

TAKING A BYTE OUT OF BITCOIN REGULATION

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INTRODUCTION

Commerce on the Internet has come to rely almost exclusively on financial institutions serving as trusted third parties to process electronic payments. While the system works well enough for most transactions, it still suffers from the inherent weakness of the trust based model. . . . The cost of mediation increases transaction costs, limiting the minimum practical transaction size and cutting off the

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possibility for small casual transactions, and there is a broader cost in the loss of ability to make non-reversible payments for non-reversible services. . . . A certain percentage of fraud is accepted as unavoidable. These costs and payment uncertainties can be avoided in person by using physical currency, but no mechanism exists to make payments over a communications channel without a trusted third party.

. . . .

What is needed is 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 of a trusted third party.²

This excerpt appeared in a 2009 manifesto that was distributed by a cryptography mailing list.³ The manifesto set forth a peer-to-peer electronic cash system where consumers can trade with each other without the interference of a third party intermediary such as a bank.⁴ It detailed technical specifications of how to generate, track, and protect the use of a new virtual currency, defined as “an electronic coin [produced by] a chain of digital signatures.”⁵ This currency has now been given the moniker Bitcoin.⁶

The history of Bitcoin is cloaked in mystery—the creator (or creators⁷) purportedly used a pseudonym in his communications and was rumored to have left the project in 2010⁸—but it is hardly novel. Since the late 1990s, many attempts at popularizing virtual money have been made including Flooz, Litcoin, GeistGeld, SolidCoin, BBQcoin, and most recently, Ripple or “Bitcoin 2.0.”⁹ However, none of these has achieved the mainstream acceptance of Bitcoin.¹⁰

Currently, there is no official U.S. regulation of Bitcoin. The

² Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN, <http://bitcoin.org/bitcoin.pdf> (last visited Aug. 21, 2013).

³ *Who Created Bitcoin?, Frequently Asked Questions*, BITCOIN, <http://bitcoin.org/en/faq> (last visited Aug. 21, 2013).

⁴ Nakamoto, *supra* note 2, at 1.

⁵ *Id.* at 2.

⁶ Bitcoin is both a currency and a protocol. *Help: Introduction*, BITCOIN WIKI, https://en.bitcoin.it/wiki/Introduction#Capitalization_.2F_Nomenclature (last visited Nov. 16, 2013). For this paper, the capitalized version will be used to denote both the currency and the protocol. Throughout extensive research, the media has not shown any consistency in the capitalization.

⁷ In the manifesto, the author used the plural “we.” *Id.*; Peter Cohan, *Can Bitcoin Survive, Is it Legal?*, FORBES (June 28, 2011), <http://www.forbes.com/sites/petercohan/2011/06/28/can-bitcoin-survive-is-it-legal/>.

⁸ *Who Created Bitcoin?*, *supra* note 3.

⁹ Andrew R. Johnson, *Promise and Peril of Virtual Currencies*, WALL ST. J. (May 23, 2013), <http://online.wsj.com/article/SB10001424127887324125504578511580913892620.html>.

¹⁰ *Id.*

government, both local and federal, is seeking answers to the bevy of legal questions raised by the possible legitimization of the currency.¹¹ Research shows that the strength of any economy is based on the trust that exists in its economic transactions.¹² A peer-to-peer model that completely eliminates trust removes itself from any historical context and presents new challenges to the present day regulatory scheme. How should the government regulate this innovative financial concept that defies the traditional notions of money?

In this article, Part I will introduce what Bitcoin is and explain its technical and practical aspects including a history of the more notable controversies it has caused since its inception. Part II will examine some of the problems faced by Bitcoin users and how the different responses from various federal and state agencies could have potentially legitimized and damaged the currency at the same time. Part III will propose regulatory approaches to establish a new framework that would balance the need for government oversight with the essential philosophies behind Bitcoin. Part IV will review New York's first attempt at regulating Bitcoin in the

¹¹ See *infra* Part II. See also, e.g., David D. Stewart and Stephanie Soong Johnston, *Digital Currency: A New Worry for Tax Administrators?*, TAX ANALYSTS (Nov. 7, 2012), <http://www.taxanalysts.com/www/features.nsf/Articles/C1A7ED502DD2B84685257AAF0056A2A2> (discussing the government's potential role with bitcoin regulation). Some of the questions raised include: How would employers who pay employees with Bitcoins file W-2's? Has a realization event occurred in a Bitcoin transaction? How to capture sales taxes if the purchasers are shielded by anonymity? *Id.*; *Some Things You Need to Know*, BITCOIN, <http://bitcoin.org/en/you-need-to-know> (last visited Aug. 22, 2013). Bitcoin advocates are surprisingly willing to cooperate. Eric Markowitz, *Bitcoin: More Regulation, More Opportunity?*, INC.COM (Aug. 13, 2013), <http://www.inc.com/eric-markowitz/as-bitcoin-grows-regulators-need-to-step-up.html/1>. Bitcoin investor Cameron Winklevoss said: "In the Bitcoin world, we love regulation. I don't want to facilitate bad uses of money as much as anybody else." *Id.* This could be attributed to a desire on the part of the investors to increase the currency's popularity, thus increasing their own returns. *Id.* ("As the use of Bitcoin grows, the companies that stand to profit off its legitimization have recognized that regulation—usually the dirtiest of words among entrepreneurs—might actually be the most effective route to the long-term success of their businesses.").

¹² Paul J. Zak & Stephen Knack, *Trust and Growth*, 111 ECON. J. 295, April 2001, at 295. "Trust enables people to do business with each other. Doing business is what creates wealth." Tim Harford, *The Economics of Trust*, FORBES (July 21, 2010), http://www.forbes.com/2006/09/22/trust-economy-markets-tech_cx_th_06trust_0925harford.html. Steve Knack, a senior economist at the World Bank observed, "If you take a broad enough definition of trust, then it would explain basically all the difference between the per capita income of the United States and Somalia." *Id.*

United States.

I. WHAT IS BITCOIN?

A. Introduction to Bitcoin

There are two main methods of acquiring a Bitcoin—one primary, and one secondary. The primary method involves actual creation of a Bitcoin via a process known as “mining” while the secondary method involves purchase through an exchange.¹³ The algorithm behind the creation or mining of a Bitcoin is complex, but the manifesto and various sources give a simple explanation.¹⁴ In order to mine for Bitcoins, users employ special computer software to solve math problems.¹⁵ Every time a problem is solved, the users earn a certain number of Bitcoins.¹⁶

The alternative method of acquiring Bitcoins is via trade.¹⁷ Mt. Gox was one of the oldest Bitcoin trading platforms on the web, allowing users to buy or sell Bitcoins with many different currencies.¹⁸ Acquired Bitcoins are stored in what is called an “e-wallet”—a virtual account that gives users ownership of web addresses to send and receive Bitcoins.¹⁹ Popular e-wallet services include MultiBit and Bitcoin Wallet.²⁰

¹³ See *What is Bitcoin Mining?, Everything You Need to Know About Bitcoin Mining*, BITCOIN MINING.COM, <http://www.bitcoinmining.com/> (last visited Nov. 3, 2015) (explaining how bit mining occurs); see also Adam Dachis, *What Is Bitcoin and What Can I Do With It?*, ASK LIFEHACKER (Mar. 26, 2013), <http://life hacker.com/5991523/what-is-bitcoin-and-what-can-i-do-with-it> (explaining the acquisition of bitcoins through trading)[hereinafter *What is Bitcoin Mining?*].

¹⁴ See, e.g., Nakamoto, *supra* note 2, at 2.

¹⁵ *What is Bitcoin Mining?*, *supra* note 13.

¹⁶ *Id.*

¹⁷ See Adam Dachis, *What Is Bitcoin and What Can I Do With It?*, ASK LIFEHACKER (Mar. 26, 2013), <http://lifehacker.com/5991523/what-is-bitcoin-and-what-can-i-do-with-it> (“The mining process involves running software that performs complex mathematical equations for which you’re rewarded a very small portion of a Bitcoin. . . . [while] [p]urchasing Bitcoin takes less effort than mining it. . . .”).

¹⁸ See Reuben Grinberg, *Bitcoin: An Innovative Alternative Digital Currency*, 4 HASTINGS SCI. & TECH. L.J. 159, 166 (2012) (stating the types of currencies used and describing Mt. Gox as the “most popular exchange”).

¹⁹ See *How does Bitcoin Work?*, BITCOIN, <http://bitcoin.org/en/how-it-works> (last visited Aug. 21, 2013) (explaining that upon downloading a wallet, a Bitcoin address will be created).

²⁰ See *Choose Your Bitcoin Wallet*, BITCOIN, <https://bitcoin.org/en/choose-your-wallet> (last visited Nov. 8, 2015) (listing several options for a wallet); see also *Why Choose MultiBit HD?*, MULTIBIT, <https://multibit.org> (last visited Nov. 19, 2013) (explaining the benefits of MultiBit and linking to the downloadable application); BITCOIN WALLET, <https://play.google.com/store/apps/details?id=de.schildbach.wal>

Once a user has an “e-wallet” stocked with Bitcoins, she or he is ready to join an online community that hosts as many as 60,000 daily active participants and start transacting.²¹ Each Bitcoin contains a public and a private key.²² The public key consists of a string of letters and numbers, varying from twenty-seven to thirty-four characters, and it tracks each transaction on an open transaction log to prevent duplicate use of each Bitcoin.²³ The private key held by the users authorizes each transaction.²⁴

The only two rules in this virtual economy are that there is an approximate maximum supply of 21 million Bitcoins and each Bitcoin may be divisible by at least eight decimal places.²⁵ Bitcoin enthusiasts like this set up because it is anonymous, decentralized – which leads to easier and less costly transfers, and hard to counterfeit.²⁶ That is not to say that Bitcoin is perfect. There is extreme volatility associated with the currency.²⁷ In the four years of its existence, its value rapidly shifted from less than one cent to more than \$700.²⁸

Despite its pros and cons, the popularity of Bitcoin cannot be denied. As of April 2013, millions of U.S. dollars worth of Bitcoins

let&hl=en (last visited Nov. 19, 2013) (describing Bitcoin Wallet and including the downloadable application for the wallet).

²¹ Derek A. Dion, Note, *I'll Gladly Trade You Two Bits on Tuesday for a Byte Today: Bitcoin, Regulating Fraud In The E-economy of Hacker-Cash*, 2013 U. ILL. J.L. TECH. & POL'Y 165, 169 (2013) (citation omitted).

²² *Id.* at 167–68.

²³ *Id.* at 168.

²⁴ *Id.*

²⁵ *Won't the Finite Amount of Bitcoins Be a Limitation?, Frequently Asked Questions*, BITCOIN, <http://bitcoin.org/en/faq> (last visited Nov. 8, 2015).

²⁶ NerdWallet, *Betting on the Bitcoin Buzz*, NASDAQ (Sept. 20, 2013), <http://www.nasdaq.com/article/betting-on-the-bitcoin-buzz-cm279095>.

²⁷ *See id.* (describing fluctuations in value ranging from a penny to over \$220 USD).

²⁸ *Id.*; see Saumya Vaishampayan, *Bitcoin Pushes Above \$400 for New Record High*, MARKET WATCH (Nov. 13, 2013) <http://www.marketwatch.com/story/bitcoin-pushes-above-400-for-new-record-high-2013-11-13> (stating that the value broke \$400 U.S.D); see Ana Komnenic, *Bitcoin Passes \$500 Mark for the First Time*, MINING.COM (Nov. 17, 2013), <http://www.mining.com/bitcoin-passes-500-mark-for-the-first-time-57546/> (describing how the value of Bitcoin climbed from \$400 to \$500 in a week's time and marking this as a fifty fold increase in a twelve month period). Then upon the news that the government was looking favorably at Bitcoin, the currency reached another record high on November 18, 2013. Delphine Strauss and Stephen Foley, *Bitcoin Hits \$785 with a Little Help from Bernanke*, FIN. TIMES (Nov. 18, 2013), <http://www.ft.com/intl/cms/s/0/6c5b941c-5052-11e3-9f0d-00144feabdc0.html#axzz2l6NrUk3P>. See generally Radoslav Albrecht, *Bitcoin Volatility – The 4 Perspectives*, BITCOIN MAG. (Aug. 27, 2013), <http://bitcoinmagazine.com/6543/bitcoin-volatility-analysis/>, for a further discussion in this area.

are traded daily in approximately 50,000 transactions,²⁹ and the total value of Bitcoins in circulation is estimated to exceed \$1.3 billion.³⁰ According to Bitpay, an online service that helps merchants accept virtual payments, more than 1,000 merchants had signed up by September 2012.³¹ Merchants that accept Bitcoins include casinos, web hosting services, and online companies that provide digital downloads.³²

Internationally, Bitcoin has encountered varying levels of acceptance. Kenya is currently developing a project that links Bitcoin with M-Pesa, a mobile payments system.³³ In late July 2013, Thailand declared virtual currency illegal and banned all trading of Bitcoins.³⁴ The first Bitcoin automatic teller machine was placed into operation in Vancouver, Canada, in November 2013.³⁵ A new Bitcoin exchange launched around the same time in

²⁹ *VFC Intelligence Bulletin 13-02: TOR, Bitcoins, Silk Road, and the Hidden Internet*, VIRGINIA FUSION CENTER, <https://info.publicintelligence.net/VFC-Tor.pdf>.

³⁰ *Id.*; *See Is Bitcoin Really Used by People? Frequently Asked Questions*, BITCOIN, <http://bitcoin.org/en/faq> (last visited Nov. 8, 2015). (discussing that the value of all Bitcoins in circulation as of April 2013 surpassed US \$1.5 billion).

³¹ Brian Browdie, *BitPay Signs 1,000 Merchants to Accept Bitcoin Payments*, AM. BANKER (Sept. 11, 2012), http://www.americanbanker.com/issues/177_176/bitpay-signs-1000-merchants-to-accept-bitcoin-payments-1052538-1.html.

³² *See* Dion, *supra* note 21 (describing how Bitcoins are used by many types of merchants from casinos to charitable organizations).

³³ Jeremy Kirk, *In Kenya, Bitcoin Linked to Popular Mobile Payment System*, NEWS, CIO (July 11, 2013), http://www.cio.com/article/736202/In_Kenya_Bitcoin_linked_to_popular_mobile_payment_system.

³⁴ *Virtual Currency Bitcoin Blocked in Thailand*, YAHOO! FINANCE (July 30, 2013), <http://finance.yahoo.com/news/virtual-currency-bitcoin-blocked-thailand-073205127.html> (“[I]t’s illegal to trade [B]itcoins, move them in or out of the country, or use them to buy or sell goods or services.”). Although no official law prohibits Bitcoins, senior members of the Foreign Exchange Administration and Policy Department of the Bank of Thailand have the authority to make this type of decisions. *Roles and Responsibilities of the Bank of Thailand, About BOT, Roles & History*, BANK OF THAILAND, <http://www.bot.or.th/English/AboutBOT/index/Pages/RolesAndResponsibilities.aspx> (last visited Nov. 3, 2013); *Trading Suspended Due to Bank of Thailand Advisement*, BITCOIN: BUY, SELL EXCHANGE BITCOINS IN THAILAND (July 29, 2013), <https://bitcoin.co.th/trading-suspended-due-to-bank-of-thailand-advisement/?bettertitle>. Bitcoin followers fear that China may also follow suit. *Bitcoin: What is it and How Does it Work?* AAT COMMENT (Oct. 30, 2013), <http://www.aatcomment.org.uk/aat-view/front-page-latest-featured-articles/bitcoin-what-is-it-how-it-works>.

³⁵ It traded \$100,000 CAD in its first week in Canada. Matthew Robinson, *\$100K Traded through Vancouver’s Bitcoin ATM in One Week*, VANCOUVER SUN (Nov. 10, 2013), <http://o.canada.com/technology/100k-traded-through-vancouvers-bitcoin-atm-in-one-week/>. The Financial Transactions and Reports Analysis Centre of Canada has assured Bitcoin businesses via a letter that money transmitter laws do not apply to them. Jerry Brito, *US Regulations Are*

the United Kingdom but it is not available to American clients due to “diverging regulatory approaches.”³⁶ To date, Germany is the only country to legally recognize Bitcoin as a “unit of account” and “private money.”³⁷

B. Positive and Negative Applications of the Bitcoin Technology

For an audience lacking technological savvy, it is easier to understand Bitcoin through its usage. The peer-to-peer model means that consumers and merchants may make exchanges without the facilitation of third party intermediaries such as banks, credit cards, or online payment systems.³⁸ These transactions run the gamut between wholly ordinary to controversial.³⁹ Some organizations like the Bitcoin Foundation, a

Hampering Bitcoin's Growth, THE GUARDIAN (Nov. 18, 2013), <http://www.theguardian.com/commentisfree/2013/nov/18/bitcoin-senate-hearings-regulation>.

An actual copy of this letter is difficult to locate but a relevant portion of it states: Although your entity remits and/or transmits funds when you buy and sell [B]itcoins, it is simply a corollary of your actual business of buying and selling virtual currency. Therefore, you do not have to register your entity with us. Should your business model change in the future to expand beyond buying and selling [B]itcoins, we appreciate you contacting us in order for us to review and reassess our interpretation to reflect these new facts.

Matthew Burgoyne, *All You Need to Know About Federal Bitcoin Law in Canada*, COINDESK (Oct. 23, 2013), <http://www.coindesk.com/federal-bitcoin-law-canada/>. It is important to note that the Canada Revenue Agency (“CRA”) declared that Bitcoins would be subject to paragraph three of the CRA’s Interpretation Bulletin IT-490 and paragraphs nine through 32 of the CRA’s section IT-479R stating that Bitcoin users are subject to income and investment taxes. *IT-479R, Income Tax Act: Transactions in Securities*, CANADA REVENUE AGENCY, <http://www.cra-arc.gc.ca/E/pub/tp/it479r/it479r-e.html>; *IT-490, Income Tax Act: Barter Transactions*, CANADA REVENUE AGENCY, <http://www.cra-arc.gc.ca/E/pub/tp/it490/it490-e.html>; *Revenue Canada Says BitCoins Aren't Tax Exempt*, CBC NEWS (Apr. 26, 2013, 5:02 PM), <http://www.cbc.ca/news/business/revenue-canada-says-bitcoins-aren-t-tax-exempt-1.1395075>.

³⁶ Stephen Foley, *New UK Bitcoin Exchange to bar US Clients*, FT.COM (Oct. 29, 2013), <http://www.ft.com/intl/cms/s/0/8223d270-3fe3-11e3-a890-00144feabdc0.html#axzz2jcv6GaUs>. The United Kingdom currently does not regulate Bitcoin because the Financial Conduct Authority has determined that its use is not widespread enough yet. *Id.*

³⁷ This became official on August 18, 2013. Matt Clinch, *Bitcoin Recognized by Germany as 'Private Money'*, CNBC (Aug. 19, 2013), <http://www.cnbc.com/id/100971898>. This is discussed further *infra* Part III.A.

³⁸ EDWARD V. MURPHY ET AL., BITCOIN: QUESTIONS, ANSWERS, AND ANALYSIS OF LEGAL ISSUES 1, 2 (2015), available at <https://www.fas.org/sgp/crs/misc/R43339.pdf>.

³⁹ The first recorded Bitcoin transaction occurred on May 17, 2010 when the user, “laszlo,” successfully traded 10,000 Bitcoins for pizza. *Pizza for Bitcoins*, BITCOIN FORUM, <https://bitcointalk.org/index.php?topic=137.0> (last visited Aug. 21, 2013). Fundraising with Bitcoin for divisive organizations like WikiLeaks has

nonprofit advocate for its namesake currency, pay their employees in Bitcoins, either wholly or in part.⁴⁰ The ability to trade Bitcoins in real-time also allows the currency to compete with traditional money transfer services such as Western Union.⁴¹

None of the positive uses of Bitcoin garner as much publicity as its illicit uses. Most nefariously, Bitcoin was the exclusive currency accepted by the now defunct Silk Road—a secretive website that made the buying and selling of illegal drugs and other contraband seem like every day online shopping.⁴² During the 2012 election, a

caused controversy. *Donate to WikiLeaks*, WIKILEAKS.ORG, <http://shop.wikileaks.org/donate> (last visited Aug. 21, 2013). “[B]itcoin allows users to make legitimate donations and purchases anonymously. This is a benefit in cases where an individual may not want to be associated with a transaction, even if that transaction is perfectly legal . . . fearing damaging association and accusation.” Dion, *supra* note 21, at 182–83 (footnotes omitted). Bitcoin also breaks ground in other charitable giving. Sean’s Outpost, a charitable organization, and its subsidiary the Bitcoin Homeless Outreach Center teaches the homeless to mine for Bitcoins (on cell phone applications) and solicits Bitcoins on reddit. Daniela Hernandez, *Homeless, Unemployed, and Surviving on Bitcoins*, WIRED.COM (Sept. 20, 2013), <http://www.wired.com/wiredenterprise/2013/09/bitcoin-homeless/2/>. In Argentina, Bitcoin is used to offset the country’s astronomical inflation rate and rigid capital controls. Timothy B. Lee, *Five Surprising Facts About Bitcoin*, WASH. POST, (Aug. 21, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/08/21/five-surprising-facts-about-bitcoin-2/>. In Iran, citizens have used Bitcoins when there is a lack of currency in the economy. Dion, *supra* note 21, at 182.

⁴⁰ See, e.g., Noam Cohen, *Bubble or No, This Virtual Currency is a lot of Coin in Any Realm*, N.Y. TIMES (Apr. 7, 2013), <http://www.nytimes.com/2013/04/08/business/media/bubble-or-no-virtual-bitcoins-show-real-worth.html?pagewanted=all&r=0> (explaining how a Bitcoin Foundation employee is paid); David Meyer, *Finnish Development Firm Offers to pay Salaries Partly in Bitcoins*, GIGAOM.COM (Mar. 15, 2013), <http://gigaom.com/2013/03/15/finnish-development-firm-offers-to-pay-salaries-partly-in-bitcoins/> (announcing that Finnish developer SC5 will begin paying its employees in Bitcoin).

⁴¹ Gerald P. Dwyer, Ph.D. & Norbert J. Mitchel, Ph.D., *Bits and Pieces: The Digital World of Bitcoin Currency*, THE HERITAGE FOUNDATION (Sept. 16, 2015), <http://www.heritage.org/research/reports/2015/09/bits-and-pieces-the-digital-world-of-bitcoin-currency>. Bitcoin could also eliminate the 9.05% transaction fee that about 40 million U.S. immigrants incur when transmitting money out of the country. Steven A. Camarota, *Immigrants in the United States, 2010: A Profile of America’s Foreign-Born Population*, CENTER FOR IMMIGR. STUD. (Aug. 2012), <http://www.cis.org/2012-profile-of-americas-foreign-born-population> (“The number of immigrants . . . in the country hit a new record of 40 million. . . .”); Lee, *supra* note 39.

⁴² See Adrian Chen, *The Underground Website Where You Can Buy Any Drug Imaginable*, GAWKER, (June 1, 2011), <http://gawker.com/the-underground-website-where-you-can-buy-any-drug-imag-30818160> (detailing how a software developer ordered 100 micrograms of acid through the website to be delivered to his Canadian residence four days later). The alleged administrator of the Silk Road, 29-year-old Ross William Ulbricht, was captured in early October 2013. *End of the Silk Road: FBI Says it’s Busted the Web’s Biggest Anonymous Drug Black Market*, FORBES (Oct. 2, 2013), <http://www.forbes.com/sites/andygreenbe>

group of hacktivists claimed to have obtained Republican presidential candidate Mitt Romney's unreleased tax returns and demanded \$1 million in Bitcoins as ransom.⁴³ The anonymous nature of the currency prompts fears that Bitcoin trading is the perfect vehicle for money laundering and bribery.⁴⁴ Bitcoin has been called "anti-establishment at heart" because "it is completely independent of any banking system, regulatory agency, or government, and allows Bitcoin users to send money anonymously across borders."⁴⁵

II. BITCOIN AND THE EXISTING REGIME

The rising popularity of Bitcoin and other virtual currencies comes at a time when there is frustration with the conventional banking system.⁴⁶ As the peer-to-peer model continues to

rg/2013/10/02/end-of-the-silk-road-fbi-busts-the-webs-biggest-anonymous-drug-black-market/. While the takedown of Silk Road shook up the Internet underworld, it did not have any consequential effects because there are numerous alternative sites available. Leonid Bershidsky, *Goodbye Silk Road, Hello Sheep Marketplace*, Opinion, BLOOMBERGVIEW (Oct. 4, 2013), <http://www.bloomberg.com/news/2013-10-04/goodbye-silk-road-hello-sheep-marketplace.html>. For example, Sheep Marketplace is very reminiscent of the Silk Road and its biggest advertised commodity is illegal drugs. *Id.*

⁴³ David D. Stewart & Stephanie Soong Johnson, *Digital Currency: A New Worry for Tax Administrators?*, 68 TAX NOTES INT'L 423, 423 (2012). This was later dismissed as a hoax. *Id.* Bitcoin and politics mixed again when Conservative Action Fund, a political action committee that spent more than \$300,000 for Republicans, requested Federal Election Commission's opinion on Bitcoin contributions. Francis Wilkinson, *Bitcoin and Politics: What Could Go Wrong?*, BLOOMBERGVIEW (Sept. 5, 2013), <http://www.bloomberg.com/news/2013-09-05/bitcoin-and-politics-what-could-go-wrong-.html> (describing other political contributions using Bitcoin).

⁴⁴ Ari Zoldan, *Bitcoin: Society's Boon or Bane?*, HUFFINGTON POST (Aug. 19, 2013), http://www.huffingtonpost.com/ari-zoldan/bitcoin-societys-boon-or-b_3715125.html ("Bitcoin could readily serve as an easily accessible global network for drug dealing, gambling, bribery, insider trading, and money laundering."). It is important to note that researchers at University of California, San Diego, released new research that shows how law enforcement can link patterns of Bitcoin purchases to certain users using mathematical mappings of the public transaction log so there is no guaranteed anonymity. Tom Simonite, *Mapping the Bitcoin Economy Could Reveal Users' Identities: Analyzing the Public Traces Left by Every Bitcoin Transaction Could Allow Law Enforcement to Identify Many Users of a Currency Often Assumed to Offer Anonymity*, MIT TECH. R. (Sept. 5, 2013), <http://www.technologyreview.com/news/518816/mapping-the-bitcoin-economy-could-reveal-users-identities/>.

⁴⁵ Lisa Valentine, *Payments Landscape: "Still Crazy After All These Years"*, ABA BANKING J., July 2013, at 27.

⁴⁶ Banks are criticized for not being as savvy and forward-thinking as Google Wallet or Paypal. Valentine, *supra* note 45, at 25. See also Jon Matonis, *Bitcoin Prevents Monetary Tyranny*, FORBES (Oct. 4, 2012), <http://www.forbes.com/sites>

experience growth⁴⁷ and scandals,⁴⁸ government agencies have circled in to regulate these new currencies.⁴⁹ Case law and regulations are still limited but agencies including the Financial Crimes Enforcement Network (“FinCEN”),⁵⁰ the Department of Homeland Security (“DHS”),⁵¹ the Securities and Exchange Commission (“SEC”),⁵² and the New York Department of Financial

/jonmatonis/2012/10/04/bitcoin-prevents-monetary-tyranny/ (“Essentially, [B]itcoin is a reaction to three separate and ongoing developments: centralized monetary authority, diminishing financial privacy, and the entrenched legacy financial infrastructure.”). Internationally, the greatest fluctuations of Bitcoin coincided with the collapse of the Cyprus banking system. Michael Carney, *Bitcoin’s Greatest Value is in the World’s Least Stable Economies*, PANDO DAILY (July 12, 2013), <http://pandodaily.com/2013/07/12/bitcoins-greatest-value-is-in-the-worlds-least-stable-economies/>.

⁴⁷ Carney, *supra* note 46.

⁴⁸ *E.g.*, Tradehill, Inc. v. Dwolla, Inc., 2012 WL 1622668, at *2 (N.D. Cal. 2012) (dismissing fraud and false advertising claims pursuant to an arbitration clause); *ESEA In \$1M Settlement: In the Wake of Bitcoin Scandal, ESEA Have Agreed to a \$1 Million Settlement in a Consumer Protection Complaint Filed by the State of New Jersey*, ESPORTSHEAVEN (Nov. 20, 2013), <http://www.esportsheaven.com/news/59226/esea-in-1m-settlement> (reporting ESEA settlement in New Jersey consumer protection complaint and detailing California class action suit).

⁴⁹ The U.S. Senate recently asked various federal regulatory bodies and the Obama administration regarding “all of [their] current ‘policies, procedures, guidance or advisories’ related to virtual currencies and information about ‘plans or strategies regarding virtual currencies.’” Timothy B. Lee, *Congress Starts Investigating Bitcoin*, WASH. POST (Aug. 13, 2013), <http://www.washingtonpost.com/blogs/the-switch/wp/2013/08/13/congress-starts-investigating-bitcoin/>. The Committee on Homeland Security and Governmental Affairs is concerned that Bitcoin’s “near anonymous and decentralized nature has also attracted criminals who value few things more than being allowed to operate in the shadows.” Letter from Thomas R. Carper et al., Chairman, U.S. S. Comm. on Homeland Security and Governmental Affs. (Aug. 12, 2013) (on file with author), <http://www.hsgac.senate.gov/download/letter-to-secretary-napolitano-on-virtual-currencies>. This letter was also a response to *SEC v. Shavers* discussed *infra* in Part II.B.

⁵⁰ FinCEN is a bureau of the U.S. Department of Treasury that “safeguard(s) the financial system from illicit use and combat money laundering and promote national security through the collection, analysis, and dissemination of financial intelligence and strategic use of financial authorities.” *What We Do, About FinCEN*, FIN. CRIMES ENFORCEMENT NETWORK, http://www.fincen.gov/about_fincen/wwd/ (last visited Nov. 10, 2013) [hereinafter *What We Do*].

⁵¹ DHS secures the nation from a variety of threats. *About DHS*, U.S. DEP’T OF HOMELAND SEC., <https://www.dhs.gov/about-dhs> (last visited Nov. 10, 2013).

⁵² “The mission of the [SEC] is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.” *Introduction, About the SEC*, U.S. SEC. & EXCH. COMM’N, <http://www.sec.gov/about/whatwedo.shtml> (last visited Nov. 10, 2013).

Services (“NYDFS”)⁵³ have exerted jurisdiction over Bitcoin.⁵⁴ These efforts have curbed some problems in the Bitcoin community but they have also demonstrated a lack of understanding and preparation on the government’s part to deal with this four-year-old currency. While permanent solutions are being debated,⁵⁵ no one has a sense of certainty.

A. FinCEN & DHS Target Bitcoin Money Transmitter Businesses

One of the more persistent problems in the Bitcoin community is actually the third party intermediaries.⁵⁶ Research shows that

⁵³ NYDFS’s mission is “[t]o reform the regulation of financial services in New York to keep pace with the rapid and dynamic evolution of these industries, to guard against financial crises and to protect consumers and markets from fraud. *Mission & Leadership*, N.Y. DEP’T OF FIN. SERVS., <http://www.dfs.ny.gov/about/mission.htm> (last visited Nov. 10, 2013).

⁵⁴ The Commodity Futures Trading Commission has also expressed concern for the “real risk in these instruments.” *CFTC Considers Bitcoin Oversight*, COMPLIANCE R., May 6, 2013. The FBI is also involved. Matt Clinch, *Bitcoin Gets the FBI, Homeland Treatment*, YAHOO! FINANCE (Aug. 15, 2013), <http://finance.yahoo.com/news/bitcoin-gets-fbi-homeland-treatment-054851386.html>.

A July commerce, justice, and science bill asked the FBI to brief “the nature and scale of the risk posed by such ersatz currency, both in financing illegal enterprises and in undermining financial institutions.” *Id.* Federal Reserve chairman Ben Bernanke stated in a letter that “[a]lthough the Federal Reserve generally monitors developments in virtual currencies and other payments system innovations, it does not necessarily have authority to directly supervise or regulate these innovations or the entities that provide them to a market.” Max Raskin, *U.S. Agencies to Say Bitcoins Offer Legitimate Benefits*, BLOOMBERG (Nov. 18, 2013), <http://bloomberg.com/news/2013-11-18/u-s-agencies-to-say-bitcoins-offer-legitimate-benefits.html>.

⁵⁵ The first ever Bitcoin senate hearing entitled “Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies” was scheduled for November 18, 2013. Olga Kharif and Max Raskin, *Bitcoin at Record, Senate Seeks to Discuss Virtual Money*, BLOOMBERG (Nov. 8, 2013), <http://www.bloomberg.com/news/2013-11-08/bitcoin-at-record-senate-seeks-to-discuss-virtual-money.html>.

During this two-day event, government officials were supportive of Bitcoin’s “generally positive” uses and potentials. Raskin, *supra* note 54. There is some belief that current laws, as is, can be used to regulate virtual currencies. Ryan Tracy, *Authorities see Worth of Bitcoin*, WALL ST. J. (Nov. 18, 2013), <http://online.wsj.com/news/articles/SB10001424052702304439804579205740125297358?tesla=y> (“[One Department of Justice representative] didn’t believe that virtual currencies had exposed significant gaps in the current law.”).

⁵⁶ Tyler Moore & Nicolas Christin, *Beware the Middleman: Empirical Analysis of Bitcoin-Exchange Risk*, in 7859 LECTURE NOTES IN COMPUTER SCIENCE: FINANCIAL CRYPTOGRAPHY 25—33 (Ahman-Reza Sadeghi ed., 2013) (forthcoming), <http://lyle.smu.edu/~tylerm/fc13.pdf> (last visited Nov. 16, 2013) (“Fraudsters prefer irrevocable payments, since victims usually only identify fraud after transactions take place . . . [i]rrevocability makes any Bitcoin transaction involving one or more intermediaries subject to added risk, such as if the intermediary becomes insolvent or absconds with customer deposits.”); *see also*

forty Bitcoin trading platforms have been launched in the last three years.⁵⁷ Eighteen have since closed and only five gave warnings to consumers.⁵⁸ Six of the eighteen offered refunds to their users while the others left consumers with no recovery.⁵⁹ The news of a Bitcoin exchange vanishing with the users' deposits is sadly not uncommon and it often costs innocent users millions per incident.⁶⁰

In March 2013, FinCEN issued an official memorandum that clarified its position on virtual currency and virtual money transmitters:

[FinCEN is issuing this interpretive guidance to clarify the applicability of the regulations implementing the Bank Secrecy Act [] to person creating, obtaining, distributing, exchanging, accepting, or transmitting virtual currencies. . . . A user of virtual currency is **not** an [money services business ("MSB")] under FinCEN's regulations and therefore is not subject to MSB registration, reporting, and recordkeeping regulations. However, an administrator or exchanger is an MSB under FinCEN's regulations, specifically, a money transmitter, unless a limitation to or exemption from the definition applies to the person.⁶¹

Simply, an individual user who uses 10,000 Bitcoins to buy pizza will not fall under the purview of FinCEN. However, an exchange such as Mt. Gox must register with FinCEN since it is considered a money transmitter. This guidance laid the foundation for an epic legal saga during the summer of 2013.

Two months after that statement, the DHS seized \$2.9 million

Jim Edwards, *A Bitcoin Exchange Holding \$4.1 Million for 1,000 Customers Has Simply Vanished*, BUSINESS INSIDER (Nov. 12, 2013), <http://www.businessinsider.com/bitcoin-exchange-gbl-holding-41-billion-vanishes-2013-11> (reporting on unlicensed GBL bitcoin exchange that opened with a false address and subsequently vanished); Saumya Vaishampayan, *Chinese Bitcoin Exchange Disappears With \$4.1 Million*, MARKET WATCH (WALL ST. J.) (Nov. 12, 2013), <http://blogs.marketwatch.com/thetell/2013/11/12/chinese-bitcoin-exchange-disappears-with-4-1-million/> (detailing GBL bitcoin exchange and resulting financial losses).

⁵⁷ Moore and Christin, *supra* note 56.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ The latest occurrence happened in mid-November 2013 when GBL, an unregistered Chinese Bitcoin exchange, disappeared with \$4.1 million worth of its users' money. Edwards, *supra* note 56; Vaishampayan, *supra* note 56.

⁶¹ *FIN-2013-G001*, FIN. CRIMES ENFORCEMENT NETWORK (Mar. 18, 2013), *available at* http://www.fincen.gov/statutes_regs/guidance/html/FIN-2013-G001.html.

in one of Mt. Gox's online bank accounts.⁶² Around the same time, the District Court of Maryland seized an additional \$2.1 million from two other accounts.⁶³ The seizure warrants stated that "neither Mt. Gox nor its subsidiary . . . is registered as a Money Service Business."⁶⁴ The federal statutes in question—18 U.S.C. section 1960,⁶⁵ 18 U.S.C. section 981,⁶⁶ and 31 U.S.C. section 5330⁶⁷—require companies that provide money transmitting services to register with the U.S. Treasury to hold them liable to their clients. The funds now lay in limbo until the legal fight to determine whether the exchange violated federal finance laws is settled.⁶⁸ Mt. Gox has since completed the registration process.⁶⁹ While this move brings the exchange an added sense of legitimacy and compliance, it also opens the organization to more regulations

⁶² Neil McAllister, *US Government Nabbed \$2.9m in May Bitcoin Seizure: Mt. Gox's Dwolla Account Yielded a Pretty Purse*, THE REGISTER (Aug. 21, 2013), http://www.theregister.co.uk/2013/08/21/us_government_nabbed_29m_in_may_bitcoin_seizure/. Scholars posit that "Bitcoin will flummox some of the less savvy people in government" and "the people who govern Bitcoin are an obvious point of leverage for regulators." Jeremy Kirk, *Bitcoin Exchange Mt. Gox Registers With U.S. Treasury*, P.C. WORLD (July 1, 2013), <http://www.pcworld.com/article/2043360/bitcoin-exchange-files-with-us-treasury-regulatory-agency.html> (quoting Ed Felten, Professor of Computer Science and Public Affairs at Princeton University).

⁶³ *Additional \$2.1M Seized from Mt. Gox Accounts – Now Over \$5M Total*, TRADE BLOCK (Aug. 22, 2013), <http://thegenesisblock.com/warrant-for-mt-gox-wells-fargo-accounts-shows-additional-2-1m-seized/>.

⁶⁴ The warrants, Seizure Warrant, (D.M.D. June 19, 2013) (No. 13-1085SAG) and Affidavit in Support of Seizure Warrant, at 3, (D.M.D. May 28, 2013) (No. 13-1085SAG), are on file with author.

⁶⁵ "Whoever knowingly conducts, controls, manages, supervises, directs, or owns all or part of an unlicensed money transmitting business, shall be fined . . . or imprisoned not more than 5 years, or both. . . . the term 'money transmitting' includes transferring funds on behalf of the public by . . . wire." 18 U.S.C. § 1960 (West, Westlaw through P.L. 114-61 (excluding P.L. 114-52, 114-54, 114-59, and 114-60) approved Oct. 7, 2015).

⁶⁶ "The following property is subject to forfeiture to the United States: (A) Any property, real or personal, involved in a transaction or attempted transaction in violation of section . . . 1960 of this title, or any property traceable to such property." 18 U.S.C. § 981 (West, Westlaw through P.L. 114-61 (excluding P.L. 114-52, 114-54, 114-59, and 114-60) approved Oct. 7, 2015).

⁶⁷ "Any person who owns or controls a money transmitting business shall register the business (whether or not the business is licensed as a money transmitting business in any State) with the Secretary of the Treasury. 31 U.S.C. § 5330 (West, Westlaw Current through P.L. 114-61 (excluding P.L. 114-52, 114-54, 114-59, and 114-60) approved Oct. 7, 2015).

⁶⁸ McAllister, *supra* note 62.

⁶⁹ Jeffrey Sparshott, *Bitcoin Exchange Makes Apparent Move to Play by U.S. Money-Laundering Rules*, WALL ST. J. (June 28, 2013), <http://online.wsj.com/news/articles/SB10001424127887323873904578574000957464468>.

which may increase transactional costs.⁷⁰ However, mismanagement of funds and alleged embezzling, has recently forced Mt. Gox to file for bankruptcy.⁷¹

The industry is divided on whether increased regulation will help or hurt the currency.⁷² Critics think this governmental red tape will suffocate innovation because the cost of compliance is often too high for startups and small-sized businesses.⁷³ The shutdown of at least three other Bitcoin entities has been blamed on the government's new stance on virtual money transmitting

⁷⁰ The company instituted a more rigorous verification process to prevent fraudulent and illegal activities. *Id.*

⁷¹ "Mt. Gox filed for insolvency when its operators lost track of 850,000 bitcoins that were worth around \$450 million at the time. In September, Japanese prosecutors charged the exchange's former chief executive, Fehrenman Mark Karpeles, of embezzling \$2.7 million. Who took the rest is still a mystery." John Dyer, *Everything's Coming up Bitcoin as Value Spikes*, VICE NEWS (Nov. 5, 2015), <https://news.vice.com/article/bitcoin-rebounds-as-investors-regain-confidence-banks-take-interest-in-technology>.

⁷² Sparshott, *supra* note 69. There are also concerned about the cooperation between banks and Bitcoin companies. Kashmir Hill, *Bitcoin Companies and Entrepreneurs Can't Get Bank Accounts*, FORBES (Nov. 15, 2013), <http://www.forbes.com/sites/kashmirhill/2013/11/15/bitcoin-companies-and-entrepreneurs-cant-get-bank-accounts/> ("Bitcoin is a baby currency. When it grows up, it could do serious damage to the banking hegemony, but only if the banking industry is willing to nurse it to adulthood."). Already, banks are at odds with the Bitcoin community since the mission of Bitcoin is to eliminate third party intermediaries. *Id.*; Nakamoto, *supra* note 2. After the issuance of the FinCEN guidance and a related one from the Federal Deposit Insurance Corporation, U.S. banks discontinued doing business with Bitcoin-related clients. Hill, *supra* note 72; see also *Financial Institution Letter (FIL-3-2012)*, FEDERAL DEPOSIT INS. CORP. (Jan. 31, 2012), <http://www.fdic.gov/news/news/financial/2012/fil12003.pdf> (imposing increased responsibility when financial institutions are dealing with high risk payment processors). This presented difficulties to Bitcoin businesses because they could not pay bills without traditional bank accounts. Hill, *supra* note 72. The irony is not lost on some commentators. *Id.*

⁷³ Jon Matonis, *Fincen's New Regulations are Choking Bitcoin Entrepreneurs*, AM. BANKER (Apr. 25, 2013), <http://www.americanbanker.com/bankthink/fincen-regulations-choking-bitcoin-entrepreneurs-1058606-1.html> (predicting that Bitcoin exchanges will fail under regulation like Paypal did a decade ago and arguing that Paypal only succeeded after being bailed out by eBay and limiting some of its services). It should be noted that Matonis is executive director for the Bitcoin Foundation so some self-interest is expected. For a more objective view, see Bailey Reutzel, *Regulation, FinCEN's Virtual-Money Guidelines Add Roadblocks for New Companies*, PAYMENTS SOURCE (Mar. 19, 2013), <http://www.paymentssource.com/news/fincens-virtual-money-guidelines-add-roadblocks-for-new-companies-3013574-1.html?pg=1> (explaining why regulation legitimizes Bitcoin but also destroys it and detailing how federal and state laws can result in a market entry fee that could exceed \$10 million per company). FinCEN's guidance was likened to the SEC's approach to peer-to-peer lending in late 2008 where securities offerors had to suspend services for long periods of time to cooperate with regulators. *Id.*

businesses.⁷⁴ This series of events demonstrate the tension between the government's interest in protecting consumers and the users' desire to preserve the essential philosophies behind Bitcoin. Applying current money transmitting laws to all Bitcoin exchanges causes unintended, negative effects in the virtual currency industry.

B. SEC Applies Securities Laws to Bitcoin Investments

Another area for possible fraud is unregulated Bitcoin investments. On July 23 2013, the SEC filed a lawsuit against Trendon T. Shavers and his company, Bitcoin Savings & Trust, for running a Ponzi scheme.⁷⁵ The complaint stated that Shavers promised his investors 1% daily or 7% weekly interest.⁷⁶ When new investors came onboard, Shavers pocketed some of the money and handed out the rest as returns to his older investors.⁷⁷ Investors duped by Shavers may have lost as much as \$23 million depending on the current Bitcoin exchange rates.⁷⁸ The two claims that the SEC alleged are misrepresentation and misappropriation of investor funds.⁷⁹

The SEC asserted that courts have jurisdiction over Bitcoin

⁷⁴ Matonis, *supra* note 73. There was speculation that bitme.com, a relatively small exchange, shut down due to difficulties in regulatory compliance. BTC Buy, another exchange site, suspended services and said the FinCEN guidance created legal uncertainty. Bitcoin Direct, a private off-exchange purchaser, often closes itself off to new customers and now has cancelled its cash deposit feature is puzzled by whether the FinCEN guidance applies to one-way, fixed-rate brokers. *Id.*; see also McAllister, note 62 (reporting that OK Pay, a Bitcoin payment processor, voluntarily suspended virtual money transfers following the seizure and Mt. Gox itself sporadically stopped transactions involving the U.S. dollar).

⁷⁵ Complaint at 1, SEC v. Shavers, 2014 WL 4652121 (E.D. T.X. 2014) (No. 4:13-CV-416)[hereinafter *Complaint*]. Shavers allegedly operated under the screen name "Pirateat40" and received over 700,000 Bitcoins for investment opportunities that he advertised on discussion forums. Robert McMillan, *SEC Says Man Fittingly Named 'The Pirate' Ran Bitcoin Ponzi Scheme*, WIRED (July 23, 2013), <http://www.wired.com/wiredenterprise/2013/07/sec-says-man-named-the-pirate-was-running-bitcoin-ponzi-scheme/>. On the same day that the SEC filed the complaint, it released a stern warning against about investment schemes involving virtual currencies. *Investor Alert: Ponzi Schemes Using Virtual Currencies*, INVESTOR.GOV (July 23, 2013), <http://m.investor.gov/news-alerts/investor-alerts/investor-alert-ponzi-schemes-using-virtual-currencies>.

⁷⁶ Complaint, *supra* note 75, at 2, 3.

⁷⁷ *Id.* McMillan, *supra* note 74 (reporting that Shavers returned 500,000 Bitcoins but kept the remaining 200,000).

⁷⁸ SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182, at *1 (E.D. Tex. Aug. 6, 2013).

⁷⁹ Complaint, *supra* note 74, at 3, 6.

investments under sections 20 and 22 of the Securities Act of 1933⁸⁰ and sections 21 and 27 of the Exchange Act of 1934.⁸¹ Shavers argued that securities laws do not apply because Bitcoin is not a regulated money and no real money ever exchanged hands.⁸² This dispute led to *SEC v. Shavers*⁸³ where the court was asked to determine whether Bitcoin investments are securities under the federal securities laws.⁸⁴ The legal standard for securities covers every investment contract.⁸⁵ In order for the transactions in question to constitute investment contracts, the Bitcoins had to constitute money.⁸⁶

The court ruled for the SEC and decided that Bitcoin constituted money because it can be used to purchase goods or services and exchanged for other currencies, despite some merchants' reluctance to accept it.⁸⁷ The court did not see a distinction between Bitcoin and more traditional currencies like the Euro, the Yuan, or the U.S. dollar.⁸⁸ Once that conclusion was reached, it was not hard for the court to rule that the transactions were investment contracts subject to the federal securities laws.⁸⁹

This ruling fueled an international discussion of government regulation versus a laissez-faire approach.⁹⁰ Jon Matonis, the Executive Director of the Bitcoin Foundation, commented, "The ruling is interesting because it highlights the fact that Bitcoin is becoming recognised [sic] as a commodity money in the same way that gold and silver are currently recognized as money."⁹¹ This

⁸⁰ *Id.* at 2.

⁸¹ *Id.*

⁸² *Shavers*, 2013 WL 4028182 at *1.

⁸³ No. 4:13-CV-416, 2013 WL 4028182 (E.D. Tex. Aug. 6, 2013).

⁸⁴ *Id.* at *1.

⁸⁵ *Id.* at *2 (citing 15 U.S.C. § 77(b)). The three elements of an investment contract are "(1) An investment of money, (2) in a common enterprise, (3) with the expectation that profits will derive from the efforts of the promoter or a third party." *Id.* (citing *SEC v. W. J. Howey & Co.*, 328 U.S. 293, 298-99 (1946); *Long v. Shultz Cattle Co.*, 881 F.2d 129, 132 (5th Cir. 1989)).

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Shavers*, 2013 WL 4028182 at *2.

⁸⁹ *Id.*

⁹⁰ See Jason Mick, *U.S. Court Demands Bitcoin Regulations, Germany Offers a Libertarian View*, DAILY TECH (Aug. 19, 2013), <http://www.dailytech.com/US+Court+Demands+Bitcoin+Regulation+Germany+Offers+a+Libertarian+View/article33197.htm> (discussing the United States case and Germany's stance on Bitcoin regulation and control).

⁹¹ Nick Renaud-Komiya, *Bitcoin is a Currency, Rules US Judge: Ruling Means Suspected Fraudster Dealing in Virtual Currency Can be Charged*, News, Lifestyle, THE INDEPENDENT (Aug. 16, 2013), <http://www.independent.co.uk/life->

ruling is just the beginning of the conversation.

More legal questions and discussions will ensue as users further push the limits of Bitcoin as investment vehicles.⁹² Kathleen Moriarty, the famed lawyer who helped create the Standard & Poor's Depositary Receipts, filed the first proposal to establish a Bitcoin-based exchange-traded fund with the SEC for Cameron and Tyler Winklevoss in July 2013.⁹³ Moriarty followed the gold bullion approach and proposed to pool Bitcoin in a trust then sell shares of the pool.⁹⁴ In September, the Winklevosses estimated that it would take six to twelve months for regulators to lay down some ground rules before deciding on the application.⁹⁵

In a comic or cruel twist of fate, someone else may have beaten the Winklevosses to the punch.⁹⁶ SecondMarket Holdings Inc., a company that specializes in the secondary sales of startup stock, launched its own Bitcoin trust.⁹⁷ The trust allows accredited investors to trade in Bitcoin without dealing with the hassles of managing multiple accounts and exchanges.⁹⁸ In return, the

style/gadgets-and-tech/news/bitcoin-is-a-currency-rules-us-judge-8770963.html. He continues to note, "This . . . is appropriate because the International Organization for Standardization recognizes [precious metals] as non-national units that do not require the backing of any third-party institution. . . . which will become more important as global foreign exchange dealers adopt [B]itcoin as a trading unit on their existing electronic platforms." *Id.*

⁹² Juan Forrer, *Am law Lawyers Helping Bring Bitcoin to the Masses*, THE AM. LAWYER (Aug. 8, 2013), <http://www.americanlawyer.com/id=1202614423813/Am-Law-Lawyers-Help-Bring-Bitcoin-to-the-Masses?slreturn=20150930185450>.

⁹³ *Id.* For the Winklevoss Bitcoin Trust application, see *Winklevoss Bitcoin Trust Form S-1 Registration Statement Under the Securities Act of 1933*, U.S. SEC. & EXCH. COMM'N (July 1, 2013), <http://www.sec.gov/Archives/edgar/data/1579346/000119312513279830/d562329ds1.htm>. Interesting side note: Cameron and Tyler Winklevoss are identical twins who originally rose to fame by claiming that they, not Mark Zuckerberg, had the idea for Facebook first. Mike Vilensky, *The Winklevoss Twins are Just as Angry With Mark Zuckerberg Today as They Were When They Sued Him the First Time*, N.Y. MAG. (Dec. 31, 2010), http://nymag.com/daily/intelligencer/2010/12/winklevoss_twins_still_mad.html.

⁹⁴ Forrer, *supra* note 92.

⁹⁵ Linette Lopez, *The Winklevoss Twins Just Gave a Presentation on Bitcoin to a Room Full of Investors*, BUS. INSIDER (Sept. 17, 2013), <http://www.businessinsider.com/winklevoss-bitcoin-bitcoin-presentation-2013-9>.

⁹⁶ Yuliya Chernova, *Winklevoss Twins Face Competition from SecondMarket's New Bitcoin Trust*, WALL. ST. J. (Sept. 25, 2013), <http://blogs.wsj.com/venturecapital/2013/09/25/winklevoss-twins-face-competition-from-secondmarkets-new-bitcoin-trust/>. The Winklevosses were not actually eclipsed exactly, but the media could not resist a little humor at the twins' expense.

⁹⁷ *Id.* The advisory board for this venture consists of Archibald Cox, Jr., former chairman of Barclays Americas and CEO of Morgan Stanley International, and Jon Matonis, executive director of the Bitcoin Foundation. *Id.*

⁹⁸ *Id.*

company charges small administrative fees.⁹⁹ Because this investment trust is private, it is not subject to regulations.¹⁰⁰

As Bitcoin in the investment context continues to expand,¹⁰¹ there is a serious need for the SEC to release its official position on virtual currencies. The same concerns that beleaguered the FinCEN guidance are present here. Legitimizing Bitcoin may potentially strip the currency of its value.¹⁰² Critics question whether traditional regulation can maintain the advantages of Bitcoin.¹⁰³ When the cost of compliance places Bitcoin on the same level as real world money, then there is no incentive to continue using the virtual currency.¹⁰⁴ In fact, Bitcoin may not even survive under that comparison because it holds no intrinsic value.¹⁰⁵

⁹⁹ *Id.*; See also *Bitcoin Investment Trust, Bonds*, SECONDMARKET, <https://www.secondmarket.com/company/bitcoin-investment-trust> (last visited Nov. 16, 2013) (listing the fee schedule and net asset values, and important disclaimers).

¹⁰⁰ *Id.* (“The [Bitcoin Investment Trust] is a private, unregistered investment vehicle and NOT subject to the same regulatory requirements as exchange traded funds or mutual funds, including the requirement to provide certain periodic and standardized pricing and valuation information to investors.”). Be careful, not all private investment funds can escape SEC regulation. Investment Company Act of 1940, 15 U.S.C. §§ 80a-3(b)–80a-3(c)(14)(B(ii)) (West, Westlaw through P.L. 114-61 (excluding P.L. 114-52, 114-54, 114-59, and 114-60) approved Oct. 7, 2015); *Investment Companies*, U.S. SEC. & EXCH. COMM’N, <http://www.sec.gov/answers/mfinvco.htm> (last updated July 9, 2013) (“private investment funds with no more than 100 investors and private investment funds whose investors each have a substantial amount of investment assets are not considered to be investments companies . . . because of the private nature of their offerings or the financial means and sophistication of their investors.”).

¹⁰¹ Bitcoin reached a higher level of legitimacy when it was rumored to have obtained its own ticker on the Bloomberg terminal for internal workers. Brittany A Roston, *Bitcoin Scores Bloomberg Ticker Following US Court Ruling*, SLASHGEAR (Aug. 10, 2013), <http://www.slashgear.com/bitcoin-scores-bloomberg-ticker-following-us-court-ruling-10293426/>. The spokesperson for Bloomberg, Vera Newhouse, confirmed this news on August 11, 2013. Danny Bradbury, *Confirmed: Bloomberg Staff Are Testing a Bitcoin Price Ticker*, COINDESK (Aug. 10, 2013), <http://www.coindesk.com/confirmed-bloomberg-staff-are-testing-a-bitcoin-price-ticker/> (“Bloomberg is testing Bitcoin data, but this is only accessible to internal users. . . . We often prototype new functions and dashboards; some that are eventually rolled out, and some that aren’t. It’s premature to provide any details about Bloomberg’s plans for this prototype at this stage.”).

¹⁰² Timothy Lavin, *The SEC Shows Why Bitcoin is Doomed*, BLOOMBERGVIEW (Aug. 8, 2013), <http://www.bloomberg.com/news/2013-08-08/did-the-sec-just-validate-bitcoin-no-.html> (“The closer Bitcoin gets to being an accepted currency, the less useful it will be as a method of exchange. And the less useful it is as a method of exchange, the harder it is to see why it has any value at all.”).

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* (“Unlike gold or silver, [B]itcoins have no intrinsic uses.”).

C. NYDFS Investigates Bitcoin Companies for Compliance Issues

Adding to an already complicated legal landscape, federal agencies are not the only ones pursuing Bitcoin companies. On August 12, 2013, the NYDFS subpoenaed twenty-two Bitcoin companies to determine whether they are in compliance with current financial regulations.¹⁰⁶ Benjamin Lawsky, the superintendent for the department, declared via an online memorandum “if virtual currencies remain a virtual Wild West for narcotraffickers and other criminals, [it] would not only threaten our country’s national security, but also the very existence of the virtual currency industry.”¹⁰⁷ This move does not mean that any illegal activities have taken place,¹⁰⁸ but instead the department is most likely trying to gather information on anti-crime controls and consumer protection policies present in the current regime.¹⁰⁹ Lawsky indicated that the department is looking to generate new regulation to include Bitcoin and other emerging currency products.¹¹⁰

¹⁰⁶ Romain Dillet, *New York’s Financial Services Subpoenas Bitcoin Firms to “Root out Illegal Activity”*, TECHCRUNCH (Aug. 13, 2013), <http://techcrunch.com/2013/08/13/new-yorks-financial-services-subpoenas-bitcoin-firms-to-root-out-illegal-activity/>; Letter from Benjamin M. Lawsky, Superintendent of Fin. Serv., N.Y. State Dep’t of Fin. Serv. (August 12, 2013) (on file with N.Y. Dep’t of Fin. Serv.), available at http://www.dfs.ny.gov/about/letters/ltr130812_virtual_currency.pdf. The list of companies includes BitInstant, BitPay, Coinabul, Coinbase Inc., CoinLab, Coinsetter, Dwolla, eCoin Cashier, Payward, Inc., TrustCash Holdings Inc., ZipZap, Butterfly Labs, Andreessen Horowitz, Bitcoin Opportunity Fund, Boost VC Bitcoin Fund, Founders Fund, Google Ventures, Lightspeed Venture Partners, Tribeca Ventures Partners, Tropos Funds, Union Square Ventures, and Winkevoss Capital Management. Dillet, *supra* note 106 (citing Kashmir Hill, *Every Important Person in Bitcoin Just got Subpoenaed by New York’s Financial Regulator*, FORBES (Aug. 12, 2013), <http://www.forbes.com/sites/kashmirhill/2013/08/12/every-important-person-in-bitcoin-just-got-subpoenaed-by-new-yorks-financial-regulator/>).

¹⁰⁷ Nathaniel Popper, *New York and U.S. Open Investigations Into Bitcoins*, N.Y. TIMES (Aug. 12, 2013), http://dealbook.nytimes.com/2013/08/13/officials-broaden-inquiries-into-oversight-of-bitcoin-and-other-currencies/?_r=0 (internal quotations omitted).

¹⁰⁸ Kashmir Hill, *Every Important Person in Bitcoin Just got Subpoenaed by New York’s Financial Regulator*, FORBES (Aug. 12, 2013), <http://www.forbes.com/sites/kashmirhill/2013/08/12/every-important-person-in-bitcoin-just-got-subpoenaed-by-new-yorks-financial-regulator/>.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* As of November 2013, results from the subpoenas have not been announced and no official regulation has been formed. But the NYDFS issued a notice of intent to hold a public hearing on creating a virtual currency transmission licensing platform named “BitLicense” that would ensure anti-money laundering and consumer protection controls. Saumya Vaishampayan, *NY Regulator Considers Bitcoin Regulation License*, MARKETWATCH (WALL ST. J.)

Each state has varying degrees of money transmitter laws.¹¹¹ These state laws are filled with different levels of vagueness and present uncertainty for existing online payment systems such as Paypal because there is confusion about to whom and to what extent these laws apply.¹¹² Scholars are concerned that this will stifle innovation.¹¹³ If established Internet companies like Amazon and Paypal do not have a clear understanding of when and how the money transmitter laws apply,¹¹⁴ then the Bitcoin companies are not likely to fare any better. The costs associated with state money transmitter laws compliance are unrealistic for startups

(Nov. 14, 2013), <http://www.marketwatch.com/story/ny-regulator-considers-bitcoin-regulation-license-2013-11-14>.

¹¹¹ Compare CAL. FIN. CODE § 2030 (West 2013) (requiring a license for money transmissions); COLO. REV. STAT. ANN. § 12-52-104 (West 2013); MICH. COMP. LAWS ANN. § 487.1011 (LexisNexis 2013) (requiring a license for money transmissions); N.Y. BANKING LAW § 641 (McKinney 2013) (requiring a license for money transmissions), with MONT. CODE ANN. § 32-1-101–32-11-414 (West 2013) (containing no money transmitter laws); N.M. STAT. ANN. § 58-20-1 (West 2013) (applying license requirements only to the sale of checks or money orders); S.C. CODE ANN. § 34-1-10–34-43-50 (West 2013) (containing no money transmitter laws); see also Wistar Wilson, *A Call to Clarify the Regulatory Scope of Money Transmitter Laws*, PENN PROGRAM ON REGULATION REG BLOG (June 19, 2013), <https://www.law.upenn.edu/blogs/regblog/2013/06/a-call-to-clarify-the-regulatory-scope-of-money-transmitter-laws.html> (discussing money regulatory laws). State laws are also evolving which makes compliance difficult. For example, Indiana previously did not require foreign money transmitting businesses to obtain licenses in order to conduct business within its borders. Compare IND. CODE § 28-8-4-13 (2013) (containing language that expands the performance of money transmission to any location), with IND. CODE § 28-8-4-13 (West 2013) (containing no limitation regarding foreign transactions).

¹¹² Wilson, *supra* note 111.

¹¹³ *Id.* (“[Professor of Law at University of New Mexico School of Law, Kevin] Tu argues that [large companies are in better positions to investigate whether laws apply to them] and the disparate impact of the uncertainty on start-up firms functions as a barrier to market entry and may hinder innovation in the payment industry.”). Bitcoin investors fear that the currency will be pushed to other countries. See Agustino Fontevercchia, *Winklevoss Twins Say Bitcoin Market to Hit \$400B, Urge Regulators Not to Push Innovation to China*, FORBES (Nov. 12, 2013), <http://www.forbes.com/sites/afontevercchia/2013/11/12/winklevoss-twins-say-bitcoin-market-to-hit-400b-urge-regulators-not-to-push-innovation-to-china/> (stating that the twins fear innovation would best pushed into China). The Winklevosses’ worries are not unfounded. See also Brito, *supra* note 35 (noting that the Chinese search engine, Baidu, accepts Bitcoin payments and pointing out that China is the first country to beat the U.S. in Bitcoin client software downloads); Foley, *supra* note 36 (noting that Bitcoin Foundation is seeking to establish a non-U.S. headquarter “to reflect the possibility that the centre [sic] of gravity for innovation will shift abroad.”).

¹¹⁴ See Wilson, *supra* note 111 (arguing that large companies like Amazon and Paypal have the resources to investigate their susceptibility to regulation but startups and small-sized businesses do not).

and small-sized Bitcoin exchanges.¹¹⁵

III. PROPOSALS FOR A NEW REGULATORY FRAMEWORK

Every new technology is ‘dangerous’ and nearly every one can be used by criminals to make committing crimes easier, whether it’s bank robbers using cars instead of horses or drug dealers using disposable cellphones instead of corner pay-phones. Governments and law enforcement have always had to adapt to new technologies to collect taxes or catch criminal . . . [and] they will continue to adapt.¹¹⁶

The U.S. government has yet to establish a clear plan on how to regulate Bitcoin.¹¹⁷ While the currency’s history already demonstrates a need for some government oversight, adding tiers of regulation may unconsciously eliminate any positive attributes of the currency.¹¹⁸ Regulatory decisions reached at this juncture will determine whether Bitcoin grows into a viable currency that could solve some of the nation’s financial problems, or loses its value and becomes destroyed by rushed and ineffective regulation. The U.S. government should take “a holistic and whole-government approach”¹¹⁹ and introduce a brand new regulatory framework.

¹¹⁵ Reutzel, *supra* note 73.

¹¹⁶ *International*, WASH. INTERNET DAILY (WARREN COMMUNICATIONS NEWS, INC.), May 24, 2011 at 2 (quoting Gavin Andresen, head of Bitcoin Foundation, from a “eG8” forum where various heads of states met to discuss Internet and economic growth).

¹¹⁷ *See supra* discussion Part II (discussing the rise of bitcoins and the frustration with current banking regimes); Raskin, *supra* note 54.

¹¹⁸ *See supra* discussion Part II (describing the economic loss to innocent consumers due to smaller companies failing to meet the costs of meeting regulatory requirements). *Cf. International*, *supra* note 116 (explaining that the May G28 forum failed to include the voices of the consumers, whose interests would be served by regulations that would enhance the use of the technology rather than limit it).

¹¹⁹ Brendan Sasso, *Senate Jumps Into Bitcoin Fray*, THE HILL (Aug. 13, 2013), <http://thehill.com/blogs/hillicon-valley/technology/316859-senate-panel-investigates-bitcoin> (quoting a letter that the Senate Homeland Security and Government Affairs Committee Chairperson Tom Carper (D-Del.) and ranking member Tom Coburn (R-Okla.) sent to seven federal agencies including the Federal Reserve, SEC, Office of Management and Budget, CFTC, DHS, Department of Justice, and Department of Treasury).

A. Centralize Jurisdiction and Rules

Germany has established itself as a pioneer in denationalizing money and structuring a specific regulatory regime for Bitcoin.¹²⁰ For example, Bitcoin traders are subject to Germany's twenty-five percent capital gains tax.¹²¹ If it is a long-term holding, meaning an investment of more than a year, then the tax does not apply.¹²² The German government benefits from the tax revenues but it is also a win for Bitcoin users.¹²³ Taxpayers can write off hardware used to mine as a capital investment, and losses incurred as capital losses.¹²⁴ Some consider this approach as a fair way to create opportunities for the currency while adding consumer responsibility.¹²⁵

Additionally, the German Federal Financial Supervisory Authority ("BaFin") propagated one set of rules for Bitcoin companies such as minimum capital requirements, mandatory anti-money laundering mechanisms, and regular reporting schedules.¹²⁶ In order to promote technical innovation and venture capitalism, BaFin reserved the power to grant rule exemptions on a case-by-case basis.¹²⁷ The agency also characterized all virtual currencies as financial instruments.¹²⁸ Pulling these currencies into a regulatory framework encourages cooperation with other financial institutions.¹²⁹ It also places these currencies into the European financial passport scheme.¹³⁰

¹²⁰ Mick, *supra* note 90.

¹²¹ *Id.* Sales tax regulation is still unclear. Pete Rizzo, *Bitcoin Regulation Leaps Forward in Germany*, PYMNTS (Aug. 19, 2013), <http://www.pymnts.com/briefing-room/issuers/virtual-currency/2013/bitcoin-regulation-leaps-forward-in-germany/>.

¹²² Mick, *supra* note 90.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ Stefan, *Germany Sets Standard for Bitcoin Regulation*, BITCOIN MAG. (Aug. 19, 2013), <http://bitcoinmagazine.com/6421/germany-sets-standard-for-bitcoin-regulation/>.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.* See Hill, *supra* note 72 for a discussion on the tension between Bitcoin companies and U.S. banks.

¹³⁰ Stefan, *supra* note 126. Please note that the European Commission takes a single filing approach to money transmitter businesses. See 2009 O.J. (L 267) 7–17 (directive on the taking up, pursuit and prudential supervision of the business of electronic money institutions); 2007 O.J. (L 319) 1–36 (directives on payment

Likewise, the U.S. government should develop a specific regulatory regime that is unique to Bitcoin.¹³¹ It should create a new federal agency with exclusive jurisdiction for the reasons why it conceived the Consumer Financial Protection Agency during the latest financial crisis.¹³² Asking multiple agencies with limited resources and lack of expertise to research a concept that is already ahead of the law is not a wise use of resources.¹³³ The

services). A business needs to only register in one member state. If it chooses to expand into another country, the second country's authorities have thirty days to object to the expansion. The records of applications and transactions are computerized so there is one central, unified system. Bailey Reutzel, *Uniform Licensing Could Help Bitcoin Businesses Stay Disruptive*, PAYMENTS SOURCE (June 19, 2013), <http://www.paymentssource.com/news/uniform-licensing-could-help-bitcoin-businesses-stay-disruptive-3014466-1.html>.

¹³¹ This is also known as the integrated approach. Adriane Fresh & Martin Neil Baily, WHAT DOES INTERNATIONAL EXPERIENCE TELL US ABOUT REGULATORY CONSOLIDATION?, PEW FIN. REFORM PROJECT 5 (2009), available at <http://fic.wharton.upenn.edu/fic/Policy%20page/Fresh-Baily-International-Final-TF-Correction.pdf> ("The integrated approach is designed to eliminate regulatory arbitrage, facilitate greater communication and information-sharing among regulators of a given institution, and consolidate rule-making and application."). One critic acerbically pointed how burdensome it would be for Bitcoin to comply with every applicable law under the existing regime. The list of laws included money transmitter laws, the Patriot Act, the Bank Secrecy Act, international anti-money laundering laws, tax laws, Foreign Account Tax Compliance Act, etc. Lavin, *supra* note 102.

¹³² See U.S. DEP'T OF TREASURY, A NEW FOUNDATION: REBUILDING FINANCIAL SUPERVISION AND REGULATION 7–8 (2009), available at http://www.treasury.gov/initiatives/Documents/FinalReport_web.pdf [hereinafter *Financial Regulatory Reform*] (proposing the creation of a Consumer Financial Protection Agency).

¹³³ "Prior to the current financial crisis, a number of federal and state regulations were in place to protect consumers against fraud and to promote understanding of financial products like credit cards and mortgages. But as abusive practices spread, particularly in the market for subprime and nontraditional mortgages, our regulatory framework proved inadequate in important ways. Multiple agencies have authority over consumer protection in financial products, but for historical reasons, the supervisory framework for enforcing those regulations had significant gaps and weaknesses. . . . [Some] agencies had a clear mission but limited tools and jurisdiction." See *id.* at 55 (describing financial abuses prior to the financial crisis and calling for a single regulatory agency).

See also Jay Newton-Small, *Why the Deep Web has Washington Worried From Online Drug Bazaars to Virtual Currency tax Shelters, the Growing Anonymous web has Many Corners of Washington Concerned*, TIME (Oct. 31, 2013), <http://swampland.time.com/2013/10/31/the-deep-web-has-washington-worried/> (stating the FBI does not have the resources to compete with Silicon Valley in hiring). The former assistant director of the FBI's technology division claimed that funds for develop technology to fight cybercrime is "not adequate." *Id.* There is also the issue of untrained staff. Less than 200 agents have the skills to deal with cybercrimes. *Id.*

existing agencies are not ready to tackle the implicit complexities of a currency that is outside the confines of traditional money.¹³⁴ A new federal agency should combine the functions of every relevant alphabet soup organization to serve as specialized law enforcement.¹³⁵

However, even if a federal conglomerate agency were created, state laws present another hurdle under the current regime.¹³⁶ The second step to a specialized regime is to implement one set of rules that applies to all transactions involving virtual currencies.¹³⁷ For instance, American retailers who accept Bitcoin payments could undergo a registration process using their private keys and charge a flat-rate tax on every sale. This makes certain that the government collects the appropriate tax revenues without disturbing the anonymity of the buyers' identities. This would also not conflict with the Internal Revenue Code or state tax laws because transactions involving real world money would be unaffected. This approach would truly embody a regulatory system that balances everyone's interests.

¹³⁴ See discussion *supra* Part II (discussing various regulatory agencies). See also Vitalik Buterin, *The United States' Regulatory Shame*, BITCOIN MAG. (Aug. 21, 2013), <http://bitcoinmagazine.com/6463/the-united-states-regulatory-shame/> (detailing the fractured nature of the U.S. response to Bitcoin regulation). The Government Accountability Office asked the IRS for recommendations on virtual currency taxation but said in a report that "given [the] uncertainty, available funding, and other priorities, IRS made a reasoned decision not to implement a compliance approach specific to virtual economics and currencies." *Id.* (internal quotations omitted); U.S. GOV'T ACCOUNTABILITY OFFICE, VIRTUAL ECONOMICS AND CURRENCIES: ADDITIONAL IRS GUIDANCE COULD REDUCE TAX COMPLIANCE RISKS (2013).

¹³⁵ Bitcoin advocacy groups like the Bitcoin Foundation provide a less costly alternative to establishing a new government agency. They consist of experts who developed the currency. A private, not-for-profit organization can regulate the virtual currency market without spending any of the taxpayers' money similar to the way FINRA conducts itself. *What We Do*, *supra* note 50.

¹³⁶ Jason Mick, *Bitcoin Foundation Meets With U.S. Feds Over Legality of Cryptocurrency*, DAILY TECH (Aug. 27, 2013), <http://www.dailytech.com/Bitcoin+Foundation+Meets+With+US+Feds+Over+Legality+of+Cryptocurrency/article33243.htm>.

¹³⁷ See Financial Regulatory Reform, *supra* note 132, at 7 ("Banking regulators at the state and federal level had a potentially conflicting mission to promote safe and sound banking practices. . . ."). For this suggestion, state money transmitter laws would be replaced by the European Commission model of a one-step approach with each U.S. state showing full faith and credit.

B. Adopt a Set of Flexible Rules

Traditionally, regulatory systems are either rules-based or principles-based.¹³⁸ The U.S. follows the rules-based system where the laws provide specificity regarding their promulgation, monitoring, and enforcement.¹³⁹ A principles-based approach, however, favors flexibility over rigidity.¹⁴⁰ Instead of focusing on specific rules, the emphasis is placed on desired outcomes.¹⁴¹ Then it is left to individual entities to decide how to best implement rules that would achieve that outcome.¹⁴² Scholars argue that approach is better suited for emerging technology¹⁴³ but it often morphs into a rules-based system.¹⁴⁴ The key to the latter system's perceived superiority in the Internet context is flexibility.

Some financial regulators abandon the dichotomy and emphasize prudence.¹⁴⁵ Prudential regulation acknowledges that

¹³⁸ *E.g.*, Ruth B. Carter & Gary E. Marchant, *Principles-Based Regulation and Emerging Technology*, in *THE GROWING GAP BETWEEN EMERGING TECHNOLOGIES AND LEGAL-ETHICAL OVERSIGHT: THE PACING PROBLEM* 157 (Gary E. Marchant ET AL. eds., 2011) (discussing, in part, the differences between rules-based and principles-based systems).

¹³⁹ *Id.* at 158 (citation omitted).

¹⁴⁰ *Id.* at 157. The United Kingdom and Canada follow this approach to regulate financial institutions. *Id.* at 160. It is important to note that although this paper will promote a flexible approach in the Bitcoin context, principles-based regulation is not perfect. *Id.* (“The U.K.’s . . . financial regulation came under considerable criticism with the recent high-profile failure of Northern Rock Bank. . . .”) (citation omitted).

¹⁴¹ *Id.* at 158 (citation omitted).

¹⁴² Carter & Marchant, *supra* note 138, at 158 (citation omitted).

¹⁴³ *Id.* (“[Principles-based regulation] provide[s] greater agility for adapting to new situations and contexts that arise in rapidly changing areas of activity” and “encourage[s] more collaborative approaches and focus on finding solutions to problems instead of being overburdened by attempts to stay in compliance with an inflexible rules-based system.”) (citations omitted).

¹⁴⁴ *Id.* at 160 (“[Canada’s regulations prohibiting ‘unfair practices’ began] to resemble rules when it provides specific definitions, clarifications, and requirements.”) (citation omitted)).

¹⁴⁵ Annette L. Nazareth, Commissioner, U.S. Sec. & Exch. Comm’n, Speech by SEC Commissioner: Remarks before the SIFMA Compliance and Legal Conference (Mar. 26, 2007). <http://www.sec.gov/news/speech/2007/spch032607aln.htm>; see generally EDWARD V. MURPHY, WHO REGULATES WHOM AND HOW? AN OVERVIEW OF THE U.S. FINANCIAL REGULATORY POLICY FOR BANKING AND SECURITIES MARKETS, CONG. RESEARCH SERV. (2013), available at <http://www.fas.org/sgp/crs/misc/R43087.pdf> (explaining regulatory policies of agencies that oversee the banking and securities markets). For United Kingdom’s approach to prudential regulation in the financial markets, see Financial Services Act, 2012, c. 2 (U.K.) (governing the Prudential Regulation Authority); 2009 O.J. (L 267) 7–

firms within an industry vary, identifies the firms that have the potential to pose as systemic risks to the economy, and places stricter regulations on those firms accordingly.¹⁴⁶ This approach historically applied to banks¹⁴⁷ but the former SEC Commissioner Annette Nazareth has championed it in the securities market.¹⁴⁸ In her words, “having a clear set of standards with a more flexible implementation approach for meeting those standards” means more efficient regulation.¹⁴⁹ It does not seek one universal solution but rather it aims for flexible rules to fit the needs of different market participants.¹⁵⁰ It encourages dialogs between regulators and market participants for a more responsive regime.¹⁵¹ The emphasis rests upon customization and flexibility to address the dynamic environment of today’s financial marketplace.¹⁵²

The new Bitcoin framework should toss out the classifications and focus on the elements of customization and flexibility. The stereotypes surrounding a seedy Bitcoin user¹⁵³ show that a rules-based scheme could lead to creative compliances or evasions or turn out to be unnecessarily burdensome.¹⁵⁴ A principles-based scheme may be more suitable because the law tends to lag behind the fast pace of technology.¹⁵⁵ However, no single approach can

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¹⁴⁶ See Nazareth, *supra* note 145 (explaining the flexibility of prudential regulation); *Experts Analyze Recent Financial Reform Legislation*, COLUMBIA L. SCH. MAG. (Fall 2011), <http://www.law.columbia.edu/magazine/62269/experts-analyze-recent-financial-reform-legislation?layout=magazine.print> (last visited Nov. 15, 2015).

¹⁴⁷ Murphy, *supra* note 145, at 5.

¹⁴⁸ Press release, U.S. Sec. & Exch. Comm’n, Commissioner Nazareth Announces Intention to Leave SEC, (Oct. 2, 2007), <http://www.sec.gov/news/press/2007/2007-210.htm>.

¹⁴⁹ Nazareth, *supra* note 145.

¹⁵⁰ *Id.* (“The era of a one-size-fits-all regulatory regime is rapidly becoming outmoded.”).

¹⁵¹ *Id.* (“In our current financial marketplace, a high degree of public and private sector cooperation must occur to meet the challenges of rapidly evolving financial markets, trading every more complex products.”).

¹⁵² *Id.*

¹⁵³ See Kashmir Hill, *Congress Is Nervous About This Whole Bitcoin Thing*, FORBES (Aug. 15, 2013), <http://www.forbes.com/sites/kashmirhill/2013/08/15/congress-is-nervous-about-bitcoin/> (Labeling Bitcoin users as “cryptonerds” and implying a certain level of savvy).

¹⁵⁴ See Vincent Di Lorenzo, *Principles-Based Regulation and Legislative Congruence*, 15 N.Y.U. J. LEGIS. & PUB. POL’Y 45, 47–48, 85–86 (2012) (discussing how rules-based regimes may lead to unsavory results, using unsafe mortgage products as an example).

¹⁵⁵ Manav Tanneeru, *Can the Law Keep up With Technology?*, CNN (Nov. 17, 2009), <http://www.cnn.com/2009/TECH/11/17/law.technology/index.html> (“ Gen

guarantee perfect results. The solution should be a “holistic and whole government” approach that focuses on addressing the specific needs of virtual currencies and their users.

The government should express its objectives but allow the market participants to assist in finding the best method of compliance. For example, the government could release a statement expressing its anti-money laundering concerns. The individual exchanges would then create monitoring systems that raise red flags whenever suspicious characteristics are detected. The monitoring efforts should be comparable to the scales of those organizations’ operations and reasonable in relation to their available resources. The bigger businesses that are perceived to be systemic risks to the virtual economy would be subject to heightened regulation but startups and small-sized exchanges would not have to worry about the exorbitant costs of compliance. Being flexible enough to provide customized responses to Bitcoin firms would build toward more efficient regulation.

C. Consider Variations of Self-Regulation

A more extremist approach is to take inspiration from video games and allow the Bitcoin community to regulate itself.¹⁵⁶ It may seem silly to compare international markets to video games but there are many similarities between Bitcoin and an in-game economy that has grown large enough for game money to obtain real world value. For example, the World of Warcraft virtual economy is actually larger than the Bitcoin economy.¹⁵⁷ In fact, the creators of World of Warcraft have a market cap of \$20 billion.¹⁵⁸

erally, [the law] is at least five years behind technology as it is developing,’ said Andrea Matwyshyn, a professor at the University of Pennsylvania’s Wharton School.”)

¹⁵⁶ Bitcoin itself shares a gaming past. Mt. Gox, short for Magic: The Gathering Exchange, started as a trading platform for Magic: The Gathering card players. James J. Angel, *Don’t Get Bitten by Bitcoins, Opinion*, CNN (Apr. 12, 2013), <http://www.cnn.com/2013/04/11/opinion/angel-bitcoin-currency>. This approach is also consistent with President Barrack Obama’s message for improving regulation and regulatory review. Exec. Order No. 13563, 76 Fed. Reg. 3821 (Jan. 18, 2011); Memorandum for the Heads of Executive Departments and Agencies (Mar. 11, 2011), <http://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Principles-for-Regulation-and-Oversight-of-Emerging-Technologies-new.pdf> (“agencies should consider the option not to regulate”).

¹⁵⁷ Salvatore Delle Palme, *The Archetypes of Virtual Currency*, LTB NETWORK (Aug. 23, 2013), http://letstalkbitcoin.com/the-archetypes-of-virtual-currency/#.UjUq_5PD-P8.

¹⁵⁸ *Id.*

In-game economies of a game such as *Eve Online* can rival those of small countries.¹⁵⁹ In fact, three major gaming companies—CCP, Valve, and ArenaNet—have started to employ economists and analysts to ensure that everything is running well in their virtual economies.¹⁶⁰ This oversight was sought after a 2007 debacle where the then-newly-passed Unlawful Internet Gambling Enforcement Act incited a virtual bank run in the game *Second Life*, ultimately costing players \$750,000 with just one in-game bank.¹⁶¹

There are several key parallels to learn from. First, for unknown reasons, cheating is rare in virtual economies despite the lack of oversight.¹⁶² Second, virtual banks are voluntarily “diligent and efficient” because there is no central bank or Federal Reserve to provide a bail out in a crisis.¹⁶³ Third, although players hide behind screen names and avatars, their true identities are traceable through a complex mathematical mapping of their transactions.¹⁶⁴

The comparison between the two virtual worlds is on point. One observation regarding a lack of cheating in the virtual economies is that regulatory compliance is not the only motivation behind why people behave ethically. While Bitcoin is associated with many criminal enterprises, there are legitimate purposes that benefit most users. Second, the rationale behind the diligence and efficiency shown by in-game banks similarly would incentivize Bitcoin institutions to act prudently. Third, the same mapping method could provide law enforcement an avenue to pursue using the information found on the public transaction log. If the Bitcoin community could effectively regulate on its own, then governmental oversight only complicates the administration of the currency without producing any tangible or worthwhile benefits.

¹⁵⁹ Brad Plumer, *The Economics of Video Games*, WASH. POST (Sept. 28, 2012), <http://www.washingtonpost.com/blogs/wonkblog/wp/2012/09/28/the-economics-of-video-games/>. “If you’re creating a game with 100,000 users, with things that they can buy and sell, you need an economist just to help you tweak that system so that it doesn’t spin out of control,” says Robert Bloomfield, an economist at Cornell’s Johnson School of Management. *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.* But *Second Life* game designers did have to ban some forms of lending when players used virtual bank money to invest in unsuccessful deals in 2007. Plumer, *supra* note 159.

¹⁶⁴ See Ryan Kaminsky et al., *Identifying Game Players With Mouse Biometrics*, WASH. U. (Dec. 8, 2008), http://homes.cs.washington.edu/~miro/docs/mouse_ID.pdf (indicating that scholars have even tried to identify users through mouse clicks in certain games).

Social networks offer an alternative approach that allows the users to decide the levels of risk and responsibility that they are willing to accept. For example, Facebook users can set their desired levels of privacy.¹⁶⁵ However, if they sign up for any applications on the website, then they run the risk of unwanted sharing of personal information.¹⁶⁶ While the connection between social media and Bitcoin is tenuous at best, giving the users choices may make regulation easier. Users should be able to decide whether they want to conduct business with regulated companies or take risks with unregulated ones that may entail lower costs and higher returns.

Putting these choices into Bitcoin consumers' hands is a well-rounded compromise. For example, consumers should be given the option to either trade on registered or unregistered exchanges. The registered platforms will offer layers of consumer protection but they may give less in return due to the costs of compliance. The unregistered platforms will not pass off those costs to the consumers but there are higher risks. Instead of creating costly entries to the market and stifling the growth of Bitcoin through regulations, this framework reaches a happy medium that caters to all participants of the virtual market.

IV. REACTION TO NEW YORK'S PROPOSED RULES

After two years of deliberation and revisions, New York became the first state to formally regulate Bitcoin in passing new policy known as BitLicense in May 2015.¹⁶⁷ There were immediate negative responses about the stringent record keeping requirements amongst other complaints.¹⁶⁸ ShapeShift.io, a

¹⁶⁵ *How is This Information Shared?, Data Policy*, FACEBOOK, <https://www.facebook.com/about/privacy/your-info> (last visited Nov. 19, 2013).

¹⁶⁶ *Id.*; See Christina Bonnington, *Keep Your Facebook Friends From Finding Out You Use Tinder*, WIRED (Aug. 15, 2013), <http://www.wired.com/gadgetlab/2013/08/keep-apps-private-facebook/> ("And while you may have already tightened the controls on what photos and wall posts friends and strangers can view, you may be leaving one aspect of your digital existence open to exploration: What apps you use.").

¹⁶⁷ Michael J. de la Merced, *Bitcoin Rules Completed by New York Regulator*, N.Y. TIMES (June 3, 2015), http://www.nytimes.com/2015/06/04/business/dealbook/new-york-regulator-announces-final-rules-on-bitcoin.html?_r=0. Benjamin Lawsky stepped down around the same time. See 23 N.Y. COMP. CODES R & REGS. tit. 23 (West) for a complete set of the rules.

¹⁶⁸ Zach Wener-Fligner, *Why Bitcoin Buffs Hate New York's Proposal to Regulate Bitcoins*, QUARTZ (July 18, 2014), <http://qz.com/236825/why-bitcoin-buffs-hate-new-yorks-proposal-to-regulate-bitcoins/>.

startup that allows clients to exchange digital currencies without signing up for an account, cut off service to New Yorkers because the new regulatory policy is too “restrictive of innovation.”¹⁶⁹ In its exit statement, the company’s website reads “Bitcoin and blockchain technology have enabled a new standard of financial privacy and consumer protection. . . . Unfortunately, in spite of the technological achievements that now protect consumers, some jurisdictions have legally mandated the continued extraction of sensitive private information.”¹⁷⁰ More damaging, the company encouraged others in the industry to cut off service to New York.¹⁷¹ Nonetheless, the New York Department of Financial Services stood firm in its stance, stating “[u]ltimately, we believe that prudent regulation will be important to building greater consumer confidence in digital currency and sparking wider adoption.”¹⁷² Because New York is the first state to attempt to regulate this digital currency, the consequences from regulation are important lesson for other jurisdictions looking for inspiration.¹⁷³

CONCLUSION

Even in a capitalist society where privatization and self-autonomous markets are arguably favored, the U.S. government has tremendous impact on the economy through its policies. Regulations either win by protecting legitimate users or fall flat by creating inefficiencies that produce no measurable successes. There has already been a long lag on the government’s responsiveness to the Bitcoin phenomenon. It is important that pressured or rushed regulation is not used as a way to catch up. What is needed is a whole new system of governance that speaks to this currency’s departure from the traditional models of money and finance.

In order for this new system to succeed, the government should centralize its efforts into one specialized regime, work with market participants to implement its objectives through flexible rules, and

¹⁶⁹ Daniel Roberts, *Bitcoin Company Ditches New York, Blaming new Regulations*, FORTUNE (June 11, 2015), <http://fortune.com/2015/06/11/bitcoin-shapeshift-new-york-bitlicense/>.

¹⁷⁰ New York is listed as one of the jurisdictions. *Id.*

¹⁷¹ *Id.*

¹⁷² *Id.* (quoting the N.Y. Dep’t of Fin. Serv.).

¹⁷³ “Other states are already looking to the BitLicense as a model for their own frameworks. We are working with them to ensure they do not repeat the mistakes made here.” (quoting Jerry Brito, Coin Center’s executive director), *de la Merced*, *supra* note 167.

explore nontraditional options that may include self-regulation. Otherwise, legitimate Bitcoin users may become frustrated and abandon the currency, thus ruining the burgeoning success story of a peer-to-peer model that holds so much promise for addressing some of today's financial concerns. Others should learn from New York's experience and adopt a more flexible and adaptive set of rules that complements the core philosophy of Bitcoin culture.