a whole becomes more desirable, each individual bitcoin becomes more valuable.<sup>134</sup> However, people buy bitcoins for a host of different reasons; some look to hold them as investments, and others merely seek to use them as a way to buy things online without the hassle of traditional payment processors.<sup>135</sup> While users in these different categories face some of the same risks, their risks are not identical. Bitcoin investors are likely far more concerned with the value of Bitcoin as a whole over the long term, while people only looking to use bitcoins to buy things are arguably more concerned with short term pricing, and whether the retailers they want to transact with will accept bitcoins. Buyers' risks differing with their motivations is not an issue for traditional securities, because an expectation of profit is a prerequisite for an investment to be a security, under the *Howey Test*.<sup>136</sup>

Likewise, in regards to vertical commonality, proponents have suggested that computer programmers and developers, working within the Bitcoin network, can be considered promoters of the enterprise, and

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128. Farmer, *supra* note 48, at 101.

129. Grinberg, *supra* note 2, at 199.

130. Yang, *supra* note 52, at 111.

131. *Id.* at 111–12.

132. *Id.*

133. *Id.* at 112.

134. Grinberg, *supra* note 2, at 197.

135. *Id.* at 198.

136. SEC v. W.J. Howey Co., 328 U.S. 293, 299 (1946).

that investors' returns are tied to these promoters' efforts.<sup>137</sup> While computer developers and programmers that are working to create new applications to aid in the use of Bitcoin likely increase the worth of the Bitcoin network, it is not clear that these developers' efforts are truly aimed at making bitcoins worth more. These developers work independently of one another and seek to make a profit for themselves, not for general base of Bitcoin users.<sup>138</sup> As many of these developers are competing against each other, it would be difficult to substantiate that they are all working together toward a common end.

In regards to the third prong of the *Howey* test, requiring that investors expect profits solely from the efforts of others, it is unclear whether Bitcoin satisfies this requirement.<sup>139</sup> While people hold bitcoins for any number of reasons, the majority likely holds them with the expectation, or at least hope, that they will appreciate, because the limited number of merchants that accept bitcoins make them difficult to spend.<sup>140</sup> Those holding bitcoins solely for transacting business, however, would not likely satisfy this prong, for the same reason that it is generally accepted that a person who holds dollars does not expect to make a profit from holding them.<sup>141</sup> The investors that do hope to make a profit from their Bitcoin holdings may be reliant on the efforts of some third party to make the Bitcoin network more valuable.<sup>142</sup> It is, however, still difficult to pinpoint exactly who these third parties are, and how their different development projects and uses for Bitcoin come together in a cohesive manner to improve Bitcoin holders as a whole. Other Bitcoin investors may argue that they expect to make a profit from their bitcoins because of their usefulness and inherent scarcity.<sup>143</sup>

After running Bitcoin through the *Howey* Test, it is difficult to see how Bitcoin could be classified as an investment contract. Calling Bitcoin an "enterprise" would seem to imagine a far more cohesive purpose behind Bitcoin than appears to exist. Bitcoin does not seem to readily fit into any category of security.

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137. Farmer, *supra* note 48, at 103.

138. See Grinberg, *supra* note 2, at 197.

139. *Id.* at 199.

140. *Id.* at 198.

141. *Id.*

142. See *id.* at 198–99 (“Bitcoin investors have no active part to play in Bitcoin’s management but do require the ongoing efforts of the Bitcoin developers.”).

143. *Id.* at 199.

#### IV. WHY BITCOIN IS A COMMODITY

##### A. *Bitcoin is a Commodity Because of its Economic Function*

It would make sense for regulators to treat Bitcoin as a commodity. Commodities are generally defined as “goods sold in the market with a quality and value uniform throughout the world.”<sup>144</sup> This categorization would be appropriate because it realistically reflects the economic behavior of Bitcoin users and squares with traditional economic conceptions of exchange.

Bitcoin should primarily be considered a commodity because it serves the function of money in its community of users. Users exchange bitcoins to obtain property that they desire. In his seminal work, *Man, Economy, and State*, Murray Rothbard argues that all monetary exchanges are actually indirect commodity exchanges.<sup>145</sup> Rothbard supports his proposition by tracing the development of money and exchange. Before the widespread adoption of a common form of money, people had to engage in bartering, or “direct exchange,” in order to complete transactions.<sup>146</sup> In the barter system, if a wheat farmer needed to hire a teacher for his children, he had to find a teacher that was willing to teach his children in exchange for some amount of his wheat. This system was time-consuming and inefficient, and it limited people’s choice of transacting partners to only those that desired the kind of property they had to trade.<sup>147</sup>

Money is created when a community of people agrees upon a common commodity that can be converted and exchanged between them.<sup>148</sup> The hallmarks of early forms of the money commodity were that it could be easily transported, divided, and valued in different places.<sup>149</sup> For this reason, precious metal commodities gained the status

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144. Kaplanov, *supra* note 11, at 147.

145. See MURRAY N. ROTHBARD, *MAN, ECONOMY, AND STATE: A TREATISE ON ECONOMIC PRINCIPLES* 662 (1962) (“Money is a commodity that serves as a general medium of exchange; its exchanges therefore permeate the economic system.”); see also James C.W. Ahikpor, *Did Adam Smith Retard the Development of Economic Analysis?: A Critique of Murray Rothbard’s Interpretation*, 3 *INDEP. REV.* 355, 365–70 (1999) (noting that Adam Smith and Rothbard shared a similar understanding of monetary exchanges as commodity exchanges).

146. See ROTHBARD, *supra* note 145, at 160 (discussing the limits of the barter system).

147. See *id.* at 161.

148. See *id.* at 164 (explaining how marketable commodities become a medium of exchange).

149. *Id.* at 163 (“Tending to increase the marketability of a commodity are its demand for use by more people, its divisibility into small units without loss of value, its durability, and its transportability over large distances.”).

of money in many societies.<sup>150</sup> For instance, gold is relatively easy to transport, can be broken down into smaller pieces, and is desirable for use as ornamentation in many different places.<sup>151</sup> The more people that desire to possess a commodity, the better form of money it makes.<sup>152</sup> When a commodity comes into “general use as a medium of exchange,” it is defined as money.<sup>153</sup> And, when a government adopts that form of money as the preferred medium for the country, it becomes currency.<sup>154</sup>

The money commodity has further evolved because of the difficulty and costs of transporting and dividing the chosen commodity.<sup>155</sup> This evolution occurred when people decided that instead of exchanging a common money commodity, they would instead exchange receipts and claims on the money commodity held in a central location.<sup>156</sup> As a result of this community agreement, paper claims quickly assumed the role of money because they were easier to transport and divide.

The adoption of paper money introduced a new problem into the exchange system—trust.<sup>157</sup> When dealing with people from different communities, how could a seller be sure that a buyer’s paper claim to the money commodity was actually backed by the money commodity? To combat this problem, trusted intermediaries and governments assumed the role of managing the central depository of the money commodity.<sup>158</sup> People in far reaching communities could trust and accept the paper claims that outsiders sought to exchange with them because they felt confident that the third party issuing the paper claim was trustworthy, and would honor the claim, if they decided to exchange the receipt for the money commodity.<sup>159</sup>

In the modern era, money has undergone another evolution. When governments and other trusted intermediaries found that it was too difficult to maintain a common pool of money commodity to back each claim and receipt, they shifted the backing from the money commodity

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150. *Id.* at 164–65.

151. *Id.* at 165.

152. *Id.* at 163.

153. *Id.* at 165.

154. *See* 31 C.F.R. § 1010.100(m) (2014) (defining currency).

155. *See* ROTHBARD, *supra* note 145, at 700–01.

156. *See id.*; *see also* Ahiakpor, *supra* note 145, at 365 (noting the rise of paper money through “private bank notes”).

157. *See* ROTHBARD, *supra* note 145, at 702.

158. *See* George Selgin, *On Ensuring the Acceptability of New Fiat Money*, 26 J. MONEY CREDIT & BANKING 808, 809 (1994) (noting that George Simmel, social philosopher and precursor to Rothbard, argued that acceptance of any money cannot develop without public confidence in the issuing government).

159. *See* ROTHBARD, *supra* note 145, at 702.

to their own authority. Now, instead of exchanges taking place through claims on the money commodity, exchanges occur through claims on the government issuing the money.<sup>160</sup> The issuing government then lends its authority, and, ultimately, army, to secure the exchange.<sup>161</sup> People can be confident that they could later exchange the government-backed money with others because the government guaranteed that it would be accepted.<sup>162</sup>

Bitcoin seeks to operate in the same way. However, instead of acting as a claim on some money commodity, Bitcoin purports to be the money commodity itself. By holding itself out as an accepted medium of exchange within a community, Bitcoin acts as the money commodity. Bitcoin, further, meets the characteristics that Rothbard identified as being desirable in a money commodity. Bitcoins are very easy to transmit across the internet, are divisible to eight decimal places, and are recognized as valuable across a widespread community of users.<sup>163</sup>

Furthermore, while Bitcoin acts as a money commodity in its community of users, from a pricing standpoint, it is valued like other commodities.<sup>164</sup> The price of traditional commodities, like gold, silver, and agricultural products, vary in accordance with their demand and scarcity.<sup>165</sup> When more people want a commodity that has a fixed supply, the price rises.

Similarly, the price of Bitcoin fluctuates according to the same fixed supply model.<sup>166</sup> Bitcoins are scarce because the algorithm controlling how many bitcoins are released into the market through mining rewards is designed to taper the supply of bitcoins, until no more are created.<sup>167</sup> Bitcoins are considered rare because there is a fixed supply of them, leading users to be willing to pay increasing prices to control them. The

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160. See Groshoff, *supra* note 16, at 507 (discussing “fiat currency”).

161. See Joe Weisenthal, *Bitcoin Has No Intrinsic Value, and Will Never Be a Threat to Fiat Currency*, BUS. INSIDER, (Apr. 11, 2013, 4:59 PM), <http://www.businessinsider.com/bitcoins-have-no-value-2013-4> [<https://perma.cc/ZFQ4-NNX9>].

162. *Id.*

163. Grinberg, *supra* note 2, at 163.

164. See Adam Wyatt, *Why There’s Confusion Over Valuing Bitcoin*, WALL ST. & TECH. (Dec. 17, 2014, 9:00 AM), <http://www.wallstreetandtech.com/infrastructure/why-theres-confusion-over-valuing-bitcoin/d/d-id/1318209> [<https://perma.cc/F22S-Z2FZ>] (describing bitcoin “as a hybrid virtual commodity/currency, similar to gold and silver but without the physicality”).

165. See Plassaras, *supra* note 23, at 389 (comparing the scarcity of bitcoin to the scarcity of gold).

166. *Id.*

167. See *id.* (noting that this point will be reached somewhere around 2025).

value of a bitcoin is ultimately driven by supply and demand—a coin is worth whatever someone is willing to pay for it.<sup>168</sup>

Some have argued that it is inappropriate to consider Bitcoin as a commodity, because it does not have an inherent use value, which is sometimes considered a necessary quality of a commodity.<sup>169</sup> Unlike grain, or frozen orange juice concentrate, bitcoins cannot be used in the same way that other commodities can. While, on its face, this argument appears to be fatal for Bitcoin's classification as a commodity, it construes the concept of inherent value too narrowly. Bitcoin's inherent value is found in its ability to decrease the transaction costs of exchanging property online.<sup>170</sup> Before Bitcoin, the only real way to exchange value online was through the use of a trusted intermediary, like a bank or PayPal.<sup>171</sup> These third parties were necessary to track transactions and ensure that transferred property actually existed. For their services, these third parties charge a flat fee, or take a percentage of the transaction.<sup>172</sup> With the advent of Bitcoin, however, third parties are no longer necessary to conduct trusted transactions online; the block-chain acts to ensure that each bitcoin exists, and can only be held by one person at a time.<sup>173</sup> This means that the inherent value of a bitcoin is found in the difference of transaction costs between an online three-party exchange, and a two-party exchange.<sup>174</sup>

Furthermore, Rothbard argued that, when talking about money, use value should be irrelevant. Rothbard writes: "The sole use of money is to be exchanged for goods, and if it had no price and therefore no exchange-value, it could not be exchanged and would no longer be used."<sup>175</sup>

*B. Bitcoin Fits Within the CEA's Definition of a Commodity*

Not only does Bitcoin effectively serve the purpose of a money commodity from a traditional economic viewpoint, Bitcoin also fits within the legal conception of a commodity. The Commodity Exchange

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168. Brad Jacobsen & Fred Pena, *What Every Lawyer Should Know About Bitcoins*, UTAH B.J., July/Aug. 2014, at 40.

169. See Godlove, *supra* note 40, at \*26.

170. See *id.* at \*28.

171. See *id.* at \*14 ("Currently, consumers pay a money transfer fee as a percentage of the total amount transferred: approximately 10% on average.").

172. See *id.*

173. See Kaplanov, *supra* note 11, at 116–17.

174. See Godlove, *supra* note 40, at \*28.

175. ROTHBARD, *supra* note 145, at 670.

Act (CEA)<sup>176</sup> regulates a broad array of commodities, and likely can accommodate Bitcoin. The Act states,

The term “commodity” means wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, *Solanum tuberosum* (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice, and all other goods and articles, except onions (as provided by section 13-1 of this title) and motion picture box office receipts (or any index, measure, value, or data related to such receipts), and all services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in.<sup>177</sup>

It is clear that the CEA was intended to capture the agricultural products typically thought of as “commodities,” but the Act’s broad language also encompasses “all other goods and articles, . . . in which contracts for future delivery are presently or in the future dealt in.”<sup>178</sup>

The primary question in determining whether a good or article is a commodity under the CEA is whether the item is one “in which contracts for future delivery are presently or in the future dealt with.”<sup>179</sup> The Commodities Futures Trading Commission (CFTC) has defined a futures contract as “an agreement to purchase or sell a commodity for delivery in the future in which the price is determined at the outset of the agreement.”<sup>180</sup> Only certain commodities, however, are adaptable to organized futures trading.<sup>181</sup> In order to be traded on a futures exchange, a commodity must: 1) be homogenous; 2) be susceptible to standardized grading; 3) have large supply and demand; 4) have an unrestricted

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176. 7 U.S.C. § 1 (2014).

177. 7 U.S.C. § 1(a)(9) (2014).

178. *Id.*

179. *United States v. Brooks*, 681 F.3d 678, 694 (5th Cir. 2012) *cert. denied sub nom.* *Phillips v. United States*, 133 S. Ct. 836 (2013), *cert. denied sub nom.* *Walton v. United States*, 133 S. Ct. 837 (2013), and *cert. denied*, 133 S. Ct. 839 (2013).

180. HOUMAN B. SHADAB, GLOBAL MARKETS ADVISORY COMMITTEE, REGULATING BITCOIN AND BLOCK CHAIN DERIVATIVES 3–4 (Oct. 9, 2014), [http://www.cftc.gov/idc/groups/public/@aboutcftc/documents/file/gmac\\_100914\\_bitcoin.pdf](http://www.cftc.gov/idc/groups/public/@aboutcftc/documents/file/gmac_100914_bitcoin.pdf) [<https://perma.cc/5JFE-LY2C>].

181. See JULIUS B. BAER & OLIN GLENN SAXON, COMMODITY EXCHANGES AND FUTURES TRADING: PRINCIPLES AND OPERATING METHODS 110 (3d ed. 1949) (discussing the type of commodities that are adaptable to futures trading).

market; 5) have uncertain supply and demand; and 6) not be perishable.<sup>182</sup> So, while grain, cotton, and tin are strong candidates for futures trading, uncanned fruit, tea, and shoes are not adaptable to futures trading because they do not possess all of these characteristics.<sup>183</sup> These characteristics ensure that a commodity's risks are sufficient for speculators to demand a futures market.<sup>184</sup>

Bitcoin possesses all the characteristics that are needed for a commodity to be traded on a futures exchange. Bitcoins are homogenous, imperishable, and susceptible to standardized grading, as all bitcoins are the same, and their quality does not vary.<sup>185</sup> Further, a large supply of bitcoins exists, and demand for them fluctuates in an uncertain manner.<sup>186</sup> And the Bitcoin market is unrestricted, as no single entity controls the supply or demand of bitcoins.<sup>187</sup> There is nothing that conceptually prevents bitcoins from being traded on a futures contract. Two parties could easily contract for the sale of some amount of bitcoins at a present price, with the actual exchange of the bitcoins happening in the future. Furthermore, the risks of Bitcoin are such that futures trading would be beneficial to Bitcoin users; futures contracts would be of great use for companies being paid in bitcoins to protect against bitcoin price drops.<sup>188</sup>

While bitcoins likely fall under the CEA's definition of commodity, it is not clear what category of commodity they fit into.<sup>189</sup> The CEA

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182. *Id.* at 110–12, 118.

183. *See id.* at 118–19 (explaining that uncanned fruit is perishable, tea is not susceptible to common grading, and that shoe manufacturers are able to closely tailor supply to demand, making shoes not uncertain enough to need futures trading).

184. *Id.* at 125.

185. Nikolay Gertchev, *The Money-ness of Bitcoins*, ST. WKLY. (Apr. 5, 2013), <http://thestateweekly.com/the-money-ness-of-bitcoins/> [<https://perma.cc/6E6D-V6DR>] (“[Bitcoins] are perfectly homogenous, easily cognizable, conveniently divisible, storable at practically no cost, and imperishable.”).

186. *See* Timothy B. Lee, *Here's why volatility isn't a big problem for Bitcoin*, WASH. POST (Dec. 9, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/12/09/heres-why-volatility-isnt-a-big-problem-for-bitcoin/> [<https://perma.cc/Z7M4-T74Q>] (“Bitcoin is volatile for two basic reasons: it's currently difficult to purchase Bitcoins with dollars, and there's a lot of uncertainty about the Bitcoin network's long-term prospects.”).

187. Dion, *supra* note 10, at 167.

188. *See* SHADAB, *supra* note 180, at 3.

189. *Id.* at 5.



breaks commodities down into three categories: agricultural commodities, excluded commodities, and exempt commodities.<sup>190</sup> While agricultural commodities are self-explanatory, the other two categories bear explanation. Excluded commodities are made up of interest rates, currencies, and other financial instruments, whereas exempt commodities function as a “catch-all category” that includes energy interests and precious metals.<sup>191</sup>

Bitcoin likely fits best in the category of exempt commodities.<sup>192</sup> This categorization would make sense primarily because of the similarities between bitcoins and precious metals: each exists in a limited supply, is capable of physical delivery, and is a capital good.<sup>193</sup> Further, the CFTC has classified intangible commodities as exempt commodities “if ownership of the commodity can be conveyed in some manner and the commodity can be consumed.”<sup>194</sup> Bitcoins can arguably be consumed, in the sense that they can be spent or traded.<sup>195</sup> Finally, classifying Bitcoin as an “exempt commodity” would be consistent with the IRS’s and FinCEN’s guidance, as neither treats Bitcoin strictly as a currency or financial instrument.<sup>196</sup>

## V. ADVANTAGES TO TREATING BITCOIN AS A COMMODITY

### A. CEA and CFTC Regulation

If Bitcoin is classified as a commodity, the CEA could regulate Bitcoin exchanges, and the CFTC could oversee any Bitcoin derivatives that may be developed. Organized and regulated commodity exchanges promote price stabilization in the market, and allow investors to engage

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190. *Id.* at 4.

191. *Id.*

192. *Id.* at 5.

193. *Id.* (noting that physical delivery of bitcoins is possible “in a digital sense,” as a Bitcoin user actually possesses the bitcoin file).

194. Further Definition of “Swap,” “Security-Based Swap,” and “Security-Based Swap Agreement”; Mixed Swaps; Security-Based Swap Agreement Recordkeeping, 77 Fed. Reg. 48208, 48233 (Aug. 13, 2012) (to be codified at 17 C.F.R. pts. 1, 230, 240 and 241).

195. SHADAB, *supra* note 180, at 5.

196. *Id.*

in “hedging” to limit the risk of their investments.<sup>197</sup> This kind of regulation would be very beneficial to Bitcoin users, because it would create increased confidence in the Bitcoin economy and ecosystem.<sup>198</sup>

The CEA contains a list of “core principles,” to which all commodities “boards of trade” must adhere.<sup>199</sup> J.M. Mehl, the first administrator of the Commodity Exchange Authority, explained that the purpose of the CEA was to “assure the reflection of true prices” and “to prevent cheating and fraud, [and] to compel honest accounting to customers . . . .”<sup>200</sup> To achieve these goals, any U.S.-based commodity exchange must be registered and adhere to the guidelines of the CEA.<sup>201</sup> The CEA requires that registered exchanges establish clear rules for traders, keep detailed trading records, and make regular reports.<sup>202</sup> Further, the CEA contains broad provisions to prevent fraud, and requires exchange operators to prevent price manipulation through enforcing position limits.<sup>203</sup>

The CEA’s regulations would be very beneficial to the Bitcoin network and users. While CEA compliance would likely change some aspects of Bitcoin transactions, particularly the anonymity of transactions because of the CEA’s reporting requirements, the increased confidence that users could have in Bitcoin exchanges would likely be worth the sacrifice.<sup>204</sup> The current exchanges on which Bitcoins are traded leave much to be desired, particularly the services that seek to offer derivatives trading. For instance, one service, BTCOracle, offers “binary options” to users.<sup>205</sup> The site terms its financial instruments in those of a game, with the page titled “How to Play” explaining how options trading works.<sup>206</sup> In order to trade options on this site, “players”

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197. Comment, *Federal Regulation of Commodity Futures Trading*, 60 Yale L.J. 822, 823–30 (1951).

198. See Micheal A. Fixler, Note, *Cyberfinance: Regulating Banking on the Internet*, 47 CASE W. RES. L. REV. 81, 108 (1996).

199. 7 U.S.C. § 7 (2014).

200. J.M. Mehl, *Objectives of Federal Regulation of the Commodity Exchanges*, 19 J. FARM ECON. 313, 315 (1937).

201. See BAER & SAXON, *supra* note 181, at 252.

202. *Id.* at 252–54.

203. Comment, *supra* note 197, at 837–39. See also SHADAB, *supra* note 180, at 4–5 (“[The CEA] require[s] exchanges to establish and enforce rules to protect customers, prevent fraud and manipulation, maintain and disclose records, and maintain fair and orderly markets by . . . enforcing position limits.”).

204. See BAER & SAXON, *supra* note 181, at 253 (noting that registered exchanges must keep a record of “the parties to all transactions”).

205. *How to Play*, BTCOracle, <http://btcoracle.com/howto.php> [<https://perma.cc/JK9H-25T4>] (last visited Dec. 26, 2015).

206. *Id.*

send bitcoins to the hosts' Bitcoin account, and if their option "wins" the hosts send the winnings back.<sup>207</sup> This entire process happens anonymously, and the only assurance that users have that they will receive their "winnings" is the faith they have in the site's operators.<sup>208</sup>

Were Bitcoin to be regulated by the CFTC, sites acting as exchanges and offering options trading would be subject to the reporting and enforcement requirements of the CEA, allowing consumers to be confident that the prices they are seeing are an accurate reflection of the Bitcoin market.<sup>209</sup> Also, consumers would be able to do more than just "believe" that the people they are transacting with will hold up their end of the bargain.<sup>210</sup> As the Bitcoin system currently stands, basic contracting principles do not afford Bitcoin users enough protection. The anonymity of the current system leaves consumers with little protection or legal recourse.<sup>211</sup>

*B. Treating Bitcoin as a Commodity Would Result in More Efficient Tax Treatment*

One of the primary tax advantages of treating Bitcoin as a commodity would be the ability for Bitcoin dealers and traders to elect mark-to-market accounting. Section 475(e) of the Internal Revenue Code allows commodities dealers and traders to recognize gain or loss on any commodities that they hold at the end of the taxable year.<sup>212</sup> The taxpayer is then allowed to treat these gains or losses as ordinary gains or losses, rather than capital ones.<sup>213</sup> The Internal Revenue Code defines a dealer as anyone that purchases commodities from, or sells commodities to, customers in the regular course of business.<sup>214</sup> In contrast, traders are individuals that make it their business to frequently buy and sell commodities, making a profit off of the daily fluctuations of the market.<sup>215</sup>

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207. *Id.*

208. *FAQ*, BTCOracle, <http://btcoracle.com/faq.php> [<https://perma.cc/3PM6-LUPG>] (last visited Dec. 26, 2015).

209. *See* Mehl, *supra* note 200, at 315 (noting that an objective of the CEA is to "assure the reflection of true prices").

210. *See* 17 C.F.R. § 33.10 (2015) (creating a fraud cause of action for those who attempt to cheat someone through a commodities option).

211. Middlebrook & Hughes, *supra* note 32, at 842 ("It is also important to note that anonymity is incongruous with consumer protections.").

212. 26 U.S.C. § 475 (2002).

213. *Id.*

214. *Id.*

215. 2 MERTENS LAW OF FED. INCOME TAX'N § 16:105 (West 2015).

While only a portion of Bitcoin's users would likely be able to take advantage of the mark-to-market provisions, the accounting procedure could be an important piece in the development of a more robust Bitcoin market and exchange. The chief advantage of mark-to-market accounting is that losses, which would normally be treated as short-term capital losses subject to a \$3,000 current deduction limit, are converted to ordinary losses that may be entirely deducted in the current year.<sup>216</sup> As Bitcoin has a history of rapid price fluctuation, the option to fully recognize losses sooner would be beneficial to those regularly buying and selling bitcoins.<sup>217</sup> The option to use this accounting method would give developers a new tax incentive to develop Bitcoin programs and services to make the Bitcoin economy function more efficiently.<sup>218</sup>

Additionally, regulating Bitcoin as a commodity under the CEA would provide a clearer tax reporting mechanism. As the IRS's guidance currently stands, Bitcoin users are required to report bitcoin transactions to their transacting partners on a Form 1099.<sup>219</sup> This can be problematic, as Bitcoin users rarely know with whom they are transacting.<sup>220</sup> Under the CEA, however, registered Bitcoin exchanges, and wallet companies, would be required to track all transactions, including Bitcoin users' identities.<sup>221</sup> This would greatly simplify Bitcoin users' ability to comply with the IRS's guidance.

## VI. BITCOIN CONSUMER PROTECTION REGULATION

### A. *Why and Where Bitcoin Consumer Protection Regulation Is Needed*

In addition to the market and tax advantages that regulating Bitcoin as a commodity would bring, the CEA could also provide important consumer protections to Bitcoin users. Currently, Bitcoin users have very little protection, and losses from theft and fraud have become increasingly frequent.<sup>222</sup> Further, the Bitcoin network operates in a highly technical system, and many Bitcoin users are at a severe information disadvantage when compared to those that operate the system. If

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216. *Id.*

217. *See Mark to Market*, GUARDIAN ACCT. GROUP, <http://www.shrinkmytaxes.com/marktomarket.php> [<https://perma.cc/84RK-CVNE>] (last visited Dec. 26, 2015) (discussing the advantages of mark-to-market accounting).

218. *See Comment*, *supra* note 197, at 827–28 (noting that rapid trading and market speculation is an important part of providing liquidity to a market).

219. IRS, *supra* note 74, at 939.

220. Marian, *supra* note 77.

221. *See BAER & SAXON*, *supra* note 181, at 253 (noting that registered exchanges must keep a record of “the parties to all transactions”).

222. Godlove, *supra* note 40, at \*18; Middlebrook & Hughes, *supra* note 32, at 816.

the Bitcoin economy is going to grow and develop successfully, consumers need to have confidence that their bitcoins are securely held; regulation can provide some of this confidence.<sup>223</sup>

While consumer protection regulation is clearly needed in the Bitcoin economy, a difficult question of where to regulate arises. As the Bitcoin network is really nothing more than a collection of individual computers working together, there is no proper central Bitcoin authority or organizing body on which to impose regulations.<sup>224</sup> As a result, Bitcoin regulators should look to the myriad secondary businesses and exchanges that are sprouting up to make Bitcoin more accessible to consumers.<sup>225</sup> By regulating at the point of the exchanges and wallet services, regulators can ensure that developers have proper incentives to play by the rules. For this reason, CEA regulation would be appropriate, as the regulatory focus is on the market makers, rather than mere market participants.<sup>226</sup>

*B. Regulatory Need 1: Impose Reserve Requirements  
on Bitcoin Exchanges*

One important, and currently absent, regulation that regulators should consider for Bitcoin exchanges are reserve requirements.<sup>227</sup> Under the current model, when a Bitcoin exchange or wallet service loses bitcoins, or is robbed, the exchange simply covers its losses by making deductions from users' accounts.<sup>228</sup> This kind of behavior erodes consumer confidence and makes consumers bear the risk that their chosen service's security system will be breached.<sup>229</sup> Most consumers are ill equipped to evaluate the quality of security that different wallet companies, or exchanges, provide because of the high degree of complexity of cyber-security, and the inaccessibility of most of the important information.<sup>230</sup> By imposing a reserve requirement on Bitcoin exchanges, regulators could help ensure liquidity in the Bitcoin market and incentivize exchanges and wallet services to properly safeguard users'

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223. Fixler, *supra* note 198, at 108.

224. Groshoff, *supra* note 16, at 524.

225. See Godlove, *supra* note 40, at \*45–47 (“Institutional investors . . . do merit increased oversight.”).

226. Mehl, *supra* note 200, at 316 (“It is the purpose of the law to impose upon commodity futures exchanges and their members certain requirements and standards of business conduct in aid of the general purposes of the law.”).

227. Godlove, *supra* note 40, at \*63.

228. *Id.*

229. *Id.* at \*63–64.

230. See *id.* at \*56 (noting that the obligation to inform consumers of risks should rest on the service provider).

bitcoins.<sup>231</sup> Reserve requirements could be achieved under the CEA through their inclusion in the by-laws that the CEA requires all registered exchanges to establish.<sup>232</sup>

Some commentators have suggested that the benefits of imposed reserve requirements could be achieved through participation in an insurance program.<sup>233</sup> Deposit insurance would increase consumers' confidence in the Bitcoin network and allay their fears of having their bitcoins stolen.<sup>234</sup> Furthermore, by requiring that all Bitcoin exchanges and services carry some sort of insurance, consumers would have another point of comparison to examine when choosing which service best meets their needs and desired amount of risk.<sup>235</sup>

*C. Regulatory Need 2: Ensure that Bitcoin Users Understand the Risks of the System*

By imposing registration requirements on Bitcoin exchanges, regulators can also seek to ensure that consumers are properly informed of the inherent risks that exist within Bitcoin. For instance, consumers should be warned of the fact that there is no way to reverse a Bitcoin transaction, and that there are no chargebacks.<sup>236</sup> Additionally, consumers should be reminded of the importance of keeping their "private keys private," because if someone were to gain access to it, that person would control all of the consumer's bitcoins.<sup>237</sup> By ensuring that consumers are made aware of the details of the Bitcoin network, regulators can better protect the public from fraud and theft.

## CONCLUSION

Bitcoin, while an exciting technology, needs clearer regulatory classification and treatment to allow the development of the Bitcoin economy to continue. Because Bitcoin acts as a kind of money between its users, it should be considered a commodity. Treating Bitcoin in this way would be consistent with the historical conception of what money is and would accurately reflect fluctuations and volatilities in the Bitcoin economy. Further, by treating Bitcoin as a commodity, it could be regulated under the CEA, and any derivatives could be handled by the

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231. Fixler, *supra* note 198, at 113.

232. See BAER & SAXON, *supra* note 181, at 254 (noting that registered exchanges must establish by-laws and rules for their governance).

233. Groshoff, *supra* note 16, at 535.

234. Fixler, *supra* note 198, at 89.

235. Groshoff, *supra* note 16, at 535.

236. Godlove, *supra* note 40, at \*55.

237. *Id.* at \*55–56.

CFTC. As these regulatory frameworks already exist, Bitcoin developers could draw from existing knowledge when looking to expand the Bitcoin economy. Finally, as the Bitcoin economy grows, regulators should pay special attention to the implementation of consumer protection regulation. Only once consumer confidence in Bitcoin has increased will Bitcoin be able to achieve its full potential.

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