

## MONEY FOR NOTHING: THE TREATMENT OF BITCOIN IN SECTION 550 RECOVERY ACTIONS

Mary E. Maginnis\*

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### INTRODUCTION

Bitcoin, the most valuable<sup>1</sup> and popular<sup>2</sup> digital currency to date, has redefined the way that people exchange value. Unlike most currencies, it provides relative anonymity to users, is not regulated by a central authority, and can be transferred directly from user to user. Because it is so distinct from conventional currencies, government regulation has proved difficult,

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\* J.D. Candidate, 2018, University of Pennsylvania Law School; A.B., 2013, Harvard University. I would like to thank Professor David Skeel for his thoughtful insights and feedback during the writing process, Knox McIlwain and Jill Carlson for their guidance, and my friends at the *University of Pennsylvania Journal of Business Law* for their work in publishing this Comment.

1. See Samburaj Das, *Bitcoin Exceeds \$20 Billion in Market Cap*, CRYPTOCOINSNEWS (Mar. 6, 2017, 5:22 PM), <https://www.cryptocoinsnews.com/bitcoin-exceeds-20-billion-in-market-cap/> [<https://perma.cc/5SE9-SP45>] (reporting that the Bitcoin market exceeds \$20 billion); Garrett Keirns, *Charts: How Bitcoin's Market Dominance is Being Challenged*, COINDESK (Mar. 19, 2017, 2:33 PM), <http://www.coindesk.com/4-charts-that-show-bitcoins-changing-market-role/> [<https://perma.cc/V6E9-LJZV>] (listing the market value of the most popular digital currencies as of February 28, 2017).

2. See *Cryptocurrency Market Capitalizations*, COINMARKETCAP <https://coinmarketcap.com/charts/#btc-percentage> [<https://perma.cc/R6DE-HMCP>] (indicating that Bitcoin has approximately 70% of market share).

and its treatment within existing regulatory schemes has been hotly contested. Most of these debates revolve specifically around Bitcoin's status as a currency or a commodity, and no uniform treatment has evolved.

In the context of the Bankruptcy Code (the "Code"), U.S. courts have not yet had occasion to weigh in on this debate; however, one court in the Northern District of California was recently presented with the issue in the context of a fraudulent or preferential transfer. *Kasolas v. Lowe (In re Hashfast Technologies LLC)*<sup>3</sup> (hereinafter "*Hashfast*") involved the prepetition transfer of 3,000 bitcoins, which were worth \$363,861.43 at the time of the transfer<sup>4</sup> but had grown over the case's pendency to reach over \$2.3 million.<sup>5</sup> Assuming that the bankruptcy trustee could have proven that the transfer qualified as fraudulent or preferential, the trustee would have been entitled to a recovery under Section 550 of the Code.<sup>6</sup> However, the nature and value of that recovery would have depended on how the court decided to treat the bitcoins. In making this decision, the court would have been faced with two issues. First, it would have had to determine whether Bitcoin is a currency representing U.S. Dollars or a commodity for purposes of the Code. If bitcoins were treated as a form of currency, the trustee would have been able to recover only the value of the bitcoins at the time of the transfer, and the analysis would have ended there.

On the other hand, if Bitcoin was considered a commodity, the court would have been faced with a second issue: determining the precise nature of the recovery. Section 550(a)<sup>7</sup> allows a court to order the return of either the property or its value. Because the language of this section does not specify *when* the property should be valued for purposes of a recovery order and because bitcoins are subject to extreme and frequent fluctuations in value, the trustee in *Hashfast* could have been entitled to a wide variety of recoveries. For instance, the court could have ordered the return of the bitcoins themselves, or their current value, in which case the trustee would have recovered over \$2.3 million.<sup>8</sup> Alternatively, the court could have ordered recovery of the value of the bitcoins at the time they were improperly

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3. Order on Motion for Partial Summary Judgment, *Kasolas v. Lowe (In re Hashfast Techs. L.L.C.)*, No. 14-30725DM (Bankr. N.D. Cal. June 17, 2016).

4. Amended Complaint at 5-6, *In re Hashfast Techs. L.L.C.*, No. 14-30725DM (Bankr. N.D. Cal. Feb. 17, 2015).

5. Valued as of the date of settlement, June 17, 2016. See *Bitcoin Price Index Chart*, COINDESK <http://www.coindesk.com/price/> [<https://perma.cc/R7RK-49VA>] (last visited May 21, 2017). As of August 2018, this number of bitcoins would be worth approximately \$22.5 million. *Id.*

6. See 11 U.S.C. § 550 (2017) (stating that fraudulent or preferential transfers are voidable). For the Section's specific language, see *infra* note 151.

7. See *id.* (allowing the court to order the recovery of property transferred or the value of such property from the transferee).

8. See *supra* note 5 (stating value of bitcoins).

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transferred, giving the trustee only \$363,861.43 and leaving the transferee with the remaining value.

Although *Hashfast* was voluntarily dismissed by both parties before that court determined all of the issues presented,<sup>9</sup> this set of questions is likely to come up again in the future as Bitcoin's popularity continues to skyrocket.<sup>10</sup> Of increasing significance, too, are other emerging digital currencies such as Ethereum and Dash, which are growing faster than Bitcoin.<sup>11</sup> Finally, these questions are likely to continue to emerge in the bankruptcy context, as a number of Bitcoin-related entities have been forced to file for bankruptcy in the last few years.<sup>12</sup> The high volatility of Bitcoin's market price and the inability to track down hackers and recover lost bitcoins, moreover, put individuals who have invested in Bitcoin at a higher risk of losing value.<sup>13</sup>

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9. See *In re Hashfast Techs. LLC*, *supra* note 3, at 1 (granting voluntary dismissal).

10. See, e.g., *Blockchain Wallet Users*, BLOCKCHAIN, <https://blockchain.info/charts/my-wallet-n-users> [<https://perma.cc/USY5-XNS5>] (last visited Mar. 29, 2017) (showing that the number of Bitcoin wallet users has almost doubled in the last year from just under 7 million to just under 13 million); *Total Number of Transactions*, BLOCKCHAIN, <https://blockchain.info/charts/n-transactions-total> [<https://perma.cc/B7WY-5RRZ>] (last visited Mar. 29, 2017) (similarly showing that the number of transactions has also almost doubled over the last year).

11. See Keirns, *supra* note 1 (showing that Ethereum and Dash are outperforming Bitcoin by 199.87% and 233.91%, respectively). Investors who missed out on purchasing Bitcoin while it was cheap are now turning to these "alt coins." See Olga Kharif, *Investors Who Missed Bitcoin Rally Turn to Dash, Ether, Monero*, MINT (Mar. 8, 2017, 5:18 PM), <http://www.livemint.com/Money/bHgV6EwzNKVKsSrI3JsFRZN/Investors-who-missed-bitcoin-rally-turn-to-dash-ether-mone.html> [<https://perma.cc/28AU-B2KT>] (explaining that investors who missed out on purchasing bitcoin while it was cheap are turning to these "alt coins"). However, these coins' higher growth rates may be due to their relative newness. See *Comparison of Cryptocurrencies*, BITCOIN WIKI, [https://en.bitcoin.it/wiki/Comparison\\_of\\_cryptocurrencies](https://en.bitcoin.it/wiki/Comparison_of_cryptocurrencies) [<https://perma.cc/Q6GV-JHQR>] (last visited Apr. 11, 2017) (listing the release dates of various cryptocurrencies and showing that the first alt coins appeared over two years after Bitcoin).

12. See, e.g., Stan Higgins, *Bitcoin Mining Firm KnCMiner Declares Bankruptcy*, COINDESK (May 27, 2016, 6:41 PM), <http://www.coindesk.com/kncminer-declares-bankruptcy-cites-upcoming-bitcoin-subsidy-halving/> [<https://perma.cc/9G7N-A6HH>] (describing the events leading up to a major mining firm's bankruptcy); Nathaniel Popper, *Mt. Gox Creditors Seek Trillions Where There Are Only Millions*, N.Y. TIMES (May 25, 2016), <https://www.nytimes.com/2016/05/26/business/dealbook/mt-gox-creditors-seek-trillions-where-there-are-only-millions.html> [<https://perma.cc/HV44-T8FZ>] (reporting that creditors' claims against the bankrupt Bitcoin exchange, Mt. Gox, amounted to \$2,411,412,137,427).

13. See Kerry Close, *Why You Shouldn't Invest in Bitcoin*, TIME (Jan. 5, 2017), <http://time.com/money/4623650/bitcoin-invest/> [<https://perma.cc/V3NZ-ZRAE>] (arguing that Bitcoin's high volatility is especially problematic for investors); Laura Shin, *Should You Invest in Bitcoin? 10 Arguments Against as of December 2015*, FORBES (Dec. 28, 2015, 8:00 AM), <https://www.forbes.com/sites/laurashin/2015/12/28/should-you-invest-in-bitcoin-10-arguments-against-as-of-december-2015/#7a40de993895> [<https://perma.cc/69TC-U9HZ>] (offering ten reasons why Bitcoin is an unsafe investment).

This Comment evaluates the different ways that bankruptcy courts might treat Bitcoin in a Section 550 recovery action and ultimately argues that bitcoins should be treated as commodities and an estate should be entitled to a return of the bitcoins themselves. This result should attach regardless of whether the value of the bitcoins has increased or decreased over the course of the bankruptcy proceeding. Because parts of Section 550 may block recovery of the bitcoins in some cases,<sup>14</sup> this Comment argues that in these situations, a court should order recovery of the value of consideration a transferee received from a subsequent transferee for the bitcoins.

Part I of this Comment offers a more detailed description of Bitcoin's history, characteristics, uses, and value, highlighting the ways in which it differs from conventional currencies. It also discusses the ways that Bitcoin has been treated by various foreign governments, U.S. States, and U.S. regulatory entities. Part II focuses on how bitcoins should be treated in a Section 550 recovery action by first discussing the currency or commodity debate and then addressing the issue of the nature of the recovery. With regards to the latter, Part II first reviews Section 550 and then analyzes recovery trends in bankruptcy courts. It concludes with specific suggestions for the treatment of Bitcoin under Section 550.

## I. BITCOIN DEFINED

### A. *Bitcoin's Characteristics*

Bitcoin was conceptually born in November of 2008 when Satoshi Nakamoto, an anonymous computer programmer or group of programmers, released a paper describing what would eventually become the world's most popular digital currency.<sup>15</sup> According to Nakamoto, the goal of Bitcoin was to create "an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party."<sup>16</sup> Therefore, Bitcoin was established without a centralized authority or bank issuing currency or controlling and brokering transactions.<sup>17</sup>

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14. See 11 U.S.C. § 550(b)-(c) (2017) (immunizing some types of transferees and insiders from recovery actions).

15. See Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN.ORG, <https://bitcoin.org/bitcoin.pdf> [<https://perma.cc/U6DZ-J5HG>] (last visited Jan. 26, 2017) (describing the use and nature of a peer-to-peer electronic cash system, without the need of third party financial institutions).

16. *Id.* at 1.

17. Online transactions in other currencies, conversely, require a third party, "like a bank or PayPal, ensuring that funds were transferred when they were claimed to be, and that no one

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In order to secure transactions without a middleman, Bitcoin requires network verification of each transaction before it is complete.<sup>18</sup> After one user sends bitcoins to another, the Bitcoin file is tagged with a “unique serial number” that represents a combination of the bitcoins’ old serial number and the recipient’s public key.<sup>19</sup> The new serial number is “broadcast” to all other computers in the Bitcoin network, and those computers respond by verifying the transaction if the bitcoins being used have not already been spent.<sup>20</sup> Once a transaction has been validated, the transaction is complete, and it is recorded on a public ledger called the “blockchain,” which contains all finalized Bitcoin transactions.<sup>21</sup> Any additions to the blockchain are distributed to the entire network at the same time the transaction is verified.<sup>22</sup> The entire process takes an average of ten minutes, and once the transferee receives notice of verification, he or she officially owns the bitcoins and may spend them or use them in whatever way he or she chooses.<sup>23</sup>

This process of transaction verification, in conjunction with a timestamp server that records the precise time of a transaction, prevents double-spending and other network manipulation.<sup>24</sup> Bitcoin miners cannot

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was cheating the system.” Mitchell Prentis, Note, *Digital Metal: Regulating Bitcoin as a Commodity*, 66 CASE W. RES. L. REV. 609, 612 (2015).

18. See, e.g., *id.*; Nakamoto, *supra* note 15, at 3 (describing the six-step process through which each transaction is verified and completed).

19. See Prentis, *supra*, note 17, at 612 (describing the computer network that verifies exchanges as they happen).

20. See, e.g., *id.*; Nicholas Godlove, *Regulatory Overview of Virtual Currency*, 10 OKLA. J.L. & TECH. 70 (2014) (describing the transfer process in detail). People do not have control over this verification process or which transactions their computer verifies; their computers automatically do the work through specific software. See Allan Harris & Corey Conley, *Will Bitcoin Kill the Dollar?*, NVATE (Nov. 23, 2011, 12:46 PM), <http://nvate.com/2177/will-bitcoin-kill-the-dollar/> [<https://perma.cc/SEK3-ZWGW>] (analogizing the verification process to computer programs that, with their users’ permission, use the computers’ idle time to crunch data for others). “To the computers that verify transactions, this process is called ‘mining.’” See *infra* note 34 and accompanying text (describing the transaction verification process).

21. *Frequently Asked Questions*, BITCOIN.ORG, <https://bitcoin.org/en/faq> [<https://perma.cc/5PTQ-2M7Z>] (last visited Jan. 29, 2017) (explaining that this ledger contains every transaction ever processed, so a user’s computer can verify the validity of each transaction).

22. See Godlove, *supra* note 20, at 9 (explaining how a transfer is verified as legitimate and recording the transfer for distribution to the network).

23. See *supra* note 21 (describing the verification process).

24. See Nakamoto, *supra* note 15, at 2 (arguing that to prevent double-spending without a middleman or centralized authority, we need transactions to be made public and a system that allows participants to agree on a single order history); see also Nikolei M. Kaplanov, Student Article, *Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation*, 25 LOY. CONSUMER L. REV. 111, 117 (2012) (stating that the timestamp server and public verification process prevents double-spending). Double-spending is the process by which the same coins are used in multiple transactions. See Joshua A. Kroll et al., *The*

cheat the system either to increase their own reward or process fraudulent transactions because the Bitcoin network was designed so that computers on the network cannot accept any block with invalid information.<sup>25</sup> For example, if User sent bitcoins to Transferee 1 and then tried to double-spend the same bitcoins by sending them to Transferee 2 before the first transaction was complete, only one transaction would be verified and the other would fail. The network would approve one transaction, but when it would attempt to approve the other, it would recognize that those bitcoins no longer belong to User and reject it. Without acceptance from other computers, the transaction would not be completed.<sup>26</sup>

Another layer of security comes from the public key encryption used to protect users' identities and their Bitcoin wallets.<sup>27</sup> Each Bitcoin user has a unique public key and private key.<sup>28</sup> A user shares his or her public key with others in order to receive bitcoins, but the private key is kept only with the user and is necessary in order to access funds or transfer value to others.<sup>29</sup> "Essentially, the public key is like an e-mail address—public and available to everyone—while the private key is like the password needed to authorize messages (in this case bitcoins) to go in and out."<sup>30</sup> Since public keys, rather than names, are shared in Bitcoin transactions and transactions can be completed online without any face-to-face contact, Bitcoin transactions can be made with relative anonymity.<sup>31</sup> However, when someone reveals their identity in conjunction with their public key, anonymity is compromised, since the blockchain contains a public record of every transaction made with that individual's public key.<sup>32</sup>

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*Economics of Bitcoin Mining, or Bitcoin in the Presence of Adversaries*, WEIS (2013), n.1, <http://www.econinfosec.org/archive/weis2013/papers/KrollDaveyFeltenWEIS2013.pdf> [<https://perma.cc/8VWK-9YTD>] (last visited Mar. 28, 2017) (explaining that blocks are not solved incrementally). For a detailed analysis of double-spending in the Bitcoin context, *see id.*

25. *See* Prentis, *supra* note 17, at 614 ("Each Bitcoin user has two mathematically related keys associated with himself or herself: a public key and a private key.").

26. *See supra* note 21 (pointing out the network's invulnerability against invalid information).

27. *See* Prentis, *supra* note 17, at 614 (describing the public key encryption).

28. *See id.* (stating that each Bitcoin user has a public key, which identifies the user on the network, and a private key, which serves as the password to allow sending bitcoins to others).

29. *See* Kaplanov, *supra* note 24, at 117 (describing the different uses of the public and private keys).

30. *Id.*

31. This, in combination with Bitcoin's decentralized nature, has created serious problems for criminal enforcement agencies, to be discussed *infra* at Section I.C.

32. Note that this would not compromise other users' public keys. Even if one user's public key was known and his transactions could be found on the public ledger, the identities of those with whom he transacted will remain anonymous unless their identities are also linked

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Users can acquire Bitcoin in one of two ways.<sup>33</sup> The easiest and most efficient way is to purchase bitcoins from someone who already owns them or through a Bitcoin exchange, a “marketplace” that allows people to exchange or purchase bitcoins for conventional currencies.<sup>34</sup> Alternatively, bitcoins can be obtained through “mining,” the process by which new bitcoins are created and issued by the network.<sup>35</sup> Using the requisite computer software, personal computers compete to verify and process Bitcoin transactions, which often involves computing complex mathematical problems.<sup>36</sup> The computer that is able to process a transaction first is compensated with bitcoins.<sup>37</sup> Mining has become less efficient, however, for a number of reasons. First, the number of miners has increased, making mining even more competitive.<sup>38</sup> Second, the mathematical problems increase in difficulty over time.<sup>39</sup> The equations have become so difficult that individuals working with personal computers can no longer solve them on their own.<sup>40</sup> Miners have avoided this problem by either using “supercomputers” with hardware able to process the highly complex transactions<sup>41</sup> or by joining with other computers through “pooled mining,” which allows each of the group’s computers to solve a smaller part of the problem.<sup>42</sup> Any rewards reaped by a mining pool are divided amongst the miners.<sup>43</sup> Finally, mining is no longer efficient because the number of

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to their public keys. Because of this lack of “full anonymity,” some argue that Bitcoin is better described as “pseudonymous.” See Judith Lee et al., *Bitcoin Basics: A Primer on Virtual Currencies*, 16 BUS. L. INT’L 21, 22 (2015).

33. See *supra* note 21 (describing the different ways one can acquire Bitcoin).

34. See *What is Bitcoin?*, CNN, <http://money.cnn.com/infographic/technology/what-is-bitcoin/> [<https://perma.cc/H9YY-HMWQ>] (last visited Apr. 11, 2017) (explaining that Bitcoin exchanges function similarly to exchanges for conventional currencies); Kaplanov, *supra* note 24, at 121-22 (drawing similarities between Bitcoin exchanges and traditional exchanges).

35. See *supra* note 21 (explaining the process of mining bitcoins).

36. See *id.* (“Mining software listens for transactions broadcast through the peer-to-peer network and performs appropriate tasks to process and confirm these transactions.”).

37. See Kaplanov, *supra* note 24, at 119-120 (explaining that the system awards bitcoins to the miner that happens to compute the proper blockchain first).

38. See *supra* note 21 (explaining that as more miners join the network, it becomes harder to make a profit).

39. See Lee et al., *supra* note 32, at 24 (explaining that the mathematical problems involved in mining increase in difficulty).

40. See Kaplanov, *supra* note 24, at 120 (stating that miners must often use supercomputers or pool miners together).

41. See Alexander Lawn, *What Is Bitcoin Mining?*, NASDAQ (Jan. 23, 2017, 9:25 AM), <http://www.nasdaq.com/article/what-is-bitcoin-mining-cm736542> [<https://perma.cc/2CJB-NWFA>] (detailing the evolution of mining hardware).

42. See Kaplanov, *supra* note 24, at 120 (explaining the process of pooled mining and its advantages).

43. *Id.*

bitcoins offered as a reward for correctly solving the equations has decreased—and continues to decrease—over time.<sup>44</sup> Originally, in 2009, miners were rewarded with 50 bitcoins per block, but that number is halved every 210,000 blocks, or approximately every four years.<sup>45</sup> Bitcoin's most recent "halving" occurred in July of 2016, when the reward dropped to 12.5 bitcoins per block.<sup>46</sup> Bitcoin production will continue decreasing and eventually halt once 21 million bitcoins have been issued.<sup>47</sup> After Bitcoin production stops, Bitcoin miners will likely be compensated for their work validating transactions with small transaction fees.<sup>48</sup>

Once a user has procured bitcoins through mining or purchase, he or she can trade them in for cash at Bitcoin ATMs located in numerous countries worldwide.<sup>49</sup> He or she can also use them to acquire goods or services through a number of retailers such as Dell, Overstock.com, WordPress.com, Target, CVS, Subway, PayPal, Home Depot, and Microsoft.<sup>50</sup> Some traditional restaurants and retail stores that do not operate

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44. See Prentis, *supra* note 17, at 616 (asserting that Bitcoin's built-in limitation on the number of bitcoins in the system leads to a diminishing reward).

45. See Block, BITCOIN WIKI, <https://en.bitcoin.it/wiki/Block> [<https://perma.cc/H297-4YBN>] (last visited Jan. 29, 2017) (explaining that the number of bitcoins generated per block is halved every 210,000 blocks).

46. See Fitz Tepper, *The Reward for Mining Was Just Cut in Half*, TECHCRUNCH (July 9, 2016), <https://techcrunch.com/2016/07/09/the-reward-for-mining-bitcoin-was-just-cut-in-half/> [<https://perma.cc/L5JB-TB43>] (describing the implications of the second-ever halving of the Bitcoin mining reward).

47. See, e.g., Lee et al., *supra* note 32, at 24 (explaining that Bitcoin is designed to cap at 21 million coins); Andrea Borroni, *Bitcoins: Regulatory Patterns*, 32 BANKING & FIN. L. REV. 47, 50 (stating that only 21 million bitcoins are ever planned to be produced). Some potential users find this feature appealing because the cap prevents any "meddling" with the supply of Bitcoin in the same way that some governments and central authorities have done with their conventional gold-backed currencies. Prentis, *supra* note 17, at 613.

48. See *supra* note 21 (explaining the shift in compensation for mining firms from mining rewards to transaction fees).

49. See *Bitcoin ATM Map*, COIN ATM RADAR, <https://coinatmradar.com/> (last visited Jan. 30, 2017) (offering an up-to-date map of Bitcoin ATMs worldwide). The number of Bitcoin ATMs in existence surpassed the 1,000 mark early in 2017. See Olusegun Ogundeji, *Another Bitcoin Record: Over 1000 Bitcoin ATMs Installed Globally*, COINTELEGRAPH (Feb. 18, 2017), <https://cointelegraph.com/news/another-bitcoin-record-over-1000-bitcoin-atms-installed-globally/> [<https://perma.cc/5RL3-MUQJ>] (stating record of 1000 Bitcoin ATMs installed around the world).

50. See Ellen Vessels, *Who Actually Accepts Bitcoin as a Form of Payment?*, THE AMERICAN GENIUS (May 26, 2016), <https://theamericangenius.com/finance/bitcoin/> [<https://perma.cc/SA7M-225T>] (demonstrating that many notable companies accept Bitcoin). But see Stan Higgins, *'Lack of Interest': Freelance Market Fiverr Drops Bitcoin Payments*, COINDESK (Jan. 23, 2017, 5:00 PM), <http://www.coindesk.com/freelance-market-fiverr-drops-bitcoin/> [<https://perma.cc/M4LJ-GT6V>] (reporting that Fiverr, a popular freelance marketplace, recently dropped Bitcoin due to an "unfortunate lack of interest").

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online have also begun accepting Bitcoin,<sup>51</sup> and a few neighborhoods have garnered a reputation for the significant number of local businesses that accept bitcoins.<sup>52</sup> Notably, however, almost all of these companies work with a “middleman” like Coinbase or BitPay that will accept a customer’s Bitcoin from the company and pay the equivalent amount in cash to the company.<sup>53</sup> Therefore, although customers are paying in Bitcoin, companies are receiving U.S. Dollars.<sup>54</sup> Doing so allows the companies to avoid the risk that is inherent in Bitcoin with its frequent and extreme value fluctuations.<sup>55</sup>

B. *Bitcoin’s Value*<sup>56</sup>

Bitcoins do not have intrinsic value.<sup>57</sup> They garner value from supply and demand.<sup>58</sup> Therefore, when the first bitcoins were mined in 2009, they had practically no value and were almost exclusively shared between a small community of coders.<sup>59</sup> It was during this time that the first “real-world”

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51. See Prentis, *supra* note 17, at 613 (explaining that even many brick-and-mortar stores have begun accepting bitcoins).

52. See *id.* (reporting that a street in Cleveland Heights, Ohio has been nicknamed “Bitcoin Boulevard US”); see also *Who*, BITCOIN BOULEVARD US, <http://bitcoinboulevard.us/> [<https://perma.cc/YUP3-F9CB>] (last visited Jan. 30, 2017) (stating that Bitcoin Boulevard US is a group of independent small businesses along a street in Ohio that provides a destination for Bitcoin commerce); Alan M. Silbert, *Growing the Market: A Bitcoin Shopping Guide*, NASDAQ (Jan. 19, 2017, 9:58 AM), <http://www.nasdaq.com/article/growing-the-market-a-bitcoin-shopping-guide-cm735382> [<https://perma.cc/Q3SL-6J3E>] (noting a neighborhood in Berlin with the same reputation).

53. See Jacob Davidson, *No, Big Companies Aren’t Really Accepting Bitcoin*, TIME (Jan. 9, 2015), <http://time.com/money/3658361/dell-microsoft-expedia-bitcoin/> [<https://perma.cc/D3WY-4KAC>] (explaining that most companies accepting Bitcoin operate with a third-party middleman); Sarah Meiklejohn et al., *A Fistful of Bitcoins: Characterizing Payments Among Men with No Names*, INTERNET MEASUREMENT CONFERENCE 2013, at §2.2, <http://conferences.sigcomm.org/imc/2013/papers/imc182-meiklejohnA.pdf> [<https://perma.cc/AY8Q-9UUE>] (last visited Mar. 28, 2017) (explaining that some third-party middlemen offer options to pay vendors in USD rather than Bitcoin, in order to minimize Bitcoin-related risk).

54. *Id.*

55. *Id.*

56. There are a number of different sources of Bitcoin’s market value, and due to Bitcoin’s illiquid nature, no two sources offer the same exact data. Each price given in this Comment has been derived from CoinDesk’s Bitcoin Price Index Chart, *supra* note 5, and represents traded prices, rather than daily closing prices.

57. See Kaplanov, *supra* note 24, at 113 (detailing that Bitcoin derives its value from its peer-to-peer network, rather than some intrinsic value).

58. See *supra* note 21 (explaining that the market determines the value of bitcoins).

59. See Benjamin Wallace, *The Rise and Fall of Bitcoin*, WIRED (Nov. 23, 2011, 2:52 PM), [https://www.wired.com/2011/11/mf\\_bitcoin/](https://www.wired.com/2011/11/mf_bitcoin/) [<https://perma.cc/76PE-3G9F>] (adding that from 2009 to early 2010, bitcoins had no value and were still valued under 14 cents by the end of 2010); Prentis, *supra* note 17, at 610 (emphasizing that a single bitcoin was worth

Bitcoin transaction took place: Laszlo Hanyecz purchased two pizzas for 10,000 bitcoins.<sup>60</sup>

From July 2010, soon after Bitcoin first started trading, through mid-October 2010, the value of a bitcoin was at most 10 cents.<sup>61</sup> It was not until early 2011 that it hit \$1.00 for the first time,<sup>62</sup> and the spring of 2011 saw a “price explosion,”<sup>63</sup> in which the value of a Bitcoin reached almost \$30.<sup>64</sup> The value almost immediately plummeted; however, and did not officially break the \$30 mark until late February 2013.<sup>65</sup> Only a few months later, in late November 2013, Bitcoin’s price reached an all-time high of \$1,165.89<sup>66</sup> and, for a time, traded at prices higher than that of gold.<sup>67</sup> However, the price quickly dropped after that date and in the months thereafter, settling at a low of \$421.91 on April 7, 2014.<sup>68</sup> It recovered slightly by June, capping out at \$652.75, but then slowly declined for the rest of the year until it reached \$214.08 in January of 2015.<sup>69</sup>

Bitcoin’s value remained more or less stable through 2015 and only made significant jumps in the last three months of the year, when it reached that year’s high of \$455.61.<sup>70</sup> The following year saw multiple ups and downs, but in the aggregate, Bitcoin rose in value, peaking at just under \$1,000 before 2017 began.<sup>71</sup>

Thus far, 2017 has seen the highest Bitcoin trends in history, with the digital currency smashing a number of previous records. In the first six weeks of 2017, Bitcoin came close to breaking its prior all-time high on

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approximately half a cent in 2009).

60. *Id.*

61. Bitcoin Price Index Chart, COINDESK, *supra* note 5.

62. *Id.*

63. See Wallace, *supra* note 59 (documenting a hundredfold increase in Bitcoin’s value between early April and late May 2011). The significant and sudden increase in Bitcoin’s value is attributed to increased attention from news media. *Id.*

64. Bitcoin Price Index Chart, *supra* note 5. At that point, Hanyecz’s payment of 10,000 bitcoins would have been worth almost \$30,000. Hanyecz has justified his loss with the fact that “[t]he pizza was really good.” Wallace, *supra* note 59 (internal quotation marks omitted).

65. Bitcoin Price Index Chart, *supra* note 5.

66. Pete Rizzo, *Bitcoin Price Bounces Back to Within \$25 of All-Time High*, COINDESK (Jan. 5, 2017, 4:30 AM), <http://www.coindesk.com/bitcoins-price-bounces-back-1140-all-time-high/> [<https://perma.cc/UXW2-6XGA>].

67. Lee et al., *supra* note 32, at 25.

68. Bitcoin Price Index Chart, *supra* note 5. One of the major price drops was caused by the hacking of MtGox, the then-most popular Bitcoin exchange, in February of 2014. Lee et al., *supra* note 32, at 25. Due to a security breach, approximately 850,000 bitcoins were stolen—at that point, about seven percent of the total number of bitcoins in circulation. *Id.*

69. *Id.*

70. *Id.*

71. *Id.*

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numerous occasions, even surpassing the price of gold at one point.<sup>72</sup> However, these near-record-breaking highs were often paired with dramatic downswings in value.<sup>73</sup> It was not until the end of February that Bitcoin reached a new high, breaking \$1,200 in the process.<sup>74</sup> Since that time, Bitcoin's price has steadily increased to exceed a remarkable \$7,000 per bitcoin in early November of 2017.<sup>75</sup> Over the next two months, the price skyrocketed to just under \$20,000 per coin, but then began a steady decline to return to the \$7,000 mark by the beginning of February of 2018.<sup>76</sup> Since then, Bitcoin has vacillated between approximately \$6,000 and \$12,000 per coin.<sup>77</sup>

While some general trends can be found in Bitcoin's value throughout its existence, it is generally known for its day-to-day volatility. In early December 2017, Bitcoin's price increased over \$5,000 over the course of two days.<sup>78</sup> Alternatively, it dropped over \$2,000 in market value over one day in January 2018.<sup>79</sup> Some argue that despite these recent swings, Bitcoin's value is more stable than ever, which is a sign that Bitcoin is maturing.<sup>80</sup> For example, in February of 2017, Bitcoin's value broke a new

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72. See Frisco d'Anconia, *Rising Bitcoin Overtakes Falling Gold to Make History*, COINTELEGRAPH (Jan. 5, 2017), <https://cointelegraph.com/news/rising-bitcoin-overtakes-falling-gold-to-make-history> [<https://perma.cc/NTR6-R4GU>] (reporting how Bitcoin made history by surpassing the price of gold).

73. See, e.g., Arjun Kharpal, *Bitcoin Plummets Over 23 Percent After Nearing All-Time High as 'Volatile Little Bubble' Bursts*, CNBC (Jan. 5, 2017, 8:26 AM), <http://www.cnbc.com/2017/01/05/bitcoin-plummets-after-nearing-all-time-high.html> [<https://perma.cc/Y76C-KAZY>] (describing the January 5, 2017 high of \$1,153.02 that was paired with the low of \$887.47). The recent ups and downs of Bitcoin's value have been attributed by some to certain political events. See, e.g., Reuters, *Here's Why Bitcoin's Price Continues to Plunge*, FORTUNE (Jan. 6, 2017), <http://fortune.com/2017/01/06/bitcoin-price-slump/> [<https://perma.cc/HX2N-SC8B>] (noting Bitcoin's value dropped after China's central bank "urged investors to take a rational and cautious approach to investing in the digital currency"); see also Andrew Quentson, *Bitcoin Rises as Trump's Actions Increases Uncertainty*, CRYPTOCOINSNEWS (Jan. 31, 2017, 9:48 PM), <https://www.cryptocoinsnews.com/bitcoin-rises-trumps-actions-increases-uncertainty/> [<https://perma.cc/6ZZ5-WMBU>] (arguing that increased uncertainty over Trump's policies have lowered the value of the U.S. Dollar and increased Bitcoin's value).

74. Bitcoin Price Index Chart, *supra* note 5.

75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. Kharpal, *supra* note 73.

80. See, e.g., Christopher Langner, *Bitcoin Is Starting To Behave Like a Grown-Up Market*, MINT (Feb. 13, 2017, 8:51 AM), <http://www.livemint.com/Opinion/NQNi3T2rYxQyANnc0UaWCL/Bitcoin-is-starting-to-behave-like-a-grown-up-market.html> [<https://perma.cc/UBF5-KCNY>] (noting that even though Bitcoin still fluctuates "by double digits some days, these [are] nothing like the gyrations . . . back in 2013").

record by consistently trading above \$1,000 for more than seven days.<sup>81</sup> Prior to that point, Bitcoin's forays above the \$1,000 mark would not last long and often result in considerable drops.<sup>82</sup>

Despite the appearance of greater stability and market confidence, however, others have recognized that Bitcoin is still significantly more volatile than conventional currencies and other "volatile" commodities. Credit Suisse analysts recently determined that the value of Bitcoin has been "three times as volatile as the price of oil and 11 times more than the post-Brexit exchange rate between the dollar and the British pound."<sup>83</sup> Similarly, Duke University Professor Campbell Harvey claims that Bitcoin is five times more volatile than the S&P 500.<sup>84</sup> Therefore, although Bitcoin's value has become more stable in recent years, its volatility is still a defining characteristic, especially in relation to conventional currencies.

### C. *Bitcoin and Crime*

While Bitcoin's fluctuations in value have introduced their own host of issues, Bitcoin has also presented significant challenges to law enforcement agencies. The anonymity provided to users ensures that these agencies will not be able to track funds after they are sent or stolen.<sup>85</sup> At an early stage, digital currencies like Bitcoin gained popularity in crime-related transactions and online black markets.<sup>86</sup> Bitcoin eventually became the only currency accepted on Silk Road, an infamous black-market site that could only be accessed using the Tor anonymous browsing network.<sup>87</sup> Silk Road, which

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81. Charles Bovaird, *Bitcoin Price Tops \$1,000 For Longest Stretch in History*, COINDESK (Feb. 21, 2017, 8:32 PM), <http://www.coindesk.com/bitcoin-price-tops-1000-longest-stretch-history/> [<https://perma.cc/W282-NQF9>].

82. Arguably, it is now showing the same volatility but at a higher price.

83. Ashley Kindergan, *Is Bitcoin Safe?*, CREDIT SUISSE (Feb. 3, 2017), <https://www.credit-suisse.com/us/en/articles/articles/news-and-expertise/2017/01/en/is-bitcoin-safe.html> [<https://perma.cc/8VQQ-2YE6>].

84. Close, *supra* note 13.

85. For example, very few of the bitcoins stolen from the MtGox hack were recovered. See Jake Adelstein & Nathalie-Kyoko Stucky, *Behind the Biggest Bitcoin Heist in History: Inside the Implosion of Mt. Gox*, THE DAILY BEAST (May 19, 2016, 1:00 AM), <http://www.thedailybeast.com/articles/2016/05/19/behind-the-biggest-bitcoin-heist-in-history-inside-the-implosion-of-mt-gox.html> [<https://perma.cc/ULS4-SA8Z>] ("To date, 650,000 bitcoins . . . remain unaccounted for . . .").

86. Lee et al., *supra* note 32, at 24.

87. *Is Bitcoin Legal?*, COINDESK, <http://www.coindesk.com/information/is-bitcoin-legal/> [<https://perma.cc/B5F5-FWX9>] (last updated Aug. 19, 2014). Tor is a browser that allows its users to maintain anonymity by "defend[ing] against traffic analysis, a form of network surveillance that threatens personal freedom and privacy, confidential business activities and relationships, and state security." TOR, <https://www.torproject.org/> [<https://perma.cc/K396-4SSU>] (last visited Apr. 13, 2017).

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has been described as “the most sophisticated and extensive criminal marketplace on the Internet,” was best known for its widespread offerings of illegal drugs.<sup>88</sup> At one point, approximately half of all Bitcoin transactions took place on Silk Road.<sup>89</sup> In October 2013, the FBI arrested the alleged owner and operator of Silk Road, shut down the website, and seized approximately 173,991 bitcoins, worth \$33.6 million at the time.<sup>90</sup>

Even though Silk Road was shut down,<sup>91</sup> crime has still proliferated through the use of Bitcoin. For example, in early 2017, cyber attackers encrypted all electronic files at Los Angeles Valley College and demanded a \$28,000 payment in Bitcoin in return for the private key required to unencrypt their files.<sup>92</sup> Similarly, an Austrian hotel’s electronic key system was overcome by hackers, who demanded €1,500, or \$1,603, in Bitcoin in return for the recovery of its system.<sup>93</sup> In both cases, the ransom was paid, but no culprits were found.<sup>94</sup> In such instances, police and insurance are of very little use because “none of those to blame [can] be found.”<sup>95</sup>

Bitcoin is also used for certain activities that, though not always illegal, are considered by some to be immoral. Over the course of the last two years, for example, Bitcoin was adopted by many of the largest online gambling platforms, completely overtaking the market.<sup>96</sup> Some have actually decided to exclusively operate with Bitcoin, forcing regular users to adopt the digital

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88. U.S. Attorney’s Office, *Manhattan U.S. Attorney Announces Seizure of Additional \$28 Million Worth of Bitcoins Belonging to Ross William Ulbricht, Alleged Owner and Operator of ‘Silk Road’ Website*, FBI (Oct. 25, 2013), <https://archives.fbi.gov/archives/newyork/press-releases/2013/manhattan-u.s.-attorney-announces-seizure-of-additional-28-million-worth-of-bitcoins-belonging-to-ross-william-ulbricht-alleged-owner-and-operator-of-silk-road-website> [<https://perma.cc/9U3P-MTFP>].

89. Lee et al., *supra* note 32, at 24.

90. U.S. Attorney’s Office, *supra* note 88.

91. Silk Road was resurrected but summarily shut down again. Donna Leinwand Leger, *Feds Shut Down Silk Road 2.0, Arrest San Francisco Man*, USA TODAY (Nov. 6, 2014, 12:24 PM), <http://www.usatoday.com/story/news/nation/2014/11/06/feds-shut-down-silk-road-copycat/18591155/> [<https://perma.cc/AGA5-4QNT>].

92. Nick Anderson, *This College Just Paid a \$28,000 Ransom, in Bitcoin, to Cyberattackers*, THE WASHINGTON POST (Jan. 13, 2017), [https://www.washingtonpost.com/news/grade-point/wp/2017/01/13/this-college-just-paid-a-28000-ransom-in-bitcoin-to-cyberattackers/?utm\\_term=.483e751402f9](https://www.washingtonpost.com/news/grade-point/wp/2017/01/13/this-college-just-paid-a-28000-ransom-in-bitcoin-to-cyberattackers/?utm_term=.483e751402f9) [<https://perma.cc/3BTW-2W68>].

93. Anthony Cuthberthson, *Hackers Demand Bitcoin Ransom After Hijacking Hotel’s Key System*, NEWSWEEK (Jan. 30, 2017, 5:20 AM), <http://www.newsweek.com/hackers-demand-bitcoin-free-hotel-guests-rooms-549952?rx=us> [<https://perma.cc/3P6Q-QLP3>].

94. *Id.*; Anderson, *supra* note 92.

95. Cuthberthson, *supra* note 93; *see also* Anderson, *supra* note 92 (reporting a cybersecurity expert’s statement that “failure to pay [the demanded ransom] would virtually guarantee that data would be lost”).

96. *See* Kyle Torpey, *Bitcoin is Eating the Entire Online Gambling Industry*, COINJOURNAL (Jan. 17, 2017), <https://coinjournal.net/bitcoin-eating-entire-online-gambling-industry/> [<https://perma.cc/DJ9A-JHMX>].

currency.<sup>97</sup> While this has arguably grown the number of Bitcoin users,<sup>98</sup> the introduction of Bitcoin into the online gambling market poses more challenges to authorities tasked with regulating the industry.<sup>99</sup>

#### D. *Current Regulations*

In response to the law enforcement issues presented by Bitcoin, foreign governments, U.S. regulatory entities, and some U.S. States have enacted certain controls on Bitcoin and its usage. Many of these regulations have at least touched on, if not fully classified, Bitcoin's status as a currency or a commodity, but no uniform consensus on that classification has emerged.<sup>100</sup>

##### 1. Foreign Regulations

Foreign governments have responded to Bitcoin in a variety of ways. Some countries have gone to the extreme of banning Bitcoin, while others have deemed it a valid form of currency. Many fall in between these two extremes, regulating Bitcoin to some regard, but not outright banning it or accepting it as a full-fledged currency. Among the countries that have banned Bitcoin in some way are Bolivia, Ecuador, Iceland, Kyrgyzstan,<sup>101</sup> and the Dominican Republic.<sup>102</sup> Most of these countries have not banned the ownership of Bitcoin, but they have banned most transactions with it, including the exchange of Bitcoin for that country's denominated currency, the purchase of Bitcoin, and general transactions with Bitcoin.<sup>103</sup>

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97. See *Will Bitcoin's Reputation Suffer due to Online Gambling?*, THE MERKLE (Feb. 13, 2017), <https://themerke.com/will-bitcoins-reputation-suffer-due-to-online-gambling/> [<https://perma.cc/4ZF4-P6X5>] (describing how the gambling industry is increasing Bitcoin use).

98. *Id.*

99. See *Italy, Bitcoin, Mafia and Gambling*, THE MERKLE (Feb. 7, 2017), <https://themerke.com/italy-bitcoin-mafia-and-gambling/> [<https://perma.cc/E627-CXAB>] (discussing the harsh response from the Italian government regarding Bitcoin regulation in casinos).

100. For an argument that authoritative legal decisions concerning Bitcoin could be made through a peer-to-peer system of governance, see Michael Abramowicz, *Cryptocurrency-Based Law*, 58 ARIZ. L. REV. 359 (2016) (arguing that authoritative legal decisions concerning Bitcoin could be made through a peer-to-peer system of governance).

101. *Is Bitcoin Legal?*, *supra* note 87.

102. *World*, BITLEGAL, [<https://perma.cc/95KE-Z3QX>] (last visited Feb. 11, 2017).

103. See *id.*

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Many countries, such as Germany<sup>104</sup> and Sweden,<sup>105</sup> have legalized Bitcoin but subject it to tax and other minor regulations.<sup>106</sup> Finally, a few countries have not adopted any regulations on Bitcoin. For example, Denmark has been encouraging the use of Bitcoin and other digital currencies with the goal of eventually eliminating the use of cash.<sup>107</sup> Similarly, the Netherlands does not regulate Bitcoin, and many of the country's banks have sought to incorporate it into their business to improve efficiency and minimize costs.<sup>108</sup>

## 2. U.S. States

Some of the independent U.S. States have also adopted new regulatory schemes<sup>109</sup> or laws specific to Bitcoin and other digital currencies.<sup>110</sup> However, at least one state has gone farther and incorporated Bitcoin into a preexisting scheme. In 2014, California repealed a provision under the California Corporations Code that prohibited the issuance or circulation of "anything but the lawful money of the United States."<sup>111</sup> The State refined the law by stating that digital currencies could be legally used for the

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104. See Matt Clinch, *Bitcoin Recognized by Germany as 'Private Money'*, CNBC (Aug. 19, 2013, 10:25 AM), <http://www.cnbc.com/id/100971898> [<https://perma.cc/YL3A-CFCG>] (discussing how the classification of Bitcoin by the German government has legitimized it as a currency).

105. See Evander Smart, *Sweden Outlines New Bitcoin Tax Regulations and Bitcoin Ban*, CRYPTOCOINSNEWS (May 22, 2015, 9:38 AM), <https://www.cryptocoinsnews.com/sweden-outlines-new-bitcoin-tax-regulations-bitcoin-ban/> [<https://perma.cc/G4DQ-CUZ7>] (discussing Sweden's Bitcoin mining tax regulations).

106. For example, Sweden has made significant mining profits taxable and banned the buying and selling of scrap metal or "waste products" with Bitcoin. *Id.* (internal quotation marks omitted).

107. See Allen Scott, *These Are the World's Top 10 Bitcoin-Friendly Countries*, BITCOIN.COM (Mar. 29, 2016), <https://news.bitcoin.com/worlds-top-10-bitcoin-friendly-countries/> [<https://perma.cc/8CMK-8EMB>] (discussing the progressive Bitcoin movement in Denmark and other pro Bitcoin countries).

108. *Id.*

109. The most famous U.S. State regulatory scheme is New York's "BitLicense" program that requires certain entities engaging in "Virtual Currency Business Activity" to be licensed to do so by the Superintendent of the New York Department of Financial Services. See generally N.Y. Comp. Codes R. & Regs. tit. 23, §§ 200.1-200.22 (2017).

110. Most recent action purports to regulate how Bitcoin may or may not be used. See, e.g., S.B. 741, 2017-2018 Sess. (Cal. 2017) (barring the use of Bitcoin to purchase raffle tickets from charitable organizations, if enacted); Stan Higgins, *Washington Lawmakers Are Trying to Keep Bitcoin Out of Pot Shops*, COINDESK (Jan. 19, 2017, 1:33 PM), <http://www.coindesk.com/washington-lawmakers-are-trying-to-keep-bitcoin-out-of-pot-shops/> [<https://perma.cc/R7EA-GPXU>] (describing a bill that, if enacted, would bar the use of Bitcoin by marijuana businesses).

111. Lee et al., *supra* note 32, at 24 (internal quotation marks omitted).

purchase of goods and services or for the transmission of payments, but further specified that digital currencies are still not categorized as “legal tender.”<sup>112</sup>

### 3. U.S. Regulatory Entities

While Congress has not acted to regulate digital currencies, U.S. regulatory entities have, albeit without a unitary approach to regulation. For starters, the former Federal Reserve Chair, Janet Yellen, stated that the Federal Reserve does not “have the authority to supervise or regulate Bitcoin in any way.”<sup>113</sup> However, Yellen’s statement made clear that she believed other government entities could regulate Bitcoin.<sup>114</sup> Those that have exercised this power appear to have classified Bitcoin so that it falls within the structures of their existing regulations.

One of the earliest forms of this type of regulation came in March 2013, when the Treasury’s Financial Crimes Enforcement Network (“FinCEN”) promulgated a guidance document stating that digital currency exchanges would be regulated as “money transmitters” under the Bank Secrecy Act (“BSA”).<sup>115</sup> The BSA requires that any financial institution qualifying as a money transmitter register with FinCEN and assist the government in detecting money laundering.<sup>116</sup> In 2013, this guidance was used by the Department of Homeland Security in executing a seizure warrant for one of MtGox’s accounts after the exchange had not registered under the BSA.<sup>117</sup> Even though MtGox was based in Japan, some of its business was performed in the U.S., and Homeland Security was able to seize over \$5 million.<sup>118</sup> MtGox summarily registered as a money transmitter with FinCEN.<sup>119</sup>

The Securities Exchange Commission (“SEC”) has mostly regulated Bitcoin through enforcement actions and advisory notices. The enforcement

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112. *Id.* at 39.

113. Ryan Tracy, *Yellen: Bitcoin ‘Doesn’t Touch’ Banks the Fed Oversees; Federal Reserve Chairwoman Cites Problems as There is No Central Issuer*, WALL ST. J. (Feb. 27, 2014) (internal quotation marks omitted).

114. Lee et al., *supra* note 32, at 36.

115. *Id.* at 46; FIN. CRIMES ENF’T NETWORK, DEPT. OF THE TREASURY, FIN-2013-G001, GUIDANCE: APPLICATION OF FINCEN’S REGULATIONS TO PERSONS ADMINISTERING, EXCHANGING, OR USING VIRTUAL CURRENCIES (Mar. 18, 2013). Another guidance was issued in 2014, clarifying certain points from the 2013 guidance. *See generally*, FIN. CRIMES ENF’T NETWORK, DEPT. OF THE TREASURY, FIN-2014-R001, APPLICATION OF FINCEN’S REGULATIONS TO VIRTUAL CURRENCY MINING OPERATIONS (Jan. 30, 2014) (issuing guidance to clarify the applicability of the regulations implementing the Bank Secrecy Act).

116. Lee et al., *supra* note 32, at 46; *Is Bitcoin Legal?*, *supra* note 87.

117. Lee et al., *supra* note 32, at 47.

118. *Id.*

119. *Id.*

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actions have indicated that even without new regulations targeting Bitcoin, the SEC has significant authority under existing promulgations to regulate it. In the first action involving digital currency, *S.E.C. v. Shavers*,<sup>120</sup> Shavers was prosecuted by the SEC for defrauding investors in a Ponzi scheme that was wholly conducted in Bitcoin.<sup>121</sup> Since the Court in the Eastern District of Texas found that Bitcoin should be considered a “currency,”<sup>122</sup> it then held that Bitcoin investments were “investment contracts” and therefore “securities” under the Securities Act of 1933.<sup>123</sup> The conclusion that bitcoins are securities has already had an impact on SEC enforcement.<sup>124</sup> It has also prompted the SEC to issue two investor alerts. The first, published in July of 2013, warned investors of the potential use of Bitcoin and other digital currencies in fraudulent investment schemes.<sup>125</sup> The second investor alert was issued in May of 2014 with the purpose of “mak[ing] investors aware about the potential risks of investments involving Bitcoin and other forms of virtual currency,” since such currencies “give rise to both frauds and high-risk investment opportunities.”<sup>126</sup>

Most recently, the SEC denied a proposal that would change certain rules to permit the creation of a Bitcoin exchange traded fund (“ETF”).<sup>127</sup> The proposal would allow investment funds to hold Bitcoin, which would offer a new and easy way for people to purchase bitcoins.<sup>128</sup> The SEC found that a Bitcoin ETF would not be “consistent with Section 6(b)(5) of the Exchange Act, which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices and to protect investors and the public

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

121. *Id.* at \*1.

122. *Id.* at \*2.

123. *Id.* at \*2 n.2.

124. See, e.g., *United States v. Faiella*, 39 F. Supp. 3d 544 (S.D.N.Y. Aug. 9, 2014) (citing *Shavers* for the proposition that Bitcoin is a currency for purposes of federal securities laws); BTC Trading, Corp., Securities Act Release No. 9685, Investment Company Act Release No. 31,366, 2014 WL 6872955 (Dec. 8, 2014) (instituting cease-and-desist proceedings against a securities exchange that only accepted Bitcoin and Litecoin, another digital currency).

125. S.E.C. OFFICE OF INVESTOR EDUCATION AND ADVOCACY, PUB. NO. 153, INVESTOR ALERT: PONZI SCHEMES USING VIRTUAL CURRENCIES (July 23, 2013).

126. S.E.C. OFFICE OF INVESTOR EDUCATION AND ADVOCACY, INVESTOR ALERT: BITCOIN AND OTHER VIRTUAL CURRENCY-RELATED INVESTMENTS (May 7, 2014).

127. Self-Regulatory Organizations; Bats BZX Exchange, Inc., Release No. 34-80206, 2017 WL 1491753 (Mar. 10, 2017).

128. See Jeff John Roberts, *Bitcoin May Go Boom: A Guide to This Week's Big SEC Decision*, FORTUNE (Mar. 9, 2017), <http://fortune.com/2017/03/09/bitcoin-sec-etf/> [<https://perma.cc/7XCU-JJPA>] (explaining that changing the rule that only investment funds that meet certain regulatory requirements can hold Bitcoin will allow millions of ordinary people to buy bitcoins).

interest.”<sup>129</sup>

The Internal Revenue Service (“IRS”) has also weighed in on the issue but has come to a different conclusion on the categorization of Bitcoin. Instead of considering it a currency, the IRS has deemed it property for federal tax purposes.<sup>130</sup> The implications of this categorization are far-reaching for taxpayers dealing in Bitcoin. For example, “[a] taxpayer who receives virtual currency as payment for goods or services must, in computing gross income, include the fair market value of the virtual currency, measured in U.S. dollars, as of the date that the virtual currency was received.”<sup>131</sup> Any bitcoins that have been mined by a taxpayer are also included in his or her gross income calculation, the value of which is to be determined on the date of receipt.<sup>132</sup> Taxpayers are subject to standard reporting penalties applicable to all exchanges for failure to report Bitcoin transactions.<sup>133</sup>

Beyond these more robust applications of Bitcoin to existing regulations, other entities have also weighed in on how Bitcoin will be treated within their frameworks. In August of 2014, the Consumer Financial Protection Bureau (“CFPB”) released a consumer advisory warning, cautioning on the risks inherent in digital currencies and advising on the safest practices with its use.<sup>134</sup> The CFPB also notified that it would begin accepting complaints on virtual currency products and services, “including exchange services or online digital wallets.”<sup>135</sup> Finally, in September of 2015, the Commodity Futures Trading Commission (“CFTC”) issued an order that held that Bitcoin would be considered a commodity under the Commodity Exchange Act, which regulates all commodities and trading activities.<sup>136</sup>

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129. S.E.C. OFFICE OF INVESTOR EDUCATION AND ADVOCACY, *supra* note 125.

130. See I.R.S., NOTICE NO. 2014-21, VIRTUAL CURRENCY GUIDANCE NOTICE (Apr. 14, 2014), at 938 (explaining that the tax principles applicable to property transactions apply to virtual currency transactions).

131. *Id.*

132. *Id.*

133. *Id.*

134. See *Consumer Fin. Prot. Bureau, Risks to Consumers Posed by Virtual Currencies* (2014), [http://files.consumerfinance.gov/f/201408\\_cfpb\\_consumer-advisory\\_virtual-currencies.pdf](http://files.consumerfinance.gov/f/201408_cfpb_consumer-advisory_virtual-currencies.pdf) [<https://perma.cc/X8XJ-M6V2>] (outlining potential hacks, scams, risks, and costs associated with virtual currencies).

135. See *Consumer Fin. Prot. Bureau, CFPB Warns Consumers About Bitcoin* (Aug. 11, 2014), <https://www.consumerfinance.gov/about-us/newsroom/cfpb-warns-consumers-about-bitcoin/> [<https://perma.cc/V7JR-W365>] (reporting that the CFPB issued a warning about risks of virtual currencies).

136. See U.S. COMMODITY FUTURES TRADING COMM’N, RELEASE NO. 7231-15, CFTC ORDERS BITCOIN OPTIONS TRADING PLATFORM OPERATOR AND ITS CEO TO CEASE ILLEGALLY OFFERING BITCOIN OPTIONS AND TO CEASE OPERATING A FACILITY FOR TRADING OR PROCESSING OF SWAPS WITHOUT REGISTERING, (Sept. 17, 2015) (holding that virtual

## II. BITCOINS IN BANKRUPTCY

Bankruptcy law has been a mainstay of the American legal system for almost a century and a half, and its current codification, the Bankruptcy Code, has been in effect since 1979.<sup>137</sup> Therefore, there is currently no accommodation for modern-day innovations such as digital currencies. With such a robust and well-established legal scheme, bankruptcy courts will likely face similar difficulties as other regulators when approaching a case involving Bitcoin.

Although there are multifarious ways in which Bitcoin could present issues in bankruptcy,<sup>138</sup> the Northern District of California was presented with the specific issue of an alleged fraudulent or preferential transfer in Bitcoin. *Hashfast*<sup>139</sup> centered around a transfer of 3,000 bitcoins from Hashfast, the debtor, to Lowe, the transferee. Hashfast and Lowe had entered into an agreement whereby Lowe would “endorse”<sup>140</sup> Hashfast’s BabyJet miner, a hardware designed to mine bitcoins.<sup>141</sup> In return, Lowe would receive ten percent of the gross sale proceeds from the first 550 BabyJets sold.<sup>142</sup> The agreement was dated August 5, 2013, and the first 550 BabyJets were purchased “in or about early September 2013.”<sup>143</sup> Per its agreement with Lowe, Hashfast paid Lowe 3,000 bitcoins—meant to represent just over \$300,000 at the time—for his efforts.<sup>144</sup> Payments totaling to this amount were made between September 5, 2013 and September 23, 2013.<sup>145</sup>

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currencies are a commodity covered by the Commodity Exchange Act).

137. See Daniel J. Brussel & David A. Skeel, Jr., *BANKRUPTCY* 17 (10th ed. 2015) (describing that bankruptcy law has been the anchor of the legal system).

138. For example, security interests in Bitcoin assets may be difficult to value, see *supra* Section B (describing Bitcoin’s highly volatile value), a secured creditor may not be able to realize upon its Bitcoin collateral if it has been transferred to others, see *supra* notes 31-32 and accompanying text (describing Bitcoin users’ anonymity), and whether a Bitcoin transfer qualifies as a preference may be challenging, see, e.g., 11 U.S.C. § 547(b)(5) (1984) (requiring that a creditor received, through the transfer, more than he or she would have otherwise).

139. *Kasolas v. Lowe (In re Hashfast Techs. LLC)*, No. 14-30725, 2016 WL 8460756 (Bankr. N.D. Cal. June 17, 2016).

140. The trustee alleges that pursuant to the parties’ memorandum of understanding, Lowe was to “post[] comments and respond[] to certain inquiries on various Bitcoin-related forums and/or message boards” in support of Hashfast’s product. Amended Complaint, *supra* note 4, at 4.

141. See Defendant Dr. Marc A. Lowe’s Opposition to Motion for Partial Summary Judgment at 3 (explaining the facts of the BabyJet agreement); *In re Hashfast Techs. LLC*, No. 14-30725 (Bankr. N.D. Cal. Feb. 2, 2016).

142. Amended Complaint, *supra* note 4, at 4.

143. *Id.* at 4-5.

144. *Id.* at 5.

145. Memorandum of Points and Authorities in Support of Motion for Partial Summary Judgment at 3, *In re Hashfast Techs. LLC*, No. 14-30725 (Bankr. N.D. Cal. Jan. 22, 2016).

Because Hashfast could not deliver all of the pre-ordered BabyJet miners by their promised delivery dates, Hashfast used the pre-order revenue to purchase products on accelerated delivery schedules, significantly increasing the cost of production.<sup>146</sup> Throughout this time, the company continued to accept pre-orders for BabyJet miners for the same price and promising the same delivery schedule.<sup>147</sup> Many customers left waiting for their deliveries past the promised date requested to be refunded for their purchases per their purchase agreements, but Hashfast could not provide any refunds.<sup>148</sup> An involuntary bankruptcy petition was filed against Hashfast on May 9, 2014.<sup>149</sup>

The bankruptcy trustee initiated the adversarial component of the proceeding to recover the 3,000 bitcoins transferred to Lowe.<sup>150</sup> After alleging that Lowe still possessed the 3,000 bitcoins in his wallet, the trustee argued that the payment qualified as a preferential transfer under Section 547(b) of the Code<sup>151</sup> and a fraudulent transfer under Section 548.<sup>152</sup> If the court agreed, the trustee would have been entitled to a recovery under Section 550.<sup>153</sup>

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146. See Luke Parker, *US Bankruptcy Court's Ruling Could Help HashFast Trustee Recover \$1.3 Million*, BRAVE NEW COIN (Feb. 29, 2016), <http://bravenewcoin.com/news/us-bankruptcy-courts-ruling-could-help-hashfast-liquidator-recover-1-3-million/> [<https://perma.cc/NL56-6YE9>] (providing that Hashfast spent significant money on expedited delivery, which proliferated production costs, all while accepting new orders and promising to meet deadlines).

147. *Id.*

148. *Id.*

149. Chapter 7 Involuntary Petition, *In re* Hashfast Techs. LLC, No. 14-30725 (Bankr. N.D. Cal. May 9, 2014).

150. Amended Complaint, *supra* note 4.

151. *Id.* at 8-9. The trustee argued that the payment satisfied an antecedent debt and that Lowe was an insider, in part because of his agreement with the debtor. If Lowe was properly categorized as an insider, the transfer would not have to have happened within 90 days of the petition date to qualify as preferential; that time would be extended to a year. See 11 U.S.C. § 547(b)(4)(B) (1984).

152. The trustee argued that the debtor received less than reasonably equivalent value in exchange for the bitcoins because “the value of the ‘services’ provided by the Defendants . . . (i.e., posting 160 comments on Bitcoin-related forums over a period of approximately one month) was less valuable than the [bitcoins transferred].” Amended Complaint, *supra* note 4, at 12. Specifically, the trustee alleged that Lowe “engaged ‘trolls’ in irrelevant and lengthy debate” on topics not directly relevant to the BabyJet miners and that this “irrelevant commentary accounts for a substantial portion of [Lowe’s posts] . . .” *Id.* at 5. The trustee also made parallel state law claims against Lowe. See *id.* at 9-12, 14.

153. 11 U.S.C. § 550 (2017). Section 550(a) provides:

(a) Except as otherwise provided in this section, to the extent that a transfer is avoided under section 544, 545, 547, 548, 549, 553(b), or 724(a) of this title, the trustee may recover, for the benefit of the estate, the property transferred, or, if the court so orders, the value of such property, from—

(1) the initial transferee of such transfer or the entity for whose benefit such

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Because Section 550 affords courts flexibility in determining the nature of the recovery and because Bitcoin had not yet been addressed by a bankruptcy court, the trustee in *Hashfast* moved for partial summary judgment on the “narrow and purely legal issue of whether bitcoin[s] constitute mere currency, i.e., the equivalent of dollar bills, or are a commodity.”<sup>154</sup> As the trustee recognized, if Bitcoin is deemed a currency, the transfer would be considered in terms of U.S. Dollars, and the recovery would be limited to the amount of U.S. Dollars transferred through the Bitcoin at the time they were given to Lowe, i.e., \$363,861.43.<sup>155</sup> The reason for this is simple: “a \$100 transfer leads to a \$100 recovery,”<sup>156</sup> and if Bitcoin is considered a form of U.S. Dollars, then recovery can only equal the “amount” of U.S. Dollars that were transferred by the Bitcoin. Alternatively, if Bitcoin is considered a commodity, then the range of recovery options laid out in Section 550(a) would be available to the court.

As recognized by the parties to the bankruptcy proceeding, the question of whether Bitcoin is currency or commodity would have been only the beginning of the inquiry if the court determined that Bitcoin is a commodity. Next, the court would have had to decide whether the trustee should be entitled to recover the bitcoins themselves, i.e., the property, or their value, and if the latter, value as of which date. This was a particularly contentious issue in *Hashfast* because the value of the bitcoins significantly increased over the course of the case from \$363,861.43<sup>157</sup> to over \$2.3 million and would be worth approximately \$22.5 million as of August 2018.<sup>158</sup>

In a partial summary judgment order, the *Hashfast* court held that the bitcoins would be treated as a commodity in this case.<sup>159</sup> This Comment argues that this classification should be adopted by all bankruptcy courts based on a plain meaning analysis of “currency” and “commodity,” Bitcoin’s “moneyness,” and the different ways each classification would function within the Code. Because Bitcoin should be considered a commodity, a court should continue to determine the nature of the recovery under Section 550(a). Most prior cases addressing the issue of recovery of property with changing

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transfer was made; or

(2) any immediate or mediate transferee of such initial transferee.

154. Memorandum of Points and Authorities in Support of Motion for Partial Summary Judgment, *supra* note 145, at 2.

155. *Id.*

156. *Id.*

157. Amended Complaint, *supra* note 4, at 5-6.

158. See *supra* note 5 and accompanying text (stating the values of the *Hashfast* bitcoins at the time the case was dismissed and at the present).

159. Order on Motion for Partial Summary Judgment at 1, *In re Hashfast Techs. LLC*, No. 14-30725 (Bankr. N.D. Cal. Feb. 19, 2016) (holding that Bitcoin should not be treated as U.S. dollars). Because the case was voluntarily dismissed, the Court did not reach the other issues.

value have held that an estate is entitled to recover the value of the property at the time of the transfer (the “transfer value”), and where property has increased, some have ordered the return of the property itself or its present inflated value (the “judgment value”).<sup>160</sup> However, Bitcoin’s unique attributes distinguish it from any other property that courts have handled in recovery actions. Therefore, this Comment argues that courts dealing with recovery of Bitcoin should *always* order the return of the bitcoins themselves when possible. If recovery of the bitcoins is not possible because a transferee is protected, courts should order payment of the value of whatever consideration a transferee received in exchange for the bitcoins.

#### A. *Currency or Commodity*

When Satoshi Nakamoto created Bitcoin, he clearly intended that it be treated as a currency, as his goal was to replace conventional ones.<sup>161</sup> A number of others have predicted that Bitcoin will eventually replace cash.<sup>162</sup> Indeed, since 2011, Bitcoin has been functioning more like cash, as more users have used their bitcoins quickly.<sup>163</sup> Despite these facts, Bitcoin does not fit within most endorsed definitions of “currency.” For starters, many of these definitions contain language indicating that currency can only be furnished by a government. FinCEN, for example, has promulgated the following definition of “currency:”

- (1) Currency. The term currency means—
  - (i) The coin and currency of the United States or of any other country, which circulate in and are customarily used and accepted as money in the country in which issued; and
  - (ii) A cashier’s check (by whatever name called, including “treasurer’s check” and “bank check”), bank draft, traveler’s check, or money order having a face amount of not more than

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160. A few courts have ordered the return of the value at the time the bankruptcy petition was filed (the “petition value”). *See, e.g., In re Adams*, 2 B.R. 313 (Bankr. M.D. Fla. 1980) (ordering the return of the petition value where the value of the property is in decline).

161. *See Nakamoto, supra* note 15, at 1 (discussing the drawbacks to conventional currencies and the ways that Bitcoin would eradicate those issues).

162. *See, e.g., EW News Desk Team, Will Bitcoin Soon Replace Paper Money?*, ECONOMY WATCH (Mar. 4, 2015), <http://www.economywatch.com/news/Will-Bitcoin-Soon-Replace-Paper-Money.03-04-15.html> [<https://perma.cc/D288-4ZAD>] (“An Australian economics professor has predicted that electronic currency such as Bitcoin will replace paper cash within a decade.”). *But see Ashley Kindergan, Forget Bitcoin, But Remember Blockchain?*, CREDIT SUISSE (Feb. 10, 2017), <https://www.credit-suisse.com/us/en/articles/articles/news-and-expertise/2017/02/en/forget-bitcoin-but-remember-blockchain.html> [<https://perma.cc/UHN2-BCTX>] (arguing that Bitcoin will not eliminate the need for cash).

163. *See Meiklejohn et al., supra* note 53, at §2.3. *But see id.*, (attributing the increase in faster spending to the popular gambling website, Satoshi Dice).

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\$10,000—

(A) Received in a designated reporting transaction as defined in paragraph (c)(2) of this section (except as provided in paragraphs (c)(3), (4), and (5) of this section), or

(B) Received in any transaction in which the recipient knows that such instrument is being used in an attempt to avoid the reporting of the transaction under section 5331 and this section.<sup>164</sup>

FinCEN clearly limits “currency” to those that are issued by a government in Subsection (i). Subsection (ii) contemplates the same, as cashier’s checks, bank drafts, and traveler’s checks are all issued by banks sanctioned by governments that only deal in conventional currencies. Bitcoin neither flows from a government, nor is it issued through any of the vehicles mentioned in Subsection (ii).

Other definitions of “currency” contemplate a place for governments by citing to the law. For example, a definition may require that a currency be “lawful”<sup>165</sup> or “authorized by law.”<sup>166</sup> While a broad construction could be given to these terms, it should be construed narrowly to encompass anything *issued* by a nation’s government. Even though Bitcoin is legal (i.e., it is not banned by the U.S. government), it is not affirmatively considered a form of *U.S. currency*. This construction is manifested by the remaining parts of these definitions. For example, one definition limits currency to “*coined money and such paper money as are authorized by law and circulate as the medium of exchange.*”<sup>167</sup> The first limitation, requiring a currency to be coined or in paper form, when combined with the legal limitation, strongly suggests that the government must be the sole issuer. While others may issue coined or paper money, they are not “authorized by law.” Furthermore, reading the invocation of the law broadly to include things not *prohibited* by law would arguably allow certain forms of “fake money,” such as Monopoly money, to be embodied in this definition. Finally, the use of the word “the” before “medium of exchange” implies that there is only one valid currency in each country, closing the door to other types of “currencies,” such as Bitcoin, even if they are not outright banned.

Even the broadest definition of “currency” cannot embrace Bitcoin. Black’s Law Dictionary defines the term as follows: “An item (such as a coin, government note, or banknote) that circulates as a medium of exchange. See legal tender.”<sup>168</sup> The examples modifying the word “item” are issued by

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164. 31 C.F.R. § 1010.330(c)(1) (2017) (emphasis added).

165. Frank v. ITT Commercial Fin. (*In re* Thompson Boat Co.), 230 B.R. 815, 819 (Bankr. E.D. Mich. 1995) (defining currency as “a lawful medium of exchange”).

166. 53A AM. JUR. 2D *Money* § 5 (2017).

167. *Id.* (emphasis added).

168. *Currency*, BLACK’S LAW DICTIONARY (10th ed. 2014).

a government, suggesting the same role of the government indicated in the definition discussed above. The citation to the definition of “legal tender” provides further support for this contention. “Legal tender” is defined as “[t]he money (bills and coins) approved in a country for the payment of debts, the purchase of goods, and other exchanges for value.”<sup>169</sup> The phrase “approved in a country” suggests an authoritative role for the government.<sup>170</sup> Bitcoin is not a coin, bill, government note, or banknote. Furthermore, it was designed to be used without government oversight or intrusion. Therefore, based on the plain meaning of the word, Bitcoin cannot be considered a currency.

The definition of “commodity,” on the other hand, does appear broad enough to encompass Bitcoin. One source defines “commodity” as: “An article of trade or commerce. The term embraces only tangible goods, such as products or merchandise, as distinguished from services.”<sup>171</sup> Bitcoin is certainly a good, rather than a service. Although it is digital rather than literally tangible, the word “tangible” is clearly meant to highlight the distinction between goods and services, as the structure of the language makes clear. Finally, Bitcoin is bought and sold on various exchanges, making it an article of trade or commerce.

The multiple dictionary definitions of “commodity” similarly embrace Bitcoin:

- 1: an economic good: such as
  - a. a product of agriculture or mining . . .
  - b. an article of commerce especially when delivered for shipment . . .
  - c. a mass-produced unspecialized product . . .
- 2: a. something useful or valued . . .
- . . .
- 4: a good or service whose wide availability typically leads to smaller profit margins and diminishes the importance of factors (as brand name) other than price
- 5: one that is subject to ready exchange or exploitation within a market . . .<sup>172</sup>

Many of these definitions center around the fact that commodities are unspecialized in that one piece or unit of a commodity is no different from another. Bitcoin certainly holds this characteristic, as two bitcoins are

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169. *Legal Tender*, BLACK’S LAW DICTIONARY (10th ed. 2014).

170. *See supra* notes 109-110 and accompanying text (stating that California law affirmatively rejects Bitcoin as a form of “legal tender” because it was not authorized by the United States).

171. *Commodity*, BLACK’S LAW DICTIONARY (10th ed. 2014).

172. *Commodity*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/commodity> [<https://perma.cc/6VX7-YNG8>] (last visited Mar. 30, 2017).

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indistinguishable in their properties, especially value. These definitions also identify items that are readily available for trade and contain value, which bitcoins certainly are and do.<sup>173</sup>

Further support for the argument that Bitcoin should not be considered a currency that is specifically representative of U.S. Dollars can be found in Morgan Ricks' *The Money Problem*.<sup>174</sup> At the outset of his analysis, Ricks defines "money" as "the set of assets that can be readily used in transactions" and states that the "paramount" property of money is its ability to function as a "medium of exchange."<sup>175</sup> On the other hand, other instruments, such as cash equivalents, "must be converted into the medium of exchange—by selling them or waiting for them to mature—before they can be used in transactions."<sup>176</sup> Although Bitcoin may operate as a "medium of exchange" for certain individuals or companies (like the parties in *Hashfast*), Bitcoin's use more generally parallels the functionality of cash equivalents, as many companies are not actually "accepting" Bitcoin and instead exchange customers' bitcoins for U.S. Dollars through a middleman.<sup>177</sup> Furthermore, Bitcoin's acceptance is not widespread enough to be considered a "medium of exchange" in all transactions because not every company or individual is willing to accept Bitcoin, even in the first instance. Therefore, Bitcoin does not quite act like "money" in the conventional sense and should not be considered on par with the U.S. Dollar.

A final justification exists for Bitcoin's classification as a commodity in the terms of Section 550(a) itself. That provision gives courts discretion to decide whether the property or its value should be returned and offers no guidance as to which measure of recovery a court should choose.<sup>178</sup> In addition, if a court elects to order the return of value, rather than property, and the value has changed over the course of the bankruptcy proceeding, the

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173. The Commodity Exchange Act also contains a definition of "commodity," *see* 7 U.S.C. § 1(a)(9), but it has been shaped by politics and is therefore not as reliable for the purposes of this analysis, *see id.* (listing various agricultural items as commodities but explicitly excluding onions); John H. Stassen, *The Commodity Exchange Act in Perspective: A Short and Not-So-Reverent History of Futures Trading Legislation in the United States*, 39 WASH. & LEE L. REV. 825, 832 (1982) (stating that Congress would "periodically update[e] the statute's definition as [it] deemed new futures products worthy of . . . oversight").

174. MORGAN RICKS, *THE MONEY PROBLEM* (2016).

175. *Id.* at 29.

176. *Id.*

177. *See supra* note 53 (clarifying that many companies exchange bitcoins through third parties like Coinbase and BitPay that will accept a customer's Bitcoin from the company and pay the equivalent amount in cash to the company).

178. 11 U.S.C. § 550(a) (2017); *see also* 5 COLLIER ON BANKRUPTCY ¶ 550.02 (Alan N. Resnick & Henry J. Sommer eds., 16th ed. 2011) ("The Code provides no guidelines to aid the bankruptcy court in deciding when to permit recovery of the value of the property rather than the property itself.").

Code does not provide the specific time that determines value.<sup>179</sup> Courts have generally recognized that this part of Section 550 is meant to give judges flexibility in determining the nature of the recovery.<sup>180</sup> A decision that Bitcoin is currency would entirely eliminate this discretion, as courts would be limited to ordering the recovery of the value at the time of the transfer. In order to remain faithful to the terms of the Code, therefore, Bitcoin should be conclusively considered a commodity.<sup>181</sup>

### B. *Nature of the Recovery*

After a bankruptcy court determines that a transfer is avoided, or void, Section 550(a) allows the trustee to recover the property or its value from the initial transferee or any immediate or mediate transferee of the initial

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179. *Id.*

180. *See, e.g., In re Trout*, 609 F.3d 1106, 1111 (10th Cir. 2010) (“[A]s . . . several other courts to consider the issue have recognized, § 550(a) provides the bankruptcy court with flexibility to fashion a remedy so as to return the estate to its pre-transfer position.”); *see also* Aalfs v. Wirum (*In re Straightline Investments, Inc.*), 525 F.3d 870, 882-85 (9th Cir. 2008) (stating that the standard of review for decisions under Section 550 is abuse of discretion and holding that the lower court did not abuse its discretion).

181. Others have argued that the two classifications would also operate differently within the Code because if Bitcoin is determined to be a currency, Bitcoin transactions or agreements to transact would be classified as swap agreements and therefore subject to a wide range of protections under the Code. *See e.g.,* Casey Doherty, *Bitcoin and Bankruptcy: Understanding the Newest Potential Commodity*, 33 AM. BANKR. INST. J. 38, 38 (July 2014); Chelsea Deppert, Comment, *Bitcoin and Bankruptcy: Putting the Bits Together*, 32 EMORY BANKR. DEV. J. 123, 146-48 (2015); Michael R. Gordon and Tyler A. Probst, *From Bitcoin to Blockchain: How Laws and Regulations are Conforming to and Impacting the Use of Virtual Currency*, NYC BAR (Apr. 28, 2016), <http://www.nycbar.org/cle-offerings/if-i-were-a-virtually-rich-man-developments-in-the-laws-and-regulations-impacting-the-digital-currency-revolution/>.

These articles further assert that if classified as a commodity, Bitcoin would not receive the same protections. *Id.* However, they ignore the extremely broad definition of “swap agreement” provided in the Code. *See* 11 U.S.C. § 101(53B) (defining “swap agreement”); *In re Nat’l Gas Distributions, Inc.*, 556 F.3d 247, 253 (4th Cir. 2009) (stating that Section 101(53B) is “extremely broad”). Section 101(53B) applies to many contracts for both currencies and commodities. *See, e.g.,* 11 U.S.C. § 101(53B)(A)(i)(I)-(III), (VII). For example, Section 101(53B)(A)(i)(II) applies to “spot, same day-tomorrow, tomorrow-next, forward, or other foreign exchange, precious metals, or other commodity agreement.” *Id.* § 101(53B)(A)(i)(II) (emphasis added). This, in addition to other parts of the section, would likely encompass certain Bitcoin transactions regardless of whether Bitcoin is considered a currency or commodity. Furthermore, the Code’s “swap agreement” definition would not encompass all contracts for the sale or purchase of Bitcoin, but only “financial instruments,” *In re Nat’l Gas Distributions, Inc.*, 369 B.R. 884, 898-99 (Bankr. E.D.N.C. 2007), and not “traditional commercial transactions,” H.R. REP. NO. 109-31, pt. 1, at 128-29. For example, the agreement that provided for the payment of the bitcoins at issue in *Hashfast* would not qualify as a swap regardless of Bitcoin’s classification because it is an agreement for a service and not a financial instrument contemplated by Congress in promulgating the provisions pertaining to swaps.

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transferee.<sup>182</sup> As noted above, the Code gives courts discretion in choosing whether the property or its value will be recovered and, if the latter, the time at which the value is to be determined.<sup>183</sup> The provision also provides for recovery only “to the extent that a transfer is avoided.”<sup>184</sup> According to the legislative history, this phrase is meant to incorporate certain protections for transferees denominated in the specific avoidance provisions.<sup>185</sup> Section 550(a) also requires that any recovery be “for the benefit of the estate,”<sup>186</sup> which has been read to prohibit recovery when it will only benefit the debtor or specific creditors.<sup>187</sup> Although it is not within the language of the provision, Section 550(a) has also been cited as demanding that recovery restore the estate to the position it would have been in had the transfer never occurred.<sup>188</sup> Because reasonable minds might differ on the specific time for valuation this rule demands, courts have come to different conclusions on what this requires.<sup>189</sup>

Both Sections 550(b) and (c) protect certain transferees from a recovery action. Section 550(b) provides that the trustee cannot recover from any transferee after the initial transferee if the subsequent transferee takes for value, in good faith, and without knowledge of the voidability of the transfer.<sup>190</sup> Section 550(c) offers protection for certain non-insiders.<sup>191</sup> Recovery is limited to a “single satisfaction” under Section 550(d); the trustee is prohibited from recovering from multiple transferees and recovering more than the total amount of the avoided transfer.<sup>192</sup> Section 550(e) contemplates any improvements made to the property by transferees by giving the transferee a lien on the recovered property in the amount of the cost of making such improvements and the increase in property’s value because of such improvements.<sup>193</sup> Finally, Section 550(f) limits the time that

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182. 11 U.S.C. § 550(a). Section 550 is triggered by avoidance under Sections 544, 545, 547, 548, 549, 553(b), or 724(a). *Id.*

183. *See supra* note 176.

184. 11 U.S.C. § 550(a).

185. 5 COLLIER ON BANKRUPTCY, *supra* note 178, ¶ 550.02 (citing H.R. REP. NO. 95-595, at 375–76 (1977)) and S. REP. NO. 95-989, at 90 (1978)).

186. 11 U.S.C. § 550(a).

187. 5 COLLIER ON BANKRUPTCY, *supra* note 178, ¶ 550.02.

188. *Id.*

189. *See infra* Section II.B.i (reviewing different trends in recovery orders made by bankruptcy courts).

190. 11 U.S.C. § 550(b)(2). This bar on recovery includes any transferees who take from the immediate or mediate transferee. *Id.*

191. *Id.* § 550(c).

192. *Id.* § 550(d). This section allows the trustee to recover from multiple transferees, as long as the total amount recovered is equal to “a single satisfaction of the property.” *Campbell v. Small Bus. Admin. (In re Jameson’s Foods, Inc.)*, 35 B.R. 433, 440 (Bankr. D.S.C. 1983).

193. 11 U.S.C. § 550(e).

a trustee has to bring an action to recover against any transferee.<sup>194</sup>

### 1. Recovery Trends of Bankruptcy Courts

Despite the limits provided for in Sections 550(b) through (f), Section 550(a) still provides a significant amount of flexibility to courts in determining the precise nature of the recovery.<sup>195</sup> In most cases, this flexibility is not so contentious because recovery of either the property or its value is essentially the same thing—the value of the property has not changed significantly since it was transferred, nor is it likely to change in the future. Where the property’s value has changed over the course of the bankruptcy proceeding or will change in the future, however, the nature of the recovery becomes more controversial. Because the specific issue that Bitcoin presents in this context is its constantly changing value, this Comment will focus on what courts tend to do when value increases or decreases.

A number of trends have developed in the way courts resolve this issue. The precise type of recovery usually depends upon the nature of the property in question, how readily ascertainable its value is, and whether it is recoverable at all.<sup>196</sup> In general, courts determine the type and amount of

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194. *Id.* § 550(f).

195. *See supra* notes 176-77 and accompanying text (describing the flexibility in the language of Section 550(a)).

196. *See Morris v. Kan. Drywall Supply Co. (In re Classic Drywall, Inc.)*, 127 B.R. 874, 877 (Bankr. D. Kan. 1991) (offering an overview of factors that courts consider in determining whether property or value should be returned). When property’s value is unascertainable, courts have ordered the return of the property itself. *Kepler v. Sec. Pacific Hous. Servs. (In re McLaughlin)*, 183 B.R. 171, 176-77 (Bankr. W.D. Wis. 1995) (citing *Widemire v. Siddiki Bros., Inc. (In re King Arthur Clock Co.)*, 105 B.R. 669, 672 (Bankr. S.D. Ala. 1989) (holding that, generally, where the record contains no evidence or conflicting evidence of the value of the transferred property, the property itself must be returned); *Gen. Indus., Inc. v. Shea (In re Gen. Indus., Inc.)*, 79 B.R. 124, 135 (Bankr. D. Mass. 1987) (ruling that a transferee should return the transferred property unless to do so would be inequitable); *Harris v. Scotsman Scotsman Queen Prods. Div. of King-Seeley Thermos Co. (In re Handsco Distributing, Inc.)*, 32 B.R. 358, 360 (Bankr. S.D. Ohio 1983) (deciding that the appropriate remedy for a trustee, who could avoid as preference debtor’s return of ice makers and refrigerators to creditor it purchased them from, was the return of those goods because there was no evidence of market value); *Slutsky v. Michel Tire Co. (In re Vann)*, 26 B.R. 148, 149 (Bankr. S.D. Ohio 1983)) (stating that the proper remedy for the preference received by debtor retailer’s tire supplier, which had removed inventory from the premises of the debtor, was to order that the removed tires or duplicates thereof be returned because their market value was unascertainable).

196. *Hirsch v. Steinberg (In re Colonial Reality Co.)*, 226 B.R. 513, 525 (Bankr. D. Conn. 1998) (citing *In re McLaughlin*, 183 B.R. at 177); *In re Int’l Ski Serv., Inc.*, 119 B.R. at 659; *Shape, Inc. v. Midwest Eng’g, Inc. (In re Shape, Inc.)*, 176 B.R. 1, 3 (Bankr. D. Maine 1994); *James B. Downing & Co. v. Agri Dairy Prods., Inc. (In re James B. Downing & Co.)*, 74 B.R. 906, 911 (Bankr. N.D. Ill. 1987)).

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recoverable value from the perspective of the trustee and the estate, rather than give weight to the effects of the recovery on the transferee.<sup>197</sup> For example, a court might demand the recovery of value, rather than the property itself, when the return of the property would create significant expenses for the estate in its sale and expose the estate to the risk that it will not receive the fair market value at the sale.<sup>198</sup> Finally, although the time at which property's value is measured might depend on the specific circumstances of a case,<sup>199</sup> “[c]ourts generally agree that the market value of the property at the time of transfer . . . is the proper measure of recovery under Section 550.”<sup>200</sup>

In the large majority of cases in which value has changed, it has *decreased* over the course of the bankruptcy proceeding. Most of these cases involve property that naturally depreciates in worth over time or loses value as it is used.<sup>201</sup> Even in the rare cases where the property's future value is

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197. See *Adashek v. Newspapers, Inc. (In re Milwaukee Cty. Conservation and Pub. Serv. Corp.)*, 47 B.R. 846, 847 (Bankr. E.D. Wis. 1985) (holding that “value” of the recoverable preference is determined from the viewpoint of the trustee and estate); *Chrysler v. Mersman Table, Inc. (In re Furniture Den, Inc.)*, 12 B.R. 522, 527 (Bankr. W.D. Mich. 1981) (ruling that “value” is to be considered from the point of view of the trustee and the estate); see also *Aalfs v. Wirum (In re Straightline Investments, Inc.)*, 525 F.3d 870, 882-85 (9th Cir. 2008) (“Section 550 is thus substantially less protective of transferees than it is of the estate.”).

198. E.g., *Gennrich v. Mont Sport U.S.A., (In re Int'l Ski Serv., Inc.)*, 119 B.R. 654, 659 (Bankr. W.D. Wis. 1990) (“Presumably, the recovery of the estate will be enlarged by eliminating both the expenses of administering a sale and the risk of obtaining a lower price at the sale.”).

199. *Pritchard v. Brown (In re Brown)*, 118 B.R. 57, 60 (Bankr. N.D. Tex. 1990) (citing 4 COLLIER ON BANKRUPTCY ¶ 550.02 n.6 (15th ed.)) (describing the circumstances of each individual case as relevant to determining the point at which the value is measured).

200. *Hirsch v. Steinberg (In re Colonial Reality Co.)*, 226 B.R. 513, 525 (Bankr. D. Conn. 1998) (citing *In re McLaughlin*, 183 B.R. at 177) (ruling that the market value of the property at the time of transfer, minus the consideration received, is the proper measure of recovery); see also *Moglia v. Universal Auto., Inc. (In re First Nat'l Parts Exch.)*, No. 98 C 5915, 2000 WL 988177, at \*10 (N.D. Ill. July 18, 2000) (citation and internal quotation marks omitted) (recognizing that market value of the property at the time of transfer is the proper measure of damages); *In re Int'l Ski Serv., Inc.*, 119 B.R. at 659 (“It is generally agreed that “[t]he market price at the time of transfer is the proper measure of damages.”) (citation omitted); *Shape, Inc. v. Midwest Eng'g, Inc. (In re Shape, Inc.)*, 176 B.R. 1, 3 (Bankr. D. Maine 1994) (ordering the return of market value less consideration received); *James B. Downing & Co. v. Agri Dairy Prods., Inc. (In re James B. Downing & Co.)*, 74 B.R. 906, 911 (Bankr. N.D. Ill. 1987) (“The market price at the time of transfer is the proper measure of damages because that is what the debtor would have been able to get for its whey had it not been improperly transferred.”). But see *In re Adams*, 2 B.R. 313, 314 (Bankr. M.D. Fla. 1980) (holding that the petition date is the proper date on which to value a car that declined in value because “[t]hat is the date on which the estate was created and the creditor's rights became fixed”).

201. See, e.g., *USAA Fed. Sav. Bank v. Thacker (In re Taylor)*, 599 F.3d 880 (9th Cir. 2010) (holding that the bankruptcy court did not abuse its discretion when it ordered the return of the value of a security interest on a car, rather than the security interest itself, when the car had depreciated in value from \$19,500 to approximately \$15,000); *First Software Corp. v.*

completely unpredictable and unaffected by the transferee, courts still follow the general rule that the estate should receive the value of the property at the time of the transfer.<sup>202</sup> In *In re Shape, Inc.*, the bankruptcy court demanded the return of the transfer value of stock when its value had “greatly diminished” since that time.<sup>203</sup> In applicable cases, this result is rationalized by the fact that the transferee had used the property in some way, thereby deriving value from it while diminishing its inherent value.<sup>204</sup> Another cited justification for ordering the transferee to pay more than the present value of the property is the fact that the transferee *could have* sold the property at the time it was transferred from the debtor.<sup>205</sup> Finally, courts have held that this approach restores the estate to the position it would have been had the transfer not occurred,<sup>206</sup> which is a goal of Section 550.<sup>207</sup>

Deviations from the general rule sometimes occur when the property has *increased* in value over the course of the bankruptcy proceeding. Some courts have held that the property itself or its judgment value is recoverable

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Comput. Assocs., Int’l (*In re First Software Corp.*), 107 B.R. 417 (D. Mass. 1989) (holding that the estate should recover the price of computer software at the time of its transfer when upgraded versions of the transferee’s software had been released, making the purchased software less valuable).

202. See, e.g., *In re Shape, Inc.*, 176 B.R. at 3 (ordering return of the transfer value less consideration received by the debtor when the value had significantly diminished since the transfer).

203. *Id.*

204. See, e.g., *Ferrari v. Comput. Assocs. (In re First Software Corp.)*, 84 B.R. 278, 286 (Bankr. D. Mass. 1988), *aff’d*, *First Software Corp. v. Comput. Assocs., Int’l*, 107 B.R. 417 (D. Mass. 1989) (holding that property should not be returned to the estate when it has depreciated in value at the hands of the transferee); *Hall v. Arthur Young & Co. (In re Comput. Universe, Inc.)*, 58 B.R. 28, 32 (Bankr. M.D. Fla. 1986) (reasoning that the estate is entitled to recover the property’s transfer value because the defendant was “enriched” during the time he possessed the property and that “[a]ny relief other than entry of a money judgment would encourage transferees to resist recovery as long as possible in order to maximize their free rent”).

205. See, e.g., *In re First Software Corp.*, 107 B.R. at 423-24 (D. Mass. 1989) (“Computer Associates had the opportunity to sell the software programs promptly for \$1,500,000 on March 25, 1986, but failed to do so. It would be inequitable to permit Computer Associates to profit, at First Software’s expense, from its own miscalculation or malfeasance.”).

206. E.g., *Lee v. Walro (In re Lee)*, No. 4:15-cv-00097, 2017 WL 568606, at \*5 (S.D. Ind. Feb. 13, 2017) (holding that transfer value constitutes “value” under the Code because it is the value that the debtor would have had the property not been improperly transferred); *Gill v. Maddalena (In re Maddalena)*, 176 B.R. 551, 556 (Bankr. C.D. Cal. 1995) (“[I]t seems to this Court that the object of any remedy should be, to the extent practicable, to ‘undo’ the transfer and to restore the parties to their pretransfer positions.”); *In re James B. Downing & Co.*, 74 B.R. at 911 (“The market price at the time of transfer is the proper measure of damages because that is what the debtor would have been able to get for its wher they had it not been improperly transferred.”).

207. See *supra* note 189 and accompanying text (stating that courts cite this as a goal of Section 550).

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when that value exceeds the transfer value.<sup>208</sup> One justification for this approach is that it arguably achieves the goal of restoring the estate to the position it would have been in had the transfer not occurred.<sup>209</sup> However, this proposition is dubious, since in the context of depreciating property, courts have decided that the transfer value restores the estate to this position.<sup>210</sup> A stronger justification can be found in the legislative history of Section 550, which states that “a transferee has an opportunity to benefit by delay, and there are possibilities for abuse where the transferred property is appreciating substantially in value.”<sup>211</sup> In crafting this provision, Congress clearly considered this scenario and implied that appreciated value should go to the estate.

Courts have also cited to Section 550(e) as a basis for this type of recovery.<sup>212</sup> That provision specifies that a transferee is entitled to a lien on recovered property when he or she has made certain improvements to the property.<sup>213</sup> The lien should be in the amount of the cost to the transferee of making said improvements and the increase in the property’s value because of the improvements.<sup>214</sup> Courts have interpreted this to mean that the estate

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208. *E.g.*, *Weinman v. Fid. Capital Appreciation Fund (In re Integra Realty Res., Inc.)*, 354 F.3d 1246, 1267-68 (10th Cir. 2004); *In re American Way Serv. Corp.*, 229 B.R. 496, 531 (Bankr. S.D. Fla. 1999) (“[W]hen the property has appreciated, the trustee is entitled to recover the property itself, or the value of the property at the time of judgment.”); *Govaert v. B.R.E. Holding Co., Inc. (In re Blitstein)*, 105 B.R. 133, 137 (Bankr. S.D. Fla. 1989) (ruling that the Trustee is entitled to at least a money judgment in the amount of the greater of the value at the time of the transfer or the value at the time of recovery less the value of improvements made); *Wood v. Davis (In re Se. Cmty. Media, Inc.)*, 27 B.R. 834, 844 (Bankr. E.D. Tenn. 1983) (stating that when the transferee was entitled to retain property, the trustee was entitled to recover value of station at time of sale less amount of debt owed to mortgage holder); 5 COLLIER ON BANKRUPTCY, *supra* note 176, ¶ 550.02 (noting that the Code provides no guidelines to aid the bankruptcy court in deciding when to permit recovery of the value of the property rather than the property itself).

209. *E.g.*, *Joseph v. Madray (In re Brun)*, 360 B.R. 669, 674-75 (Bankr. C.D. Cal. 2007) (reasoning that a recovery of the judgment value “restore[s] the estate to the position it would have occupied had the property not been transferred”).

210. *See supra* note 206 and accompanying text (explaining that the market price at the time of transfer is the proper measure of damages because that is what the debtor would have been able to get for it w they had it not been improperly transferred).

211. *Bankruptcy Act Revision: Hearings on H.R. 31 and H.R. 32 Before the Subcomm. on Civil and Constitutional Rights of the Comm. on the Judiciary*, 94th Cong. 1844 (1976). Notably, this statement was made during the rejection of a version of Section 550 that would have allowed the transferee to elect the form of recovery. *Id.*

212. *See, e.g.*, *In re Brun*, 360 B.R. at 675 (citing Section 550(e) in support of the position that the estate should recover any appreciation not covered by that section); *Cooper v. Ashley Communications, Inc. (In re Morris Communications NC, Inc.)*, 75 B.R. 619, 629 (Bankr. W.D.N.C. 1987), *rev’d on other grounds*, 914 F.2d 458 (4th Cir. 1990) (citing to a prior version of the statute—the then-Section 550(d)—to support the same position).

213. 11 U.S.C. § 550(e).

214. *Id.*

is entitled to any increase in value that is *not* generated by the transferee.<sup>215</sup>

Once a court has determined that it will return the greater of the two values—in these cases, the judgment, or present, value—most courts demand the return of the property itself, when possible, rather than its value.<sup>216</sup> Courts do so to avoid any contention between the parties that might require further litigation on the question of the present value of the property.<sup>217</sup>

The bankruptcy court in *In re Morris Communications NC, Inc.* adopted this approach in the context of stocks.<sup>218</sup> Where fraudulently transferred stock had appreciated since its initial transfer, that Court held that the stock should be returned and that the transferee should be given a lien for costs that the transferee had incurred in connection with the stock after it was transferred from the debtor.<sup>219</sup> *In re Colonial Reality Company*<sup>220</sup> also involved appreciated stock, but the initial transferees had sold the stock to a subsequent good faith transferee before the recovery action was initiated.<sup>221</sup> Therefore, the party in possession of the stock at the time of the action was protected under Section 550(b).<sup>222</sup> Because recovery of the property was completely barred, the court used the traditional rule to calculate recovery value—“the market value of the property *at the time of transfer*.”<sup>223</sup>

## 2. Suggested Treatment of Bitcoin Under Section 550

Bitcoin presents a unique problem in the recovery context because its value fluctuates every few seconds and the digital currency’s illiquid nature lends itself to varying value amounts depending on which source of price is

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215. *E.g.*, *In re Brun*, 360 B.R. at 675 (“Section 550(e) demonstrates the intent of Congress that any appreciation not attributable to the actions of a good faith transferee inure to the benefit of the estate.”).

216. *See, e.g.*, *Cooper v. Ashley Communications, Inc. (In re Morris Communications NC, Inc.)*, 75 B.R. 619, 629 (Bankr. W.D.N.C. 1987), *rev’d on other grounds*, 914 F.2d 458 (4th Cir. 1990) (holding that appreciated stock should be returned to the estate).

217. *See id.* at 629 (“This approach avoids unnecessary contests over the meaning of the term ‘value,’ and thereby promotes judicial economy.”).

218. *Id.*

219. *See id.* at 629-30 (holding that this constituted an “improvement” within the meaning of the present Section 550(e) (then Section 550(d)).

220. *Hirsch v. Steinberg (In re Colonial Reality Co.)*, 226 B.R. 513 (Bankr. D. Conn. 1998) (ruling on an adversary proceeding against direct and subsequent transferees of stock).

221. *See id.* at 518, 526 (stating that the stock at issue, in addition to other property, was sold to the Mediplex Group, Inc. and that the Mediplex Group, Inc. was a good faith transferee).

222. *Id.* at 525-26.

223. *See id.* at 22. The court subtracted the consideration that had been received at the time of the transfer, presumably because Section 548(c) applied to the initial transferees, who had acted in good faith. *See id.* at 522 (concluding that there was no actual fraud).

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used.<sup>224</sup> At the time of recovery, bitcoins will almost never be worth the same amount in U.S. Dollars as they were when they were transferred or when the bankruptcy petition was filed. Therefore, ordering the return of the bitcoins themselves will almost never put the estate back in the position it was in at any of those times. On the other hand, ordering the return of a retrospective value will either force the transferee to pay more out of his own pocket or grant him a windfall when he has not affected the bitcoins' value in any way. Furthermore, if a judge decided to use a "judgment value," he or she would have to determine which source of price is to be used and precisely which time the measurement should take place, a determination that could be contested by one of the parties and would result in further litigation. Because of the difficulties inherent in valuing Bitcoin and the ways that the justifications used by courts for different recovery rules do or do not apply in the Bitcoin context, courts faced with this issue should always order the return of the bitcoins themselves, when possible.<sup>225</sup>

Aside from arguably putting the estate back in the position it would have been in if the transfer had never happened,<sup>226</sup> none of the other justifications for the general rule of transfer value apply to a recovery of bitcoins. The transferee cannot use bitcoins like he could use a car or a piece of equipment. Therefore, he cannot derive value from it in the traditional sense after the transfer. While the transferee could have sold the property immediately after the transfer, that argument more logically and fairly applies in cases where a piece of property unquestionably and predictably loses value over time or becomes outdated, like the computer equipment in *In re Computer Universe*.<sup>227</sup> Bitcoin's value is neither guaranteed to increase nor decrease, and a person with knowledge of the Bitcoin market, such as the transferee in *Hashfast*, might reasonably argue that it is wise to maintain control over the bitcoins, since they have generally been increasing in popularity and value.

On the other hand, the justifications for recovery of judgment value—those discussed in cases where the property's value has increased—apply to a recovery of Bitcoin, even where the bitcoins have decreased in value. The legislative history indicates that Congress sought to deter transferees from

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224. See *supra* Section B (describing the evolution of Bitcoin's value).

225. Situations in which the transferee no longer possesses the bitcoins or the secondary transferee is protected are discussed below.

226. This proposition is tenuous at best. As noted above, courts have used this justification to order recovery of increased value or appreciated property. See *supra* notes 209-210 and accompanying text (describing the policy goal of restoring the estate to the position it would have occupied had the property not been transferred).

227. See *Hall v. Arthur Young & Co. (In re Comput. Universe, Inc.)*, 58 B.R. 28, 32 (Bankr. M.D. Fla. 1986) ("[T]he defendant cannot seriously argue that personal property of this sort does not depreciate in value.").

delaying the proceedings in any way. Because Bitcoin's value is extremely and frequently volatile, a transferee may be encouraged to delay the proceedings until Bitcoin's price has raised to a favorable position that may grant him some share in the property's sale if he knows that the traditional rule will apply. Demanding the recovery of the bitcoins themselves, on the other hand, will not incentivize a transferee to take part in such deceptive practices. Furthermore, in providing protection for transferees who have improved property, Section 550(e) implies that transferees should only share in increases that they have effectuated themselves. Any increase in Bitcoin's value will not be caused by the actions or be at the expense of a transferee. Finally, ordering the return of the bitcoins themselves removes the issue of valuation from the litigation, something that might be particularly contentious and drawn out if litigants were able to address it. Therefore, when possible, bitcoins subject to a recovery action should always be returned to the estate.

Although one might argue that the traditional rule should apply in cases where Bitcoin's value has decreased, forcing a transferee to turn over more value than the bitcoins themselves would be highly inequitable, especially when he was unable to predict or affect the direction that the value took after he accepted the transfer. Furthermore, in some cases, Bitcoin's value may increase over the course of this issue's litigation to the point that it is equal to or greater than the value at the time of the transfer, thereby mooting the issue.

In a number of instances, as in *In re Colonial Reality Company*, the court is unable to order the return of the property because the initial transferee no longer possesses the bitcoins or a transferee is protected by Section 550(b) or (c). Rather than mandating the return of the transfer value in these instances, a court should order the return of the value that the initial or unprotected subsequent transferee received for the bitcoins.<sup>228</sup> This would avoid granting the transferee a windfall or ordering him to pay more than the bitcoins were worth to him. Additionally, in most cases, a transferee who subsequently sold the bitcoins likely sold them for more than they were worth at the time of the transfer, meaning that the estate will likely receive some accrued value in its recovery if this rule is applied.<sup>229</sup> Finally, this rule would also avoid particularly contentious litigation over the value of the bitcoins.

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228. This rule contemplates returned value in terms of U.S. Dollars. A transferee should not be forced to purchase new bitcoins to return to the estate.

229. As discussed above, Section 550(d) limits the trustee to a "single satisfaction." See *supra* note 192 and accompanying text. Therefore, a court could not recover full consideration from more than one transferee. It could, however, order partial recovery from multiple transferees amounting to whatever time value the court uses to calculate recovery.

### CONCLUSION

Although Bitcoin was intended to function as a currency, some of its design features and its highly volatile market value have led governments and regulatory entities to treat it in inconsistent and varying ways. Therefore, when the *Hashfast* Court was presented with an allegedly fraudulent or preferential transfer of Bitcoin, it had little guidance on how to handle the issue. This Comment argues that for the purposes of a Section 550 recovery action, Bitcoin should be treated as a commodity, as opposed to a currency representing U.S. Dollars, and an estate should be entitled to a return of the bitcoins regardless of whether or not their value has changed during the case's pendency. In situations where the property is unrecoverable because the initial transferee no longer possesses the bitcoins or a subsequent transferee is protected under Section 550(b) or (c), a court should order recovery of the value that an unprotected transferee received in return for the bitcoins. These rules recognize the traditional justifications used by courts in determining the nature of a recovery while also acknowledging Bitcoin's unpredictable and extreme fluctuations in value. They also incentivize transferees to maintain possession of bitcoins or sell them for a profit without also incentivizing them to hinder or delay recovery proceedings.

Although *Hashfast* was dismissed before the Court could reach the bulk of this analysis, the issue is likely to present itself again as the popularity of both Bitcoin and other "alt coins" continues to increase. Individuals go on to purchase them regardless of their lack of inherent value, persistent value fluctuations, and risk of being lost or stolen. While these digital currencies will likely never totally displace cash, they will continue to be an important part of the economic landscape for the foreseeable future. Therefore, lawmakers and courts must accept and make room for digital currencies in existing laws and regulations.