A Too Convenient Transaction: Bitcoin and Its Further Regulation

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INTRODUCTION

Bitcoin is the odd combination of a "currency" backed by no one and an "investment" involved in nothing. Instead of representing an innovative future of banking, bitcoin today seems like the first Ponzi scheme in history where investors know about the scheme and still think it wise to invest. Regardless of disagreements on what bitcoin actually represents and the future of virtual currencies, one thing is certain: further regulation is necessary.

Bitcoin is one of approximately 2,000 virtual currencies that have been created in the last ten years.[1] A flood of novel questions, complex problems, and old crimes in new settings have accompanied this technological invention.[2] One particularly notable area is the exchanges in which these virtual currencies are traded.[3] The difficulties with virtual currency exchanges have been thoroughly chronicled and represent an area in which regulatory oversight would be particularly effective.[4]

This analysis proceeds in four parts. This paper first explains bitcoin and some of its history. To showcase bitcoin's impact, this paper then examines a wide array of problems that have arisen from its use, including an impressive litany of criminal activity. It then examines past difficulties with virtual currency exchanges. Subsequently, this paper provides a brief overview of the exchanges' current legal status, specifically concerning the SEC and securities laws. Finally, this paper explores one pathway on which the SEC may tread to enact regulations requiring all bitcoin exchanges to register as federal securities exchanges. Before concluding, this paper also analyzes the benefits of such regulation, and discusses the demanding requirements an exchange would be forced to meet.

I. BITCOIN ENABLES CRIMINAL ACTIVITIES

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[1] *Cryptocurrencies and ICOs: An SEC enforcement perspective*, 2018 WL 1060487.

[2] Julio Gil-Pulgar, *Law Firms are Adapting to the Crypto Environment*, BITCOINIST (Jan. 29, 2018, 4:00 PM), http://bitcoinist.com/lawyers-moving-into-the-bitcoin-space/. Such challenges have not been overlooked by attorneys, as many defense attorneys are now marketing specific skills in defending bitcoin claims. *Id.*

[3] Paul Vigna, *Reports of Problems at Crypto Exchange Send Bitcoin Tumbling*, WALL STREET JOURNAL (Mar. 7, 2018), https://www.wsj.com/articles/reports-of-problems-at-crypto-exchange-send-bitcoin-tumbling-1520456666.

[4] Azzief Khaliq, *The Good, the Bad, and the Ugly of Bitcoin Security*, HONGKIAT, https://www.hongkiat.com/blog/bitcoin-security/.

The advent of bitcoin has created different ways to commit old crimes. By constructing an anonymous system of sending and receiving payment, bitcoin and other virtual currencies have altered the landscape for law enforcement across the globe.[5] To examine the scope of this alteration, one must first understand the definition, inner workings, and implications of the existence of bitcoin.

A. What is Bitcoin

Bitcoin is a form of currency[6] that is accessible and usable online.[7] To obtain bitcoins, one must either mine or purchase them online from other users.[8] Mining bitcoins involves using computer processing power to solve certain mathematical equations.[9] When an equation is solved, a denomination of bitcoin is rewarded, and mathematical equations become more difficult to solve.[10] The more processing power an individual commits to mining, the more bitcoins one will receive over time.[11] Interestingly, the number of bitcoins that can be mined is limited to twenty-one

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[5] *See* Andy Greenberg, *Operation Bayonet: Inside the Sting that Hijacked an Entire Dark Web Drug Market*, WIRED (Mar. 8, 2018, 11:30 AM), https://www.wired.com/story/hansa-dutch-police-sting-operation/ (examining an interesting approach to the Dutch police's takedown of an illegal online marketplace).

[6] At the very least, bitcoins "are digital assets designed to enable purchases, sales and other financial transactions in a secure and pseudonymous matter." *Cryptocurrencies and ICOs*, *supra* note 1.

[7] *What is Bitcoin?*, CNN, http://money.cnn.com/infographic/technology/what-is-bitcoin/. Bitcoin purportedly has a slew of benefits. Some legitimate benefits include its privacy for users, ease of access and use, difficulty of counterfeiting, transnational use, and lessened costs associated with transactions. Vishal Gupta, *#8 Reasons Why Bitcoin is Better than Conventional Currency*, ENTREPRENEUR (Mar. 29, 2017) https://www.entrepreneur.com/article/292103; Blockchain Team, *The Top 5 Reasons to Use Bitcoin*, BLOCKCHAIN (April 6, 2015), https://blog.blockchain.com/2015/04/06/the-top-5-reasons-to-use-bitcoin/. Some additional, amusing claims that have been presented as benefits include bitcoin's security, insulation against inflation, lessened volatility when compared to cash, and ability to preserve tax records. Gupta, at *id.*; BLOCKCHAIN TEAM, at *id.* The numerous hacks and problems of bitcoin exchanges, wild volatility of bitcoin, and some tax problems associated with bitcoin transactions are examined later in this paper.

[8] David Myer, *Mining a Bitcoin Costs About as Much as Buying One These Days*, FORTUNE (Mar. 16, 2018), http://fortune.com/2018/03/16/bitcoin-mining-cost-profitability/.

[9] *Id.*

[10] *Id.*

[11] *Id.* Bitcoin mining ventures are an interesting topic of discussion. As each bitcoin mathematical equation is solved, they become harder. This requires miners to continually update their processing abilities, and in turn increases their electricity consumption. These efforts can lead to warehouses full of computers which have the sole focus of mining bitcoins. Keeping computers from overheating is a particular concern and can be excessively costly. As the price of bitcoin varies wildly, so too do miners' fortunes, as one day it may be profitable to commit resources to mining, and another day it is not. Recently, the break-even point for mining to become profitable was $8,038. In other words, as of March 16, 2018, one bitcoin must retain that value to make mining worth the trouble. *Id.*

million.[12] One this number is reached, purchases will be the only way to obtain bitcoins.[13] However, the bitcoin market is not simply limited to twenty-one million coins, as bitcoins may be divided and traded down to the eighth decimal point.[14] Similar to stocks, trading bitcoins occurs with a transaction that involves a virtual currency exchange.[15] While these transactions generally offer individuals anonymity, this veil may be pierced under certain circumstances.[16] Moreover, to store bitcoins one must use a virtual wallet, which may take the form of an online web page accessible (ideally) to only the owner of the coins, or a physical external storage device.[17]

Bitcoin operates on a peer-to-peer model, and is not backed by any financial institution or government.[18] Bitcoin operates using blockchain, a unique program that tracks and records bitcoin transactions.[19] Blockchain essentially acts as a public, unalterable ledger that continuously maintains and builds a history of these dealings.[20] Each bitcoin is assigned two unique identifying strings of characters: one public identifier to be recorded on blockchain, and one private identifier that enables the owner to engage in transactions.[21]

While bitcoin is generally called a virtual currency, it differs from traditional U.S. currency in several distinguishing ways. For one, unlike cash, bitcoin today functions more as an investment opportunity than simply a medium of exchange.[22]

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[12] Nathan Reiff, *What Happens to Bitcoin After All 21 Million are Mined?*, INVESTOPEDIA (June 8, 2017), https://www.investopedia.com/news/what-happens-bitcoin-after-all-21-million-are-mined/.

[13] *Id.*

[14] *Can You Buy Less Than One Bitcoin?*, BUY BITCOIN WORLDWIDE, https://www.buybitcoinworldwide.com/kb/buy-less-than-one-bitcoin/.

[15] CNN, *supra* note 7.

[16] Carmine DiPiero, *Deciphering Cryptocurrency: Shining A Light on the Deep Dark Web*, 2017 U. ILL. L. REV. 1267, 1272–73 (2017). Specifically, individuals using bitcoins illegally are at a higher risk of exposing themselves to law enforcement, although more complex methods exist to hide one's identity. *Id.*; *see* John Bohannon, *Why Criminals Can't Hide Behind Bitcoin*, SCIENCEMAG (Mar. 9, 2016), http://www.sciencemag.org/news/2016/03/why-criminals-cant-hide-behind-bitcoin (examining how to track bitcoin users). Moreover, bitcoin does not require the user to have any bank accounts or credit cards. David Kushner, *The Darknet: Is the Government Destroying 'the Wild West of the Internet?'*, ROLLING STONE (Oct. 22, 2015), https://www.rollingstone.com/politics/news/the-battle-for-the-dark-net-20151022.

[17] Khaliq, *supra* note 4. Either method has its advantages and disadvantages. For example, storing one's bitcoins offline with an external hard drive offers a significantly lower risk of being hacked. However, if the hard drive fails, the bitcoins on the storage device are irrevocably lost. Conversely, storing bitcoins on a webpage may allow for easier accessibility without the risk of losing coins to a storage device's failure, but comes with it the risk of being hacked. *Id.*

[18] Joy Crane and Max Read, *Do You Really Know What Bitcoin Is? A Guide for the Confused.*, N.Y. MAGAZINE (Dec. 26, 8:00 AM), http://nymag.com/selectall/2017/12/what-is-bitcoin-a-guide-for-the-confused.html.

[19] *Id.*

[20] *Id.*

[21] Khaliq, *supra*.

[22] Noelle Acheson, *Why Use Bitcoin?*, COIN DESK (Jan. 28, 2018), https://www.coindesk.com/information/why-use-bitcoin/.

Bitcoin originally began as an alternative, online method of payment, focusing on low-cost and near-instant financial transactions in lieu of international bank transfers.[23] While some retailers do in fact accept bitcoin as payment, such demand is reportedly not high.[24]

Currently, many individuals "invest" in bitcoin with the intent of seeking higher profits.[25] The opposite is true for cash: although some invest in U.S. currency using various mechanisms,[26] the majority of individuals use cash solely as a currency. Moreover, cash's acceptance as a currency is universal in the United States, while bitcoin's acceptance as a currency is significantly more sporadic.[27] One reason for this difference is the fact that the U.S. government requires people to pay in U.S. currency, thereby creating a demand for cash.[28] As bitcoin is a peer-to-peer network without any government backing, this type of demand has not been replicated for the virtual currency.[29]

Despite the recent splurge of publicity for bitcoin from its profound swings in value, in economic terms the cryptocurrency is relatively small.[30] Currently, the total amount of money invested in bitcoin is only worth approximately $179 billion.[31] Such a figure does not approach the colossal size of other vehicles that may impact or reflect the U.S. economy.[32] For example, $179 billion represents around 0.5% of the Dow Jones Industrial Average's total value, which is within the expected range of the index's one-day fluctuations.[33] Similarly, each of the fifteen largest banks in the United States are bigger than bitcoin.[34] JP Morgan Chase tops the list with $2.53 trillion in

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[23] *Id.*

[24] *Id.*; *2017 List of Big Companies that Accept Bitcoin & Cryptocurrencies*, STEEMIT GUIDE (June 2017), https://steemit.com/bitcoin/@steemitguide/2017-top-list-of-big-companies-that-accept-bitcoin-and-cryptocurrencies.

[25] *Id.*

[26] Some ways to invest in the U.S. dollar, both directly and indirectly, include Treasury Notes, various exchange-traded funds, and even American companies. *See* Leo Sun, *3 Ways to Invest Money in a Strong U.S. Dollar*, THE MOTLEY FOOL (May 2, 2015, 11:25 AM), https://www.fool.com/investing/general/2015/05/02/3-ways-to-invest-money-in-a-strong-us-dollar.aspx; *Treasury Note*, INVESTOPEDIA, https://www.investopedia.com/terms/t/treasurynote.asp.

[27] *2017 List of Big Companies that Accept Bitcoin & Cryptocurrencies*, *supra*. One need only visit the local grocery store and attempt to pay in bitcoin to discover this fact.

[28] Karl Whelan, *How is Bitcoin Different from the Dollar?*, FORBES (Nov. 19, 2013, 11:26 AM), https://www.forbes.com/sites/karlwhelan/2013/11/19/how-is-bitcoin-different-from-the-dollar/#3df9725e398f.

[29] *Id.*

[30] Adam Shell, *Bitcoin: If currency crashed, plunge would harm its investors but not economy*, USA TODAY (Jan. 23, 2018, 6:00 AM), https://www.usatoday.com/story/money/2018/01/23/bitcoin-if-currency-crashed-plunge-would-harm-its-investors-but-not-economy/1041093001/.

[31] *Id.* This figure has recently been subject to considerable variation, and may be out of date.

[32] *Id.*

[33] *Id.*

[34] *See* Amanda Dixon, *America's 15 largest banks*, BANKRATE (Feb. 21, 2018), https://www.bankrate.com/banking/americas-top-10-biggest-banks/#slide=1.

assets.[35] Nonetheless, virtual currencies such as bitcoin represent a foundation on which larger challenges may arise in the near future. One need look no farther than the problems currently faced by bitcoin to see the need for redress.

B. Bitcoin and Conventional White Collar Crimes

Many of the problems and challenges associated with bitcoin are crimes that may be traditionally considered white collar. These problems generally stem from a lack of regulation or oversight. One symptom of this non-supervision is the mind-bogglingly deep and frequent swings in bitcoin's value.[36] Bitcoin has gone from mere pennies per coin to a high of nearly $20,000 within a decade.[37] In the last year alone bitcoin's oscillations have been extreme, sometimes gaining and losing thousands of dollars in days or months.[38] While regulated markets are also known to fluctuate, these occurrences are rarer and less pronounced than bitcoin.[39] Regulation could provide much needed stability to bitcoin, while also ferreting out other forms of illegal activity.

For example, bitcoin's lack of regulation leads to the potential for currency manipulation.[40] There are purportedly a small number of individuals who control enough bitcoins to influence the overall value of bitcoins.[41] Because there is no oversight, these individuals could engage in a host of otherwise illegal activities with little to no repercussions.

Another visible problem is the lack of oversight for initial coin offerings ("ICOs"). ICOs operate much like an initial public offering, where a private company offers the sale of its stock to raise capital, and according to federal law, must comply with rigorous financial and accounting standards to do so.[42] However, when little

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[35] *Id.*

[36] *Bitcoin Price Historical Chart*, BITCOIN.COM, https://charts.bitcoin.com/chart/price

[37] *Id.*

[38] *Id.*

[39] *See id.*; Ryan Vlastelica, *What will we see first: Dow 30,000 or bitcoin $30,000?*, MARKET WATCH (Sept. 2, 2017, 9:44 AM), https://www.marketwatch.com/story/what-will-we-see-first-dow-30000-or-bitcoin-30000-2017-09-01.

[40] Maya Kosoff, *Could Price Manipulation be Killing Bitcoin?*, VANITY FAIR (Feb. 2, 2018, 10:24 AM), https://www.vanityfair.com/news/2018/02/could-price-manipulation-be-killing-bitcoin; *compare* Dan Falvey, *Bitcoin price MANIPULATION: Economists warn just ONE person may have caused value surge*, EXPRESS (Jan. 16, 2018, 8:39 AM), https://www.express.co.uk/finance/city/905222/bitcoin-price-news-latest-manipulation-cryptocurrency-surge-plummet-stock-exchange; *with* Ryan Browne and Arjun Kharpal, *Cryptocurrency price manipulation is 'unavoidable,' head of crypto firm says*, CNBC (Feb. 13, 2018, 10:38 AM), https://www.cnbc.com/2018/02/13/cryptocurrency-price-manipulation-is-unavoidable-nem-president-says.html.

[41] *See supra* note 38.

[42] Adam Hayes, *IPO Basics: What is an IPO?*, INVESTOPEDIA, https://www.investopedia.com/university/ipo/ipo.asp.

regulation exists for firms offering a virtual currencies, problems abound.[43] Fortunately, the SEC has taken some regulatory action towards ICOs, later discussed in Part II.[44]

Somewhat similarly, bitcoin seems to provide a more effective vehicle for money laundering.[45] Money laundering is the process of obscuring the relationship between illegally obtained funds and the underlying activity that led to the gains.[46] Historically, laundering money required placing such dirty money into a legitimate business, with the ultimate goal of allowing it to seamlessly flow into the marketplace, and replacing it with clean funds from the business.[47] Recently, however, virtual currencies such as bitcoin have changed the landscape for money laundering.[48]

Bitcoin offers several attractive traits to potential money launderers. Bitcoin users can generally participate in transactions anonymously.[49] As previously noted, bitcoin does not require users to obtain a bank account or credit card.[50] It therefore becomes more difficult to track an individual who leaves little in the way of a financial trail. Furthermore, bitcoin transactions are generally much quicker than traditional means.[51] Instead of the cumbersome process of injecting dirty money into a legitimate business, launderers can instead clean their money in the span it takes an exchange to process their transaction.[52] While the United States has taken some action on this front, bitcoin continues to serve as an attractive option for money laundering.[53]

Moreover, bitcoin generally does not involve traditional financial institutions, and therefore enables the avoidance of many mechanisms that would otherwise identify criminal activity such as money laundering. Financial institutions, such as

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[43] Jay Clayton, *Statement on Cryptocurrencies and Initial Coin Offerings*, U.S. SECURITIES AND EXCHANGE COMMISSION (Dec. 11, 2017), https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11.

[44] *Id.*; *see infra* notes 129–64 and accompanying text.

[45] Nicholas J. Ajello, *Fitting A Square Peg in A Round Hole Bitcoin, Money Laundering, and the Fifth Amendment Privilege Against Self-Incrimination*, 80 BROOK. L. REV. 435, 444 (2015).

[46] *Id.*

[47] *Id.*

[48] *Id.* In an interesting case from Florida in 2016, the court found that the defendant could not have laundered money because bitcoin was property, and not a currency. Jacob Bogage, *Bitcoin's not money, judge rules as she tosses money-laundering charge*, WASHINGTON POST (July 16, 2016), https://www.washingtonpost.com/news/morning-mix/wp/2016/07/26/bitcoins-not-money-judge-rules-as-she-tosses-money-laundering-charge/?noredirect=on&utm_term=.55ef05c2bc6f. Defendant sold bitcoins to undercover officers, and knew the officers intended to purchase stolen credit card numbers with the proceeds. *Id.* The judge found that, because bitcoin was property, the charge of money laundering was not supported. *Id.*

[49] Ajello, *supra*.

[50] Amanda B. Johnson, *9 Ways to Buy Bitcoin without a Bank Account*, COIN TELEGRAPH (July 7, 2015), https://cointelegraph.com/news/9-ways-to-buy-bitcoin-without-a-bank-account.

[51] Ajello, *supra* at 444–45.

[52] *Id.* at 445–46.

[53] *Id.*

banks, are required by federal law to report certain transactions and behaviors.[54] These requirements include filing a Currency Transaction Report ("CTR") with the IRS for any cash transactions over $10,000, and a Suspicious Activity Report ("SAR") for conduct outlined in the Federal Banking Secrecy Act.[55] For example, a SAR would be required where an individual "structures" banks deposits by splitting a large sum into denominations smaller than $10,000 to avoid the reporting requirements of a CTR.[56] These laws were created in the 1970s to identify illegally gained profits, and largely targeted money laundering.[57]

Bitcoin invariably threw a giant wrench into the machinations behind CTRs and SARs.[58] As discussed, bitcoin and other peer-to-peer virtual currencies are not backed by governments, nor require financial institutions to operate.[59] So long as individuals pay in bitcoin, which offers a shroud of anonymity, users can engage in large transactions without tripping any wires connected to CTRs and SARs, as traditional financial institutions would not be involved. Furthermore, such transactions are not difficult to facilitate. Attempting to avoid CTRs and SARs used to be a troublesome (if not gargantuan) task for money launderers; now, it simply involves the click of a mouse.

Lastly, bitcoin has allowed fraud targeting investors to flourish.[60] Scams involving fake exchanges have abounded, where investors believe they are buying bitcoin from a legitimate coin exchange website, but instead are simply paying money (and providing credit card information) to an unknown party for nothing in return.[61] Likewise, instead of fake exchanges, fraudsters have created entirely fake virtual currencies as another means to extract funds from the unwitting investor.[62] Digital wallets have been yet another area of prolific deceit.[63] Many fake wallets ensnare bitcoin users by either copying the name and logo of legitimate wallets, or advertising

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[54] Cindy Brown, *Dividing Your Deposits Is A Federal Crime*, 47 OCT. TENN. B.J. 24, 24 (October 2011).

[55] *Id.*; s*ee* Eric B. Epstein, *Why the Bank Examination Privilege Doesn't Work As Intended*, 35 YALE J. ON REG. BULL. 17, 22 (2017).

[56] *See* Brown, *supra* at 24–25.

[57] Epstein, *supra*; *see id.*

[58] It should be noted that some action related to identifying money laundering and other illegal transactions have been taken across the globe, and drawn the complaints of bitcoin users regarding their privacy. *See Is Bitcoin Legal?*, COIN DESK, https://www.coindesk.com/information/is-bitcoin-legal/.

[59] Crane, *supra* note 18.

[60] Fraud related to ICOs is discussed later in Section D.

[61] Antonio Villas-Boas, *Scammers are tricking people to log into fake cryptocurrency exchange sites, and they're incredibly hard to spot*, BUSINESS INSIDER (Feb. 20, 2018, 4:22 PM), http://www.businessinsider.com/scammers-spoofing-cryptocurrency-exchange-site-urls-incredibly-hard-to-spot-2018-2; Alexander Lielacher, *7 Bitcoin Scams You Need to be Aware of*, BTC MANAGER (Mar. 22, 2017, 4:11 PM), https://btcmanager.com/7-bitcoin-scams-you-need-to-be-aware-of/.

[62] Antonio Madeira, *7 Ways Criminals Can Steal Your Bitcoins*, BITCOINIST (Mar. 26, 2017, 3:00 AM), http://bitcoinist.com/7-ways-criminals-steal-your-bitcoins/.

[63] Lielacher, *supra*.

claims to provide greater anonymity for coin transactions.[64] Some have reportedly even found their way onto Apple and Android app stores.[65] Once downloaded, fake wallets initially work as expected, but eventually steal coins when the number of bitcoins held in the wallet reaches a certain threshold.[66] Like other problematic areas associated with bitcoin, issues surrounding investor protection will continue to decrease bitcoin's levels of stability, public confidence, and number of investors until such issues are addressed.

While additional, updated laws surrounding white collar crimes and bitcoin are needed, other areas could additionally benefit from further regulation, as a pronounced dearth of oversight has led to a broad range of crimes.[67]

C. Platform for Other Illegal Behavior

Bitcoin has proven a versatile tool for not only those engaged in what may be viewed as traditional white collar crimes, but also for those criminals with a wider field of view.[68] For example, hackers have found bitcoin to be a useful collecting method for illegally wrought gains,[69] primarily because of the level of anonymity it can offer.[70]

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[64] *Id.*

[65] *Id.*

[66] *Id.*

[67] Tax issues related to bitcoin are outside the scope of this paper. However, there is a connection between bitcoin tax issues and white collar crime. For example, some argue that if bitcoin is not regulated as a currency, then it may be a vehicle for tax fraud. Joni Larson, *Implications of Bitcoin not being an Actual Currency: the Espinoza Case*, ABA TAX TIMES (Nov. 2016), https://www.americanbar.org/groups/taxation/publications/abataxtimes_home/16nov/16nov-ac-larson-implications-of-bitcoin-not-being-actual-currency.html. Similarly, many bitcoin traders fail to adhere to IRS guidelines for reporting gains or losses. For example, in 2015 the IRS found that only 802 people had reported such a gain or loss related to bitcoin trading. Now, the IRS has developed and continues to develop ways in which to track and ultimately catch the biggest offenders. Jeff J. Roberts, *The IRS Has Special Software to Find Bitcoin Tax Cheats*, FORTUNE (Aug. 22, 2017), http://fortune.com/2017/08/22/irs-tax-cheats-bitcoin-chainalysis/; Sarah O'Brien, *GOP tax bill blocks potential bitcoin gains gambit*, CNBC (Dec. 15, 2017, 7:58 AM), https://www.cnbc.com/2017/12/14/gop-tax-bill-blocks-potential-bitcoin-gains-gambit.html; Edward Helmore, *Investors in Bitcoin and other cryptocurrencies face hefty tax bills*, THE GUARDIAN (Mar. 18, 2018, 7:59 AM), https://www.theguardian.com/technology/2018/mar/18/cryptocurrency-bitcoin-irs-tax. For an interesting discussion of the tax implications of bitcoin in North Carolina, *see* Kelly J. Winstead, *The North Carolina State Tax Treatment of Virtual Currency: An Unanswered Question*, 21 N.C. BANKING INST. 501 (2017).

[68] In one interesting example, hackers used YouTube advertisements to target personal computers across the world and quietly install a program that runs in the background to mine bitcoins. Dan Falvey, *Cryptocurrency HACKERS use YOUTUBE to target computers for bitcoin and ripple mining*, EXPRESS (Jan. 29, 2018, 8:36 AM), https://www.express.co.uk/finance/city/911278/cryptocurrency-hacking-bitcoin-ripple-ethereum-mining-youtube-adverts.

[69] Al Baker, *An 'Iceberg' of Unseen Crimes: Many Cyber Offenses Go Unreported*, NEW YORK TIMES (Feb. 5, 2018), https://www.nytimes.com/2018/02/05/nyregion/cyber-crimes-unreported.html.

[70] DiPiero, *supra* note 16.

Hackers can effectively create a hostage situation with personal computers, where a computer virus, such as WannaCry, can be deployed to completely lock victims out of their computers until they pay a ransom amount in bitcoins.[71] In the case of WannaCry, a countdown is initiated so that victims may see how much time remains until the computer's contents are erased.[72] A somewhat more humorous example (at least when viewed from afar) is a scheme involving cheating husbands.[73] Recently in Nashville, a number of men received an email from anonymous extortionists who alleged to have obtained proof of infidelity and demanded bitcoins to stay silent.[74] While the emails had been compiled with no such knowledge of anyone's infidelity, some of those targeted nonetheless paid the ransom.[75] Police were alerted to the scam after several men, apparently confident in their fidelity, reported the crime.[76]

The ability of bitcoin to conceal user identities becomes even more concerning when combined with browsers and online marketplaces that offer similar shrouds of anonymity.[77] For example, The Onion Router ("Tor") can be thought of as an internet browser that acts similarly to Google Chrome's private browsing mode, but on steroids.[78] Tor was originally designed as a secure way for the U.S. Navy to communicate, and, as one can imagine, makes it difficult for law enforcement to track its users.[79] Moreover, some websites can only be accessed with browsers such as Tor, adding yet another pall of anonymity for the user.[80] These sites are commonly referred to as the "Darknet."[81] The Darknet can be seen as the creepy, seedy, and shadowy depths of the web. Recently, several high-profile busts have occurred,[82] but it appears that illegal activity in the Darknet continues to thrive, in large part due to the

[71] Bill Chappell, *WannaCry Ransomware: What We Know Monday*, NPR (May 15, 2017, 2:31 PM), https://www.npr.org/sections/thetwo-way/2017/05/15/528451534/wannacry-ransomware-what-we-know-monday,causing%20major%20disruptions%20worldwide.

[72] *Id.*

[73] Baker, *supra*.

[74] *Id.*

[75] *Id.*

[76] *Id.*

[77] DiPiero, *supra* note 16 at 1273.

[78] DiPiero, *supra* note 16 at 1273–74.

[79] Kushner, *supra* note 16.

[80] *Id.*; DiPiero, *supra* at 1274. It should be noted, however, that the vast majority of Tor users do not engage in illegal activities, as only about three percent of Tor users actually access the Darknet. Kushner, *supra*.

[81] Kushner, *supra*. Terrorists, drug dealers, pedophiles, and other similar characters combine with activists in the Arab Spring, dissidents in other countries fighting oppressive regimes, and users simply trying to avoid being tracked by advertisers to make Tor's presence and use in the world a complex topic of discussion.

[82] *See* Greenberg, *supra* note 5.

anonymity provided by virtual currencies.[83] Similarly, virtual currency exchanges are yet another area where shady (if not illegal) activities thrive as well.[84]

D. Problems with Bitcoin Exchanges

Bitcoin exchanges have not been the shining beacon of stability and security for which the currency's users would hope.[85] Instead, exchanges have experienced a slew of high-profile problems from nearly the beginning of bitcoin's existence.[86]

Perhaps most famous was the ignominious saga of Mt. Gox,[87] as the exchange publicly went from a market leader of bitcoin transactions to a world leader of dumpster fires in less than a month. Mt. Gox began operating in 2010, and after a slight run-in with hackers in 2011,[88] quickly grew to the world's largest bitcoin exchange. By 2013, Mt. Gox handled up to 80% of all bitcoin transactions.[89] Despite its success during this timeframe, Mt. Gox had its share of problems internally.[90] For example, one investigation by the Department of Homeland Security led to the seizure of $5 million because Mt. Gox had not registered as a money transmitting business within the United States.[91] In hindsight, these issues ultimately served as a prelude for larger issues to come.

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[83] Kushner, *supra*. Moreover, Darknet users are not limited to movie villain stereotypes. Recently a group of cadets at the Naval Academy were caught using the Darknet to buy illegal narcotics with bitcoins. Lucas Tomlinson and Jennifer Griffin, *Naval Academy drug ring under investigation: LSD, cocaine allegedly bought on dark web*, FOX NEWS (Feb. 23, 2018), http://www.foxnews.com/politics/2018/02/23/naval-academy-drug-ring-under-investigation-lsd-cocaine-allegedly-bought-on-dark-web.htm.

[84] There is also a debate whether bitcoin is illegal to trade in the United States today. If so, anyone who has completed, or attempted to complete, a bitcoin transaction within the United States could be guilty of a crime. Another school of thought is that mining bitcoins could be illegal. *See* Michael L. Laussage, *Texas Taking the Lead in State Cryptocurrency Enforcement*, JACKSON WALKER (Jan. 8, 2018), https://www.jw.com/texas-cryptocurrency-enforcement/. Similarly, the Commodities Futures Trading Commission seems to thinks virtual currencies are commodities, but has yet to hone in on regulations. Instead it's focused on the emerging futures market for virtual currencies. *Is Bitcoin Legal?*, *supra* note 58.

[85] In fact, many aspects of bitcoin appear to be insecure. *See* Khaliq, *supra* note 4.

[86] *Id.*

[87] Mt. Gox is an acronym that stands for "Magic The Gathering Online eXchange." Yes, really. Robert McMillan, *Bitcoin Exchange Mt. Gox Goes Offline Amid Allegations of $350 Million Hack*, WIRED (Feb. 24, 2014), https://www.wired.com/2014/02/bitcoins-mt-gox-implodes-2/.

[88] Hackers stole about 2,000 bitcoin in 2011. *Id.*

[89] *Id.*

[90] *Id.*

[91] *Id.* As defined by statute, a company is required to register as a money transmitting business if it

> (A) provides check cashing, currency exchange, or money transmitting or remittance services, or issues or redeems money orders, travelers' checks, and other similar instruments or any other person who engages as a business in the transmission of funds, including any

Mt. Gox's downfall came in February of 2014, after hackers stole 744.408 bitcoins from the exchange. At the time, the losses amounted to about $350 million.[92] While the actual date of the hack is disputed,[93] Mt. Gox began taking action publicly on February 7, 2014, by halting all bitcoin transactions.[94] A mere twenty-one days later the exchange filed for bankruptcy in Japan, and a short time after that in the United States.[95] Drama continued to surround the rise and fall of Mt. Gox, as, incredibly, its former CEO claimed to have "found" roughly $200,000 of the stolen bitcoin funds sometime after it filed for bankruptcy on his own volition.[96] He was arrested on unrelated charges of fraud and embezzlement in 2015 in Japan.[97]

Such problems have continued for virtual currency exchanges.[98] One Hong Kong-based firm called Bitfinex was hacked to the tune of $70 million dollars in August of 2016.[99] Another exchange operating in South Korea lost 17% of its assets, and was forced into bankruptcy shortly thereafter.[100] An exchange in San Francisco believes someone was using its firm to manipulate bitcash, a currency similar to bitcoin.[101] The leading exchange in the United States, Coinbase, recently had to address unexplained, unauthorized charges to user accounts that left many without funds.[102] Exchanges have frequently experienced outages, leaving users unable to

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person who engages as a business in an informal money transfer system or any network of people who engage as a business in facilitating the transfer of money domestically or internationally outside of the conventional financial institutions system;
(B) is required to file reports under section 5313; and
(C) is not a depository institution (as defined in section 5313(g)).

31 USC § 5330(d)(1).

[92] *Id.*

[93] *Id.* There is some speculation that the hack was ongoing for a period of years and went unnoticed. Darryn Pollock, *The Mess that Was Mt. Gox: Four Years On*, COIN TELEGRAPH (Mar. 9, 2018), https://cointelegraph.com/news/the-mess-that-was-mt-gox-four-years-on.

[94] Pollock, *supra*; McMillan, *supra* note 87.

[95] Pollock, *supra*.

[96] *Id.*

[97] *Id.*

[98] Emma Dunkley, *Problems at two cryptocurrency exchanges raise security concerns*, FINANCIAL TIMES (Dec. 20, 2017), https://www.ft.com/content/aa9fdd64-e536-11e7-97e2-916d4fbac0da. Moreover, as virtual currencies have become more popular, apparently many exchanges are struggling with rapid growth. Many users have reported it may take a week or more to complete a bitcoin transaction at some exchanges. C. Edward Kelso, *Mo' Money, Mo' Problems: Bitcoin Exchanges Struggle Under Growth Explosion*, BITCOIN.COM (Nov. 26, 2017), https://news.bitcoin.com/mo-money-mo-problems-bitcoin-exchanges-struggle-under-growth-explosion/.

[99] Dunkley, *supra*.

[100] *Id.*

[101] *Id.*

[102] Chris Mills, *The US's leading Bitcoin exchange is draining tens of thousands of dollars from users' bank accounts*, BGR (Feb. 15, 2018, 5:53 PM), http://bgr.com/2018/02/15/best-bitcoin-exchange-coinbase-problems-wtf/.

access their virtual accounts.[103] All of these issues have contributed to the volatility and insecurity surrounding virtual currencies.

Many if not all of the problems outlined above would be lessened if these exchanges were regulated. Part of the problem appears to be the ease in which exchanges may be established. Instead of a few, well-regulated exchanges with the funding necessary to adhere to such requirements, the industry has a smorgasbord, each with different levels of security and financial stability.[104] Regulation could cull weaker institutions from the herd, increase the level of security for the remaining exchanges, and reduce the number of devastating hacks. Moreover, oversight could also reduce the magnitude of a successful hack.

For example, Mt. Gox appears to have been hacked for an ongoing number of years, and only noticed it in 2014 shortly before their collapse.[105] Stringent regulatory requirements could have led Mt. Gox to discover this hack sooner, as it would have been adhering to more rigorous financial accounting and reporting laws. Moreover, Mt. Gox's CEO would have likely found it more difficult to achieve any of his potentially criminal ambitions with additional regulations in place. Problems will continue to abound with virtual currency exchanges so long as they lack the necessary level of oversight.

II. REGULATORY RESPONSES DOMESTICALLY AND INTERNATIONALLY

It comes as no surprise that regulatory action has loomed and continues to loom over the relatively brief and tumultuous history of virtual currency exchanges. Various states and agencies continue to grapple with the question of regulation for virtual currency exchanges, as bitcoins seem to share many substantive traits with more traditional currencies.[106] Accordingly, the novel issues created by bitcoin and other virtual currencies have raised a host of regulatory questions and responses.

A. States' Responses to Virtual Currencies

As discussed above, exchanges that are not registered within the U.S. as a money transmitting company may receive a knock on the door from the Department of Homeland Security.[107] North Carolina has taken similar action.[108] In 2015, the state

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[103] Pan K. Yuk and Chloe Cornish, *Bitcoin exchanges suffer outages*, FINANCIAL TIMES (Dec. 12, 2017), https://www.ft.com/content/062e5d62-7f31-392e-a571-221e5e6f09fd.

[104] John Detrixhe, *Bitcoin exchanges may not be ready for the big time*, QUARTZ MEDIA (Nov. 15, 2017), https://qz.com/1120991/bitcoin-exchanges-may-not-be-ready-for-the-big-time/.

[105] Pollock, *supra* note 93.

[106] Acheson, *supra* note 22.

[107] McMillan, *supra* note 87.

[108] Michael del Castillo, *North Carolina Senate Approves Bitcoin Bill*, COIN DESK (June 28, 2016, 7:10 PM), https://www.coindesk.com/north-carolina-bitcoin-bill/.

legislature amended the Money Transmitters Act, which effectively broadened the law to encompass virtual currency exchanges, including bitcoin-related businesses.[109] The bill basically allows NC to charge $1,500 for an application to obtain a money transmitter license.[110] If granted, NC then charges an additional $5,000 a year for an "assessment."[111] This latter fee grows if the value of annual transactions exceed $1 million.[112] Moreover, such applicants must maintain a net worth of at least $250,000, and also post either an aggregate amount or a surety bond with the NC Commissioner starting at $150,000.[113] The bond may grow depending on the value of transactions over one year.[114]

Furthermore, other states have also taken action to address virtual currencies.[115] Similar to North Carolina, Washington passed a bill that brings exchanges within the purview of money transmitter laws.[116] Similarly, New Hampshire requires such firms to obtain a money transmitter license while also posting a bond.[117] In New York, officials passed a law requiring certain companies to obtain a business license for activities surrounding virtual currencies.[118] Known as BitLicense, this legislation has been unpopular in the state, as it has been argued that the requirements are too burdensome for small companies to afford.[119] New York has also taken additional action, as the state's Public Service Commission recently cleared the way for charging higher utility bills to virtual currency miners.[120] In a different approach, officials in Texas recently issued cease and desist orders to two virtual currency exchanges, in part for their lack of disclosures and failure to register with a state or federal agency.[121]

B. International Responses to Virtual Currencies

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[109] Money Transmitter Act, H.B. 289 (Mar. 18, 2015), https://www.ncleg.net/Applications/BillLookUp/LoadBillDocument.aspx?SessionCode=2015&DocNum=1327&SeqNum=0.

[110] *Id.*

[111] *Id.*

[112] *Id.*; Castillo, *supra*.

[113] H.B. 289, *supra*; Castillo, *supra*.

[114] *Id.* Interestingly, if virtual currency exchanges are indeed required to register as a federal securities exchange, firms would not have to register as a money transmitting company. Sean McLeod, *Bitcoin: The Utopia or Nightmare of Regulation*, 9 ELON L. REV. 553, 574 (2017).

[115] *Is Bitcoin Legal?*, *supra* note 58.

[116] *Id.*

[117] *Id.*

[118] *Id.*; *see* Maria Terekhova, *New York's BitLicense may see reform*, BUSINESS INSIDER (Feb. 27, 2018, 9:21 AM), http://www.businessinsider.com/new-yorks-bitlicense-may-see-reform-2018-2.

[119] Terekhova, *supra*. While rumbles for reform have been consistent, no such action has been taken.

[120] Evelyn Chang, *Bitcoin mining firms getting pushback from New York state for trying to profit from cheap electricity*, CNBC (Mar. 16, 2018, 2:12 PM), https://www.cnbc.com/2018/03/16/bitcoin-mining-firms-getting-pushback-from-new-york-state.html.

[121] Laussage, *supra* note 84.

International responses to virtual currencies have been equally interesting. Recently, bitcoin prices sprang upwards after news that a G20 meeting, involving the world's largest 20 economies, did not result in any new, coordinated efforts to regulate coins.[122] The European Central Bank and European Union have not taken regulatory action either, but have begun trending towards that direction.[123] Japan appears to be the only country that has designated bitcoin as legal tender, which provides certain protections for consumers and merchants.[124] Japan has also led a crack-down on exchanges, including a required security update in an attempt to deal with hacking.[125] Australia has passed legislation to regulate virtual currency exchanges as well. Moreover, the securities regulation body in Australia has also issued guidance on financial accounting practices involving blockchain and other distributed ledger technology.[126] Finland is leaning towards treating virtual currencies as a commodity.[127] India does not yet have relevant regulations, but has issued warnings about its use, and appears to be heading in the direction of increased oversight.[128] Russia appears to be softening its stance against digital currencies.[129]

Other countries have been less accommodating towards virtual currencies.[130] China recently placed an outright ban on all ICOs, stating that such activity constituted a crime.[131] Moreover, China has also targeted bitcoin exchanges, leading to a number of firms to shut down and cease operations.[132] Ecuador has placed an effective ban on the use of virtual currencies, and curiously plans to implement its own digital tender.[133] Venezuela, too, recently launched its own online currency.[134] Iran appears poised to enact strict regulations for the currencies' use.[135] Italy recently proposed a law that

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[122] *Bitcoin Up Sharply as Fears of Coordinated G20 Regulatory Crackdown Fade*, INVESTING.COM (Mar. 20, 2018), https://www.investing.com/news/cryptocurrency-news/bitcoin-up-sharply-as-fears-of-coordinated-g20-regulatory-crackdown-fade-1351136. Somewhat similarly, the head of the Bank for International Settlements recently called virtual currencies a Ponzi scheme and a bubble. Angela Monaghan, *Bitcoin price falls below $6,000 as banker signals crackdown*, THE GUARDIAN (Feb. 6, 2018, 5:25 AM), https://www.theguardian.com/technology/2018/feb/06/bitcoin-price-crackdown-bis-cryptocurrency.

[123] *Is Bitcoin Legal?*, *supra* note 58.

[124] *Id.*

[125] *Id.*

[126] Francine McKenna, *Here's how the U.S. and the world regulate bitcoin and other cryptocurrencies*, MARKET WATCH (Dec. 28, 2017, 11:19 AM), https://www.marketwatch.com/story/heres-how-the-us-and-the-world-are-regulating-bitcoin-and-cryptocurrency-2017-12-18?mg=prod/accounts-mw.

[127] *Id.*

[128] *Id.*

[129] *Id.*

[130] *Id.*

[131] *Id.*

[132] *Id.*; *Is Bitcoin Legal?*, *supra* note 58.

[133] McKenna, *supra* note 126.

[134] *Id.* Venezuela's virtual currency is purportedly backed by oil, gas, gold, and diamond reserves.

[135] *Id.*

would identify bitcoin users before a transaction may occur.[136] Many countries have appeared to various degrees of banning virtual currencies. Such countries include Bangladesh, Bolivia, Columbia, Indonesia, Kyrgyzstan, Morocco, and Namibia, to name a few.[137]

C. The SEC's Responses to Virtual Currencies

While relatively slow to enter the fray,[138] the slumbering SEC has recently awoken to provide some guidance regarding virtual currency exchanges. As previously mentioned, the SEC has taken steps to regulate ICOs.[139] In July 2017, the SEC issued a report on The DAO, a company that issued virtual currency based on a blockchain system similar to bitcoin.[140] While The DAO's founders told investors the company would be run solely by investors, in reality a select few individuals would determine projects to fund using investor money in order to generate a profit.[141]

The SEC's report applied the "Howey Test" to determine whether The DAO's offering of virtual assets equated to a securities offering.[142] In *Howey*, a case decided in 1946, the United States Supreme Court determined the sale of part of an orange grove constituted an investment contract security.[143] The Supreme Court defined an investment contract as

> a contract, transaction[,] or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party, it being immaterial whether the shares in the enterprise are evidenced by formal certificates or by nominal interests in the physical assets employed in the enterprise.[144]

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[136] *Id.*

[137] *Id.* Interestingly, Egypt's Grand Mufti has condemned virtual currencies under Islamic law. *Is Bitcoin Legal?*, *supra*. While not legally binding, many Egyptians may think twice before engaging in bitcoin, as such transactions could condemn one to eternal damnation. *Id.*

[138] Di Ma, *Taking A Byte Out of Bitcoin Regulation*, 27 ALB. L.J. SCI. & TECH. 1, 15 (2017) (noting the SEC had not taken much substantive action towards virtual currencies and that regulation was needed).

[139] *Cryptocurrencies and ICOs*, *supra* note 1.

[140] *Id.*

[141] *Id.*

[142] *S.E.C. v. W.J. Howey Co.*, 328 U.S. 293 (1946).

[143] *Id.*

[144] *Id.*; Lorena Yashira Gely-Rojas, *Cryptocurrencies and the Uniform Commercial Code: The Curious Case of Bitcoin*, 8 U. PUERTO RICO BUS. L.J. 129, 135 (2017).

In other words, an investment contract is one involving the "investment of money in a common enterprise with a reasonable expectation of profits to be derived primarily from the entrepreneurial or managerial efforts of others."[145]

The SEC stated that The DAO's use of virtual currency by investors constituted an investment contract.[146] Moreover, the investors had a reasonable expectation of profits because The DAO represented that funding it received for its virtual currency would be applied to projects with the intention of generating a profit.[147] Finally, the SEC noted that the founders of The DAO adequately qualified as "entrepreneurial or managerial," and that investors relied on the founders.[148] Part of the problem was the founders described themselves as experts, and a select few from their ranks held nearly all of the control regarding which projects to fund.[149] Investors, on the other hand, had nearly no power to choose which sources to fund.[150]

The SEC ultimately concluded that companies engaging in unregistered ICOs where the offered, digital assets qualified as securities could be violating federal law, and therefore must register.[151] Interestingly, the SEC took no further action against The DAO, and instead issued its report as advisory.[152] However, the SEC has engaged in several regulatory actions toward virtual currency exchanges since The DAO investigation.[153]

For instance, in October 2017 the SEC brought an action against several defendants for defrauding investors during ICOs for two companies.[154] Defendants had represented that these companies were backed by other, more stable investments in order to increase demand for the ICOs.[155] Such investments were later found to have been fabricated, and the defendants were also found to have made unrealistic claims regarding projected investor returns.[156]

Another example involved a legitimate startup company called Munchee, which revolved around crowd-sourcing restaurant reviews.[157] Munchee offered tokens

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[145] *Cryptocurrency 2018: When the law catches up with game-changing technology*, 2018 WL 1094976 (*citing SEC v. W.J. Howey Co.*, 328 U.S. 293, 301 (1946); *SEC v. Edwards*, 540 U.S. 389, 393 (2004); *United Housing Found., Inc. v. Forman*, 421 U.S. 837, 852–53 (1975)).

[146] *Cryptocurrencies and ICOs*, *supra* note 1.

[147] *Id.*

[148] *Id.*

[149] *Id.*

[150] *Id.*

[151] *Id.*

[152] *Cryptocurrency 2018*, *supra* note 145.

[153] *Cryptocurrencies and ICOs*, *supra* note 1.

[154] Frank Chaparro, *The SEC comes down on 2 cryptocurrency-based fundraising schemes*, BUSINESS INSIDER (Sept. 29, 2017, 6:47 PM), http://www.businessinsider.com/recoin-group-foundation-drc-world-ico-sec-fraud-charges-cryptocurrency-2017-9.

[155] *Id.*

[156] *Id.*

[157] *Company Halts ICO After SEC Raises Registration Concerns*, SEC PRESS RELEASE (Dec. 11, 2017), https://www.sec.gov/news/press-release/2017-227.

that users could buy to write reviews for restaurants, use for advertising, or buy and sell items.[158] Munchee attempted to hold an ICO, and explained to investors that, although the tokens did not have a practical use now, their value would increase after the ICO and they could eventually be traded on other markets.[159] This statement drew the attention of the SEC, and the subsequent investigation concluded that Munchee's tokens qualified as securities.[160] In its *Howey* analysis, the SEC stated that investors would use bitcoins or other virtual currency to buy tokens, and reasonably expected to obtain a profit from their investment.[161] Moreover, such profits would be "derived primarily from the entrepreneurial or managerial efforts of" Munchee.[162] Muchee quickly cooperated with the SEC investigation, and ultimately agreed to return investor funds.[163]

Yet another example in January 2018 involved a currency exchange advertising itself as a "decentralized bank."[164] AriseBank held an ICO and heavily targeted social media users, using a broad array of advertising tactics (including celebrity endorsements) to raise $1 billion in capital.[165] The SEC subsequently obtained a court order halting this ICO by alleging it was fraudulent.[166]

Furthermore, the SEC recently publicized a new cyber unit.[167] In part, this unit was formed to examine ICOs more closely and analyze whether such offerings constitute an offering of securities.[168] The SEC's approach to ICOs is currently being litigated in federal court.[169] And the SEC appears poised to increase regulation further for virtual exchanges.

In early March 2018, the SEC apparently took another step towards tightening regulation by releasing a statement announcing that exchanges dealing in certain

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[158] *Id.*

[159] *Id.*

[160] *Id.*

[161] *In re Munchie Inc.*, No. 3-18304 at pp. 31–32 (S.E.C., Dec. 11, 2017) (ordering Munchie to cease and desist ICO proceedings), https://www.sec.gov/litigation/admin/2017/33-10445.pdf.

[162] *Id.* at p. 33.

[163] SEC PRESS RELEASE, *supra* note 157.

[164] *SEC Halts Alleged Initial Coin Offering Scam*, SEC PRESS RELEASE (Jan. 30, 2018), https://www.sec.gov/news/press-release/2018-8.

[165] *Id.*

[166] *Id.* Such actions continue against those who qualify but fail to register as a federal securities exchange. *SEC Charges Former Bitcoin-Denominated Exchange and Operator With Fraud*, SEC PRESS RELEASE (Feb. 21, 2018), https://www.sec.gov/news/press-release/2018-23.

[167] *SEC Announces Enforcement Initiatives to Combat Cyber-Based Threats and Protect Retail Investors*, SEC PRESS RELEASE (Sept. 25, 2017), https://www.sec.gov/news/press-release/2017-176.

[168] *Id.*

[169] Patricia Hurtado, *A Major Court Case Will Decide Whether Bitcoin Can Be Regulated Like Stocks and Bonds*, TIME (Jan. 29, 2018), http://time.com/money/5123510/are-cryptocurrencies-and-icos-scams-the-government-will-soon-decide/.

digital assets must be registered with the SEC as a national securities exchange.[170] In its statement, the SEC stated it "has concerns that many online trading platforms appear to investors as SEC-registered and regulated marketplaces when they are not."[171] The SEC specifically noted that "[m]any platforms refer to themselves as 'exchanges,' which can give the misimpression to investors that they are regulated or meet the regulatory standards of a national securities exchange."[172] However, at least some speculation insists this action will not target bitcoin, but will instead focus on other types of virtual currencies.[173]

Nonetheless, the SEC should not stop there. Rather, this paper contends that the SEC should treat all virtual currency exchanges that are substantially similar in a like manner. As detailed above, bitcoin poses problems that are no less severe or unique than the ones presented by other forms of currency exchanges that the SEC currently regulates. Therefore, this paper argues that the SEC should require bitcoin and all substantially similar currency exchanges to be registered as a federal securities exchange.

III. BITCOIN EXCHANGES SHOULD BE REGISTERED AS A FEDERAL SECURITIES EXCHANGE

Virtual exchanges should be required to register federally, as at least some of the previously-discussed problems associated with bitcoin would be remedied if these exchanges were required to register as federal securities exchanges. Moreover, the SEC's recent activity directed towards the similar area of ICOs increases the odds of further regulating coin exchanges. As discussed, the SEC has begun regulating coin exchanges when these exchanges conduct an offering of securities. Interpreting the definition of a "security" to include all virtual currencies, and therefore increasing the regulation of all coin exchanges who deal in these currencies, would not be an unreasonable step on a path already taken.[174] While fraud and other crimes still occur with registered federal securities exchanges, such a designation for virtual exchanges would mark a drastic improvement to the current situation of virtual currencies, where regulation is sorely needed.

A. Rules and Regulations that Federal Securities Exchanges Must Follow

[170] Thomas Franck, *Bitcoin just tanked below $10,000 after SEC says crypto exchanges must register with agency*, CNBC (Mar. 7, 2018, 7:19 PM), https://www.cnbc.com/2018/03/07/bitcoin-just-tanked-below-10000-after-sec-says-crypto-exchanges-must-register-with-agency.html.

[171] *Id.*

[172] *Id.*

[173] *Id.*

[174] Franck, *supra* (explaining that certain exchanges must register with the SEC).

The regulations attached to a federally registered securities exchange are extensive.[175] The two main laws that such exchanges are subjected to include the Securities Act of 1933 ("1933 Act"), and the Securities Exchange Act of 1934 ("1934 Act").[176] The 1933 Act's overarching purpose is to require companies to provide investors with financial and other important information on securities for sale, while also prohibiting fraud.[177] Such information ideally provides investors with an accurate portrayal of the security so that they can make reasonable judgments on whether to invest.[178] To register under the 1933 Act, appropriate companies must provide "a description of the company's properties and business; a description of the security to be offered for sale; information about the management of the company; and financial statements certified by independent accountants."[179]

The 1934 Act created the SEC, and in part allows it to "register, regulate, and oversee brokerage firms."[180] Moreover, the 1934 act gives the SEC authority to punish those found to be in violation of securities laws.[181] As part of these powers, regulated firms are required to periodically submit reports on financial information and other substantive materials.[182] For exchanges, the SEC requires such companies to create and maintain rules that punish members participating in prohibited conduct. Such rules must also "establish[] measures to ensure market integrity and investor protection."[183]

SEC oversight of virtual exchange currencies would improve investor protections while simultaneously decreasing the likelihood of white collar crime and instability of the currency in general. Virtual exchanges would be forced to maintain detailed accounting records and provide updated information on the financial status of the corporation.[184] Such activity would help guard against the illegal abuses of these exchanges' management.[185]

Moreover, similar to action recently taken in Japan, the SEC could require virtual currency exchanges to update and strengthen security protocols to lessen both the incidents and magnitude of hacking.[186] As previously discussed, incidents of hacking attempts seem to be rampant for these exchanges.[187] It would certainly make sense that such exchanges have an increased target on their backs. Not only do exchanges house a virtually untraceable currency, they also operate on the same

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[175] *The Laws that Govern the Securities Industry*, SEC, https://www.sec.gov/answers/about-lawsshtml.html.

[176] *Id.*

[177] *Id.*

[178] *Id.*

[179] *Id.*

[180] *Id.*

[181] *Id.*

[182] *Id.*

[183] *Id.*

[184] *Id.*

[185] *See supra* notes 85–105 and accompanying text.

[186] *Is Bitcoin Legal?*, *supra* note 58.

[187] *See supra* notes 85–105 and accompanying text.

playing field as those most equipped to perform a heist.[188] Unlike cash or other virtual transactions, bitcoin represents a means of exchanging goods and services anonymously.[189] It therefore comes as no surprise that the perpetrators of such hacks often escape cleanly.[190] A required, updated security system is needed for many of these exchanges, and the SEC could take such action were it to require virtual exchanges to comply with federal securities laws.[191]

These regulations would likely reduce a litany of problems surrounding bitcoin, but would also bring challenges when implemented. Nonetheless, the benefits of requiring coin exchanges to register as federal securities exchanges outweigh the costs, and should therefore be enacted.

B. Potential Challenges that SEC Regulations Would Pose

Additional SEC regulations would bring with them a higher burden of compliance, likely causing many bitcoin exchanges to cease operations. Such a move could further strain an already strained system, in that many exchanges are already struggling to keep up with the demands of rapid growth in a short period of time.[192] Moreover, many in the virtual currency industry would likely push back on the notion of increased restrictions for bitcoins, and would argue that such action chills the use of coins in general.[193]

Furthermore, one could argue that SEC regulations would not stymie the most egregious offenders of the problems surrounding virtual exchanges. Many of the problems outlined above, and many other not discussed, occurred in exchanges located in other countries. While such regulations would be an improvement in the United States, such action might simply cause many American exchanges to cease operations and shut down shop, or simply move said shop offshore to evade these SEC regulations. Because bitcoin is nearly ubiquitous, easily transferrable, and occurs entirely online, many users would likely not feel more than a slight inconvenience of having to use an exchange that is located outside the borders of the United States. Indeed, as there is no need to ever visit a physical storefront, such as with a bank, there

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[188] *See* Swati Khandelwal, *How Hackers Cash Out Thousands of Bitcoins Received in Ransomware Attacks*, THE HACKER NEWS (July 27, 2017), https://thehackernews.com/2017/07/cashout-bitcoin-ransomware.html; Allana Akhtar, *The $70 Million Bitcoin Hack Was the 4th Largest Breach in Cryptocurrency History*, TIME MONEY (Dec. 8, 2017), http://time.com/money/5056652/the-70-million-bitcoin-hack-was-the-4th-largest-breach-in-cryptocurrency-history/; Laura Shin, *Hackers Have Stolen Millions of Dollars in Bitcoin – Using Only Phone Numbers*, FORBES (Dec. 20, 2016, 1:59 PM), https://www.forbes.com/sites/laurashin/2016/12/20/hackers-have-stolen-millions-of-dollars-in-bitcoin-using-only-phone-numbers/#4adb732d38ba.

[189] Ajello, *supra* note 45.

[190] *Supra* note 188.

[191] *See supra* notes 85–105 and accompanying text.

[192] Kelso, *supra* note 98.

[193] *See* Terekhova, *supra* note 118.

would be little to no downside to simply switch to an international exchange. Many bitcoin users may in fact prefer international coin exchanges, as they would be subject to less regulation than their U.S.-regulated counterparts. All the while, international bitcoin exchanges could continue to participate in negligent and potentially criminal activity.

Accordingly, international exchanges could actually receive a benefit from SEC regulations. Many U.S. exchanges would likely cease operating, and other U.S. exchanges would be saddled with the additional costs of complying with rigorous standards outlined by the SEC. Therefore, international exchanges could in fact obtain a competitive advantage and a better position to exploit criminal gains with the application of further regulation by the SEC.

However, even if international exchanges did receive some sort of benefit of reduced competition from U.S. exchanges, it would likely be short-lived. Many countries are currently moving towards increased regulations for virtual currencies.[194] As virtual currency regulations increase across the globe, many businesses may simply find it cheaper to abide by these applicable regulations instead of continually moving shop to less regulated countries. Furthermore, if the SEC adopted the recommendations of this paper, then certain foreign coin could be held liable through the Foreign Corrupt Practices Act ("FCPA").[195] While the FCPA would only apply to those foreign coin exchanges with the requisite amount of contacts with the U.S., its provisions would require such exchanges to follow specific accounting practices and avoid certain, statutorily-defined corrupt behavior.[196] The U.S. Department of Justice could bring an FCPA action against a foreign exchange who violates these provisions.[197] The SEC's regulations would therefore be poised to accomplish more good than harm. Despite the potential obstacles, the SEC should determine that bitcoins constitute a security as an investment contract under the *Howey* test.[198]

C. How the SEC Could Require Virtual Exchanges to Register as Federal Securities Exchanges

As previously discussed, the SEC has begun regulating coin exchanges in circumstances regarding an offering of securities. To extend such regulation to all coin exchanges, the SEC would face challenges in making the final plunge under the current legal framework.

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[194] *Is Bitcoin Legal?*, *supra* note 58.

[195] *Foreign Corrupt Practices Act*, DOJ, https://www.justice.gov/criminal-fraud/foreign-corrupt-practices-act. Although the FCPA is largely outside the scope of this paper, it would apply to any foreign corporation required to file reports under the 1934 Act.

[196] *Id.*; 15 U.S.C. §§ 78dd-1; 15 U.S.C. § 78m.

[197] *Foreign Corrupt Practice Act*, *supra*.

[198] *See Howey*, 328 U.S. 293 (1946).

One path to justify the registration of virtual exchanges would be the "investment contract" security designation outlined in *Howey*.[199] *Howey* established that all investment contract securities must meet three elements: (1) money must be invested; (2) in a common enterprise; (3) with a reasonable expectation of profits from others.[200] In the context of bitcoin, the analysis of the first prong would likely be satisfied, as bitcoins are recognized as having value.[201] The second and third prongs, however, could prove problematic.

Federal courts have previously examined the second prong, the commonality of an enterprise, both vertically and horizontally. Horizontal commonality compares risk among all investors to determine if they are similarly situated.[202] Vertical commonality compares the relationship between investors and promoters, and analyzes how much of an impact profits gained by the investors are affected by the efforts of the promoters.[203]

One argument against horizontal commonality is that bitcoin investors fall into different categories, each with their own risk. These categories may be generally described as short-term investors, who use bitcoins as a medium of exchange, and long-term investors, who use bitcoins as an investment opportunity.[204] However, such an argument regarding short-versus-long-term investors could be made for any traditional stock and is thus not particularly problematic.

For example, there are likely a broad number of motivations for those who have purchased stock from Google, ranging from an established mutual fund manager who plans to hold it for thirty years, to an individual investor hoping to capitalize on recent movement in the market and make a quick profit. While both parties have different motivations, under the traditional analysis of the *Howey* test these investors would meet the requirements for horizontal commonality.[205] The distinction of holding bitcoins in the short-term to use as currency is not a substantive one. Much like the short-term Google investor, the short-term bitcoin holder is still subject to the same risks as all others who made that investment. The fact that a short-term Google investor would sell stock for cash, while the short-term bitcoin investor would trade coins for goods or services, would likely not fundamentally alter the outcome of a *Howey* analysis. Although virtual currencies offer unique challenges to current precedent, horizontal commonality should be viewed more as a hill than a mountain.

Vertical commonality, however, could be seen as more geographically imposing than a mere hill. It would be difficult to identify a "promoter" whose efforts are tied to investors' profits. As previously discussed, bitcoin is a peer-to-peer network

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[199] *Id.*

[200] *Howey*, 328 U.S. at 298–99; Gely-Rojas, *supra* note 144 at 134.

[201] Mitchell Prentis, *Digital Metal: Regulating Bitcoin as a Commodity*, 66 CASE W. RES. L.R. 609, 623 (2015).

[202] *Id.* at 624; Gely-Rojas, *supra*.

[203] Prentis, *supra*; Gely-Rojas, *supra*.

[204] Gely-Rojas, *supra* at 144.

[205] *Id.*

with a system that operates as a public, general ledger. By definition there does not appear to be any readily available promoters to identify. One possible solution could be that bitcoin miners, or other software developers and programmers, could function as promoters.[206] However, such an argument would likely be tenuous, as these individuals' efforts do not seem related to investors.[207] Moreover, vertical commonality across all bitcoin investors appears to be a different scenario than the SEC's targets to date. In each of those cases, the SEC goes after a specific exchange that generally has promoters, managers, or founders, and uses virtual currency more as an investment tool than simply as a currency.[208] Accordingly, any attempt to meet the vertical commonality requirement would likely require a broader application of *Howey* by the SEC.[209]

The third prong regarding the reasonable expectations of profits from others could be similarly vexing.[210] In an argument related to horizontal commonality, investors hold bitcoins for a number of reasons. Short-term investors may hope their coins appreciate, but like those holding cash, do not expect them to.[211] Moreover, the argument goes, it would be unclear whom exactly such investors are relying on to generate profits, and how the broad gaggle of bitcoin-related projects and uses come together to improve all investors.[212] While this argument makes valid points, it also has several flaws.

For one, bitcoin users probably have a reasonable expectation of profits, as bitcoin is today used more as an investment opportunity than a currency. As discussed above, cash and bitcoins are similar in many respects, but also different in other key areas related to investments. The ratio of bitcoin holders who purchased coins as an investment versus a means of electronic payment is drastically higher than individuals who obtain cash for investment versus a means of payment. In other words, while bitcoin and cash can be used both as an investment or a medium of exchange, bitcoin currently operates more as an investment vehicle than a true currency, while cash operates more as a currency than an investment vehicle.[213] In fact, due to inflation, it is well-known that cash under one's mattress consistently loses value over time, while it is equally well-known that an investment in bitcoin may appreciate or depreciate wildly in the span of a day. Moreover, one simply needs to examine the disparate

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[206] Prentis *supra* at 624–25.

[207] *Id.* Indeed, it seems as though such miners and programmers are concerned with the profits only they themselves can make.

[208] *See supra* notes 138–73 and accompanying text.

[209] It may be necessary to expand the interpretation of the law. As noted, the *Howey* decision is from 1946. Ten years ago, this paper would have been no more than a discussion on a niche topic, known to very few in the public. The depth of the issues surrounding virtual currencies were likely not fully contemplated even then–and much less so over seventy years ago when *Howey* was decided.

[210] Gely-Rojas, *supra* note 144 at 135–36.

[211] Prentis, *supra* at 625.

[212] *Id.*

[213] This article does not explore all investment opportunities into U.S. currency.

number of places that accept bitcoin as opposed to those that accept cash, as well as the relatively low demand for retailers to accept bitcoin in general, to see that any such metaphor is misplaced.[214]

Similarly, broad generalizations of investor intent could go both ways. As bitcoin is seen as an investment opportunity, the SEC could find justification that most purchasers in fact bought these coins at least in part for an investment. Coin holders could indeed have the dual purpose of using bitcoins for transactions, while also maintaining coins for investment to obtain a profit.

Lastly, identifying a group of individuals upon which investors rely for profits would be challenging, in part because of the framework of *Howey*. The Supreme Court in *Howey* likely did not foresee the possibility of a peer-to-peer investment opportunity where no small, selective group of managers, board members, founders, promoters, or others existed to labor for profits. This third prong is another area in which the SEC would likely have to broaden its interpretation of a "security" to satisfy the *Howey* test. While finding bitcoin to be a security under *Howey* would likely require a broadened interpretation under precedent, it would nonetheless provide effective regulation in an urgently needed area.

IV. CONCLUSION

Bitcoin and other virtual currencies have presented a unique set of challenges and problems for governments, agencies, law enforcement, investors, and individual users across the globe. Like many technologies that have rapidly emerged, bitcoin has enabled a spectrum of criminal activity in a host of new ways. Enabling an easier method for money laundering, fraud, drug trades, child pornography, and other crimes seems a steep price to pay for an additional level of anonymity with an unregulated, virtual currency.

Moreover, until relatively recently, regulation and oversight was thoroughly lagging, both internationally and particularly in the United States. The law generally lags behind technological innovation, and the emergence of virtual currencies have been no exception. However, countries across the globe are finally attempting to address digital currencies in vastly different ways. The United States has also increased the speed of its regulatory prowess, and has already made gains in some areas surrounding bitcoin.

The SEC could continue to meaningfully improve the situation surrounding virtual currencies if it required bitcoin and other substantially similar currency exchanges to register as federal securities exchanges. The benefits of such regulations would mark a dramatic improvement to the current issues facing these exchanges. Exchanges would be required to maintain better accounting records and financial information, which would lead to a reduced potential for criminal activity and also increase investor confidence in bitcoin. Moreover, such oversight would likely

[214] *See 2017 List of Big Companies that Accept Bitcoin & Cryptocurrencies*, *supra* note 24.

improve the security of these exchanges, and in turn increase confidence in the stability of virtual currencies. While regulation in this manner would likely require a fair amount of innovative legal maneuvering, this solution should not be discarded simply because it does not fit snugly within the framework of a seventy-two year old case. Instead, the SEC should take this opportunity to embrace technological progression and advance meaningful development towards regulating virtual currencies.