

BITCOIN, ITS LEGAL CLASSIFICATION AND ITS REGULATORY FRAMEWORK

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Abstract:

Bitcoin is a revolutionary computer protocol created as a decentralized payment system. This article discusses the potential legal classification of Bitcoin and the consequences thereto. Furthermore, it considers the current regulatory landscape applicable to Bitcoin and the areas that call for additional regulation. I propose that given Bitcoin's unique features and related policy considerations, technology specific regulations need to be implemented to protect consumers and bring legitimacy to digital currencies.

Given the fluctuating nature of the law, this article is limited to the current state of the law and does not intend to cover every aspect of Bitcoin; it covers current issues as discussed on a day-to-day basis up until December 31, 2014.

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I. INTRODUCTION

Everything supposedly began in 2009 when Bitcoin, the first decentralized electronic currency, was introduced for the first time; or did it? As many suggest, irrespective of its name, the concept of Bitcoin was already a reality as far back as 1999, as apparent in this statement made by economic Milton Friedman:

One thing that's missing but will soon be developed is a reliable e-cash, a method whereby on the Internet you can transfer funds from A to B without A knowing B or B knowing A – the way I can take a \$20 bill and hand it over to you, and you may get that without knowing who I am.¹

Nonetheless, this concept, envisioned by Friedman and others came to life on January 3, 2009, when Satoshi Nakamoto created the Bitcoin Genesis Block, generating interest and triggering an ongoing international debate with respect to Bitcoin, its strengths, and its weaknesses. Some praise its international feature, qualifying it as “a global payment system anyone can use from anywhere at any time.”² Others criticize its anonymity, which can make it an attractive place for criminality.³ Some perceive its volatility as a danger, whereas others conceive it as a revolutionary innovation. In other words, it's a catch twenty-two: “The same thing that makes Bitcoin so alluring in some circles is, in fact, slowing down the development of the Bitcoin economy.”⁴

Whether Bitcoin is a good or bad financial instrument is no longer the question. “Over the 12 months prior to November 26, 2013 the value of Bitcoin has appreciated by more than

¹ Mark Andreessen, *Why Bitcoin Matters*, N.Y. TIMES (Jan. 21, 2014, 11:54 AM), <http://dealbook.nytimes.com/2014/01/21/why-bitcoin-matters>.

² *Id.*

³ Thomas R. Carper, Chairman, Comm. on Homeland Sec. & Governmental Affairs, Opening Statement, Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies (Nov. 18, 2013), *available at* <http://www.hsgac.senate.gov/download/?id=a8de9c3e-c568-4d85-bd3c-1c2365695c47>.

⁴ Nermin Hajdarbegovic, *Marc Andreessen Explains Why 2014 Will be the Year of Bitcoin*, COINDESK (Jan. 22, 2014, 15:00 GMT), <http://www.coindesk.com/marc-andreessen-believes-bitcoin>.

6000 percent, and it has achieved a current market capitalization of over \$8 billion.”⁵ Despite a drastic drop of more than fifty percent from the beginning of the year 2014 to the end of it, with a current value in the mid-300 US dollars, Bitcoin is still trading at a price “three-times above the amount it was trading at during the highs of April 2013.”⁶ Additionally, Bitcoin is used by over 100,000 people, and hundreds of thousands of dollars’ worth of Bitcoin is traded every day. It even has greater volume transactions than Western Union and is becoming a real threat to Paypal,⁷ which explains the latter’s decision to accept payments in Bitcoin⁸. In certain countries, Bitcoin is accepted for fee tuitions (Cyprus),⁹ in others for restaurants meals (restaurant Le Petit Jardin in Los Angeles),¹⁰ and since January 2013 the world’s biggest retailer, Overstock.com, began accepting Bitcoin,¹¹ followed by Expedia, Wikipedia,¹² and by Microsoft in December 2014¹³. In other words, Bitcoin is “an idea whose time has come.”¹⁴ The fundamental question that remains now is the legal classification of Bitcoin for regulatory purposes. Indeed, even if there are disagreements as to whether Bitcoin is a currency, a commodity, a security, or a whole

⁵ Katten Muchin Rosenman LLP, *Bitcoin: Current US Regulatory Developments* (Nov. 26, 2013), <http://www.kattenlaw.com/36677>.

⁶ Joon Ian Wong, *Bitcoin Price 2014 : A Year in Review*, COINDESK (Dec. 27, 2014, 9:45 GMT), <http://www.coindesk.com/bitcoin-price-2014-year-review/>

⁷ Jerin Matthew, *Bitcoin Set to Overtake eBay's PayPal in Transaction Volume*, INT’L BUS. TIMES (May 24, 2014, 8:44 BST), <http://www.ibtimes.co.uk/bitcoin-set-overtake-ebays-paypal-transaction-volumes-1449856>.

⁸ Jose Paglieri, *PayPal now lets shops accept Bitcoin*, CNN MONEY (Sept. 26, 2014, 6:15 PM) <http://money.cnn.com/2014/09/26/technology/paypal-bitcoin/index.html>.

⁹ Paul Szoldra, *A Cyprus University is First in the World to Accept Bitcoin for Tuition*, BUS. INSIDER (Nov. 21, 2013, 12:52 AM), <http://www.businessinsider.com/cyprus-university-bitcoin-tuition-2013-11>.

¹⁰ Emma G. Gallegos, *Why One Los Angeles Restaurant Started Taking Bitcoins*, LAIST (Nov. 12, 2013, 2:59 PM), http://laist.com/2013/11/12/local_restaurant_starts_taking_bitc.php.

¹¹ Ian Kar, *What Companies Accept Bitcoin?*, NASDAQ (Feb. 4, 2014, 10:05 AM), <http://www.nasdaq.com/article/what-companies-accept-bitcoin-cm323438#ixzz2vDJixvjL>. See also Matthew Warburton, *Bitcoin Can Be Spent on University and Pizza*, LIBERTY VOICE (Mar. 23, 2014), <http://guardianlv.com/2014/03/bitcoin-can-be-spent-on-university-and-pizza>.

¹² Paul Vigna & Michael Casey, *BitBeat: Wikipedia Adopts Bitcoin*, WALL ST. J. (July 30, 2014, 4:45 PM), <http://blogs.wsj.com/moneybeat/2014/07/30/bitbeat-wikipedia-adopts-bitcoin>. See also Paul Vigna, *Expedia Starts Accepting Bitcoin for Hotel Bookings*, WALL ST. J. (June 11, 2014, 8:00 AM), <http://blogs.wsj.com/moneybeat/2014/06/11/expedia-starts-accepting-bitcoin-for-hotel-bookings>.

¹³ Pedro Hernandez, *Microsoft: Bitcoin Accepted Here*, EWEEK (Dec. 14th, 2014), <http://www.eweek.com/cloud/microsoft-bitcoin-accepted-here.html>.

¹⁴ Jim Harper, *Bitcoin Foundation Lobbying*, BITCOIN FOUND. (July 9, 2014) <https://bitcoin-foundation.ghost.io/bitcoin-foundation-lobbying/>.

new type of money,¹⁵ all agree that the absence of regulatory guidance concerning Bitcoin creates uncertainty both for users and regulators. This undermines Bitcoin's potential as a new financial tool while allowing for greater criticism of Bitcoin and radical attempts to regulate or even ban Bitcoin,¹⁶ as initially undertaken in China¹⁷. Moreover, Bitcoin is no longer the only crypto-currency, as many others have been developing, including Ripple, Litecoin, Peercoin, Darkcoin and Dogecoin. If Bitcoin's price was to collapse, its users would switch to another currency, such that there is still a need to address the concerns raised by crypto-currencies that are continually gaining importance.¹⁸

The purpose of this article is to bring light to the current state of regulations applicable to Bitcoin. On the one hand, I will look at the legal classification of Bitcoin, considering the various theories that have been brought forward, their applicability to Bitcoin under U.S. laws, and the consequences of such classification for regulatory purposes. On the other hand, I will discuss the current regulatory framework, consider which areas call for additional regulation, and suggest which regulatory framework would be most appropriate.

II. WHAT IS BITCOIN FROM A LEGAL PERSPECTIVE

A. Bitcoin, the Technology, in a Nutshell

Prior to diving into legal classification, one needs to know how Bitcoin functions. Bitcoin is a revolutionary internet-wide payment system that does not rely on a central authority to secure and control its money supply.¹⁹ Instead, the Bitcoin network consists of computers around

¹⁵ Katten Muchin Rosenman LLP, *supra* note 5.

¹⁶ *Id.*

¹⁷ Alistair Charlton, *Chinese New Year Bitcoin Ban: End of Days or Empty Threat?*, INT'L BUS. TIMES (Jan. 30, 2014, 15:26 GMT) <http://www.ibtimes.co.uk/chinese-new-year-bitcoin-ban-end-days-or-empty-threat-1434495>.

¹⁸ *Mining digital gold*, ECONOMIST (Apr. 13, 2013), <http://www.economist.com/news/finance-and-economics/21576149-even-if-it-crashes-bitcoin-may-make-dent-financial-world-mining-digital>.

¹⁹ *Hearing on Virtual Currencies Before the N.Y. Dep't of Fin. Servs.*, (2014) [hereinafter *Hearing*] (testimony of Marco Santori, Chairman, Regulatory Affairs Comm., the Bitcoin Found.), (Jan. 28, 2014), *available*

the world running the Bitcoin software, which operates the protocol for administering Bitcoin transactions. Anyone who wants to join the network can download the software and create an account from which “electronic money” can be transferred to other accounts. This allows “anyone in the world to pay anyone else in the world any amount of value of Bitcoin by simply transferring ownership of the corresponding slot in the ledger.”²⁰

The public ledger is crucial; it is the technology that records all transactions occurring in the system. It is broken into blocks of transactions, linked to the previous block, forming what is called the “blockchain.”²¹ The blockchain is critical to follow every Bitcoin transaction made and ensure that no one is double spending the bitcoins they own. This procedure replaces the function of a central administrator who would have to implement policies against double spending. I will nonetheless address some security concerns and data protection issues that this system may trigger in Section III.

The new blocks are created by “mining,” which refers to a mathematical process of creating a new block in which recent transactions are incorporated by individuals referred to as miners. This process of confirmation is very complex in order to ensure that it can’t be done by anyone, and that fraudulent transactions will not be confirmed.²² Once miners attach the previous transaction history to the new block, the previous block becomes stronger and the chain becomes the basis for other miners to add blocks. Because individuals, not otherwise designated, conduct this process, Bitcoin is considered a community run, or peer-to-peer, network.

at <https://bitcoinfoundation.org/wp-content/uploads/2014/01/Bitcoin-Foundation-Marco-Santori-NYDFS-Hearing-on-Virtual-Currencies-Testimony1.pdf>.

²⁰ Andreessen, *supra* note 1.

²¹ *Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies: Before the S. Comm. on Homeland Sec. & Govt’ Affairs*, 113th Cong. 4 (2013) (statement of Patrick Murck, Gen. Counsel, The Bitcoin Foundation, Inc.), available at <http://www.hsgac.senate.gov/hearings/beyond-silk-road-potential-risks-threats-and-promises-of-virtual-currencies>.

²² Carper, *supra* note 3.

The mechanism behind a transaction can be compared to the acquisition of a seat on a stock exchange. Essentially, one buys into the ledger a fixed number of slots for cash or by selling a product and service for Bitcoin. That person can then sell out of their spot in the ledger by trading their Bitcoin to someone who wants to buy in the ledger, without requiring any approval and at almost no fees. Instead of “coins,” it is slots in the ledger that are exchanged. In other words, Bitcoin’s value is dependent both on the current volume and velocity of payments running through the ledger, and on speculation on future use of the payment system.²³ In approving a transaction, a person uses their “private key” to sign the transaction. The private key is a number that represents a person’s account, whose signature will be verified with the corresponding public key.²⁴

One should note that there are similar crypto-currencies developing in the global market. Indeed, Ripple, Litecoin, Peercoin, and Dogecoin are all virtual currencies based on the principals of a peer-to-peer, decentralized, digital currency whose implementation relies on the principles of cryptography to validate the transactions and generate the currency itself. They are all essentially based on the Bitcoin protocol with some distinctions. For example, Litecoin has gained the most popularity relative to Bitcoin because of the rising value of the Bitcoin currency. It is said to be “the silver to Bitcoin’s gold”²⁵ because it offers faster-moving transactions and a more democratic mining process. Indeed, Litecoin has a potentially wider circulation than Bitcoin, as its maximum limit is 84 million, and it only requires a low-end graphics card. Dogecoin, associated with an image of a dog, is the cheapest virtual currency, and is appreciated for the ability of members to reward each other with coins for sharing interesting content on

²³ Andreessen, *supra* note 1.

²⁴ Artus Krohn-Grimberghe & Christoph Sorge, *Practical Aspects of the Bitcoin System*, CRYPTOME, <http://cryptome.org/2013/09/bitcoin-practical-aspects.pdf> (last visited Jan. 29, 2015).

²⁵ Andrew Torba, *Is Litecoin the Silver to Bitcoin’s Gold?*, COINDESK (Nov. 27, 2013, 17:00 GMT), (<http://www.coindesk.com/litecoin-silver-bitcoins-gold/>)

social media.²⁶ Peercoin is the eco-friendly version of Bitcoin, as it uses less energy powering equipment to solve the formula. As a result, there is also no limit on the amount that can be created, but it will eventually have an inflation rate of 1%.²⁷ Lastly, Ripple, has won some mainstream support because it has big Silicon Valley backers and promises to be more transparent and easier to regulate than Bitcoin. Transactions are approved (or not) in a few seconds, compared with the ten minutes that a typical Bitcoin trade takes to be confirmed. It is also limited in its capacity to 100 billion.²⁸ There is a suggestion that these alternative cryptocurrencies might become competition to Bitcoin, and potentially oust it. However, presently, Bitcoin is still years ahead. Its value is measured in the billions of dollars. In addition, so long as they share Bitcoin's weakness of a highly fluctuating value, they are not likely to create fierce competition.²⁹

One should also note the development of Darkcoin, which soared in value from 75 cents to \$7 in May 2014.³⁰ While the other cryptocurrencies attempt to offer more secure and consumer friendly alternatives to Bitcoin, Darkcoin's success lies in its increased anonymity, facilitating illicit purchases and becoming notorious for drugs, weapons, and other illegal items. The virtual currency community must move away from those types of activities and instead bring

²⁶ Marc Shoffman, *Do You Know Your Litecoin From Your Dogecoin? As Bitcoin take a dive we look at the virtual currency rivals waiting in the wings*, THIS IS MONEY (Mar. 3, 2014, 12:30 PM), <http://www.thisismoney.co.uk/money/investing/article-2570199/Are-virtual-currencies-worth-backing.html#ixzz2y7el3vUq>.

²⁷ *Id.*

²⁸ *Id.*

²⁹ Nathaniel Popper, *In Bitcoin's Orbit: Rival Virtual Currencies Vie for Acceptance*, N.Y. TIMES, NOV. 25, 2013, at B1, available at http://dealbook.nytimes.com/2013/11/24/in-bitcoins-orbit-rival-virtual-currencies-vie-for-acceptance/?_php=true&_type=blogs&_r=0.

³⁰ *Meet Darkcoin - Bitcoin's Shadowy Cousin*, SKY NEWS (May 22, 2014, 8:56 UK), <http://news.sky.com/story/1266609/meet-darkcoin-bitcoins-shadowy-cousin>.

its innovation to benefit charities, as successfully undertaken by the Sri Lanka Campaign for Peace and Justice and, since October 2014,³¹ by the Sierra Leone Group to fight Ebola³².

Lastly, it is worth noting that in October 2014, the concept of sidechains was introduced in order to combine all the unique features of various alternative crypto-currencies and put them under one Bitcoin ecosystem. The sidechains would allow Bitcoin to be transferred between blockchains and, therefore, facilitate the use of such alternative crypto-currencies.³³

B. Various Users, Various Uses, Various Classifications?

Inherent to the mechanism of Bitcoin is the reality that many actors are involved with different roles, and, thus, different uses are made of Bitcoin. Indeed, it displays certain features enabling it to function as a method of payment similar to a currency, and alternatively as a speculative investment or even otherwise.³⁴ Because the characterization will dictate the regulation, it is necessary to look at the various uses made of Bitcoin and tie it to the appropriate regulation.

As explained in an article by the firm Katten Muchin Rosenman LLP, “to date, no US legislature or regulator has officially determined that Bitcoin is a currency, commodity, commodity money, or security.”³⁵ At the hearings taking place in New York City in January 2014 by the New York Department of Financial Services, speakers referred to Bitcoin and similar currencies using terms such as digital currency, virtual currency, cryptocurrency, and others. In addition, as property ownership could be attached to a Bitcoin, such as a land deed, it

³¹ Jon Southurst, *Sierra Leone Group Continues Bitcoin Drive to Fight Ebola*, COINDESK, Oct. 12, 2014, 14:00 GMT, <http://www.coindesk.com/sierra-leone-group-continues-bitcoin-drive-fight-ebola/>.

³² Victoria Wagner Ross, *Bitcoin Works For Charity and Global Good*, EXAMINER (May 25, 2014, 4:11 PM), <http://www.examiner.com/article/bitcoin-works-for-charity-and-global-good>.

³³ Jon Evans, *Bitcoin 2.0: Sidechains and Ethereum and Zerocash, Oh My!*, TECHCRUNCH (Oct. 25, 2014), <http://techcrunch.com/2014/10/25/bitcoin-2-0-sidechains-and-zerocash-and-ethereum-oh-my/>.

³⁴ Gareth Pyburn, *Bitcoin Legal: Taxonomy of Regulatory Reactions, APAC's Outlook and Potential for BTC-Linked Derivatives*, LEXOLOGY (Mar. 22, 2014), <http://www.lexology.com/library/detail.aspx?g=0eb2ec8e-d7a5-43ab-b177-617fd0c981f9>.

³⁵ Katten Muchin Rosenman LLP, *supra* note 5.

was suggested that Bitcoin could also assume the appearance of an asset. Other countries have been more proactive in making statements with respect to Bitcoin's classification. For instance, in Germany, Bitcoin has been recognized as a "unit of account" and, therefore, referred to as private money.³⁶ In Canada, for tax purposes, the Canada Revenue Agency ("CRA") treats Bitcoin as a commodity.³⁷ In March 2014, the Internal Revenue Service ("IRS") made a determination that Bitcoin should be treated as property for tax purposes, but this does not necessarily imply that Bitcoin will be regulated as property in all respects and in all transactions. Indeed, at the Silk Road trial that took place in July 2014 against Ross Ulbricht on money laundering charges, the latter brought as a defense the argument that since the IRS does not recognize Bitcoin as money, the transactions he conducted through the use of Bitcoin were not legally cognizable "financial transactions" within the meaning of the anti-money laundering ("AML") regulations. The judge dismissed this argument, confirming that the IRS's classification of Bitcoin will not dictate its regulation for all matters, nor shelter it from the application of existing AML regulations.³⁸ A similar case was brought against Reid and Michell Abner Espinoza in September 2014 for engaging in fake transactions with undercover agents through online marketplace LocalBitcoins.com and converting \$30,000 of cash into Bitcoin.³⁹ Both defendants have filed to have the money laundering charges dismissed, invoking the IRS guidance to the effect that Bitcoin is not money, but it is unlikely that such a defense will be

³⁶ Tyler Durden, *Bitcoin Is Recognized As "Legal Tender" in Germany*, ZERO HEDGE (Aug. 19, 2013, 11:08 PM), <http://www.zerohedge.com/node/477785>.

³⁷ Adam Bata, *The Brief on Bitcoins*, STEWART MCKELVEY LAW. (Feb. 26, 2014), <http://stewartmckelveyblogs.com/themedium/2014/02/26/the-brief-on-bitcoins/>.

³⁸ Kyt Dotson, *Judge knocks Down 'Bitcoin is Not Money' Argument in Silk Road Trial*, SILICON ANGLE (July 10, 2014), <http://siliconangle.com/blog/2014/07/10/judge-knocks-down-bitcoin-is-not-money-argument-in-silk-road-trial/>.

³⁹ Tanayaa Macheel, *4 Court Cases Helping Shape the US Stance on Bitcoin*, COINDESK (Sept. 28, 2014, 14:09 GMT), <http://www.coindesk.com/4-court-cases-helping-determine-us-stance-bitcoin/>.

retained.⁴⁰

There have been a few court cases and regulatory opinions concerning Bitcoin, but the findings are not particularly useful as they do not seem to be consistent and remain very fact specific. For example, the Federal Election Commission ("FEC") and the Magistrate Judge in the case *SEC v. Shavers*⁴¹ issued differing views on the possible classification of Bitcoin. The FEC, after delaying its decision, determined that political committees can accept contributions made in Bitcoin as a form of "in-kind donation" rather than money and that it would be subject to the same holding period and other diverging regulations applicable to campaign contributions made in the form of stocks or bonds.⁴² In contrast, the Magistrate Judge in *Shavers* stated that Bitcoin "can be used as money[]" and possesses attributes of a "currency or form of money...."⁴³

In light of these disagreements, I will look in further detail at each potential classification and analyze to what extent Bitcoin could be characterized as such. I will also consider some of the consequences of each characterization.

1. Alternative method of payment

At first glance, Bitcoin seems to be money. It can be used to buy and sell goods and services, or as a unit of account. For instance, in March 2014, acceptance of Bitcoin has stepped up from small transactions for restaurant meals to a luxury villa in Bali worth 1,000 Bitcoin, or

⁴⁰ *Id.*

⁴¹ No. 4:13-CV-416, 2013 WL 4028182, at *2 (E.D. Texas Aug. 6, 2013) (the court found that the defendant met the definition of investment contracts under sections 20 and 22 of the Securities Act of 1933).

⁴² Stan Higgins, *FEC Approves Bitcoin In-Kind Donations for US Political Campaigns*, COINDESK (May 8, 2014, 11:35 AM), <http://www.coindesk.com/fec-approves-bitcoin-kind-donations-us-political-campaigns/>.

⁴³ *Shavers*, No. 4:13-CV-416, 2013 WL 4028182, at *2. See also *Bitcoin: Current US Regulatory Developments*, KATTEN MUCHIN ROSENMAN LLP (Nov. 26, 2013), http://www.kattenlaw.com/files/50011_Bitcoin_Current%20US%20Regulatory%20Developments.pdf.

\$500,000.⁴⁴ It can be converted to fiat currency, including US dollars. It is therefore “anything that is generally accepted in payment for goods or services or in the repayment of debts.”⁴⁵

However, if Bitcoin falls under the economic definition of money, it does not qualify as a currency, electronic money, or payment instrument from a legal perspective. Indeed, the correct test to determine whether it is a currency was laid out by the Supreme Court in *California Bankers Association v. Shultz*, as follows: “Currency is defined in the Secretary’s regulations as the ‘coin and currency of the United States or of any other country, which circulate in and are customarily used and accepted as money in the country in which issued.’”⁴⁶ Bitcoin is not issued nor sanctioned by the US, or by any government.⁴⁷ As Bitcoin lacks the requirements of “legal tender” in all jurisdictions,⁴⁸ it cannot qualify as a currency. Similarly, it does not fit the definition of “payment instrument” in Finland⁴⁹ or “electronic money” as defined by the European directive⁵⁰ because the law stipulates that a payment instrument must have an issuer responsible for its operation.

However, as we find ourselves in “new and somewhat uncharted waters”⁵¹ with respect to Bitcoin, many express the need to look beyond the strict legal definition. Instead, we should look at whether Bitcoin has the functions of money. If so, as an alternative method of payment, Bitcoin should be regulated as such, with adjustments as needed.

⁴⁴ Leslie Chaffer, *Bitcoin Steps Pp From Sandwiches to Villas*, CNBC (Mar. 19, 2014, 11:54 PM), <http://www.cnbc.com/id/101509194>.

⁴⁵ CHARLES PROCTOR, *MANN ON THE LEGAL ASPECT OF MONEY* 10 (Oxford University Press ed., 7th ed. 2012).

⁴⁶ 416 U.S. 25, 39 n.14 (1974) (citing 31 C.F.R. § 1010.330 (c)(1)(i) (1974)).

⁴⁷ Tradingtitan, *Are Bitcoins Securities Under U.S. Law?*, BITCOIN & TRADING TITAN BLOG (Feb. 2014), <http://blog.bitcointitan.com/post/16995504313/are-bitcoins-securities-under-u-s-law>.

⁴⁸ Zachariah Parry, *Is Bitcoin Legal tender? No, But It Is Legal Currency*, LAS VEGAS TRIB. (Aug. 28, 2014), <http://lasvegastribune.net/bitcoin-legal-tender-legal-currency/>.

⁴⁹ Kati Pohjanpalo, *Bitcoin Judged Commodity in Finland After Failing Money Test*, BLOOMBERG (Jan. 20, 2014) <http://www.bloomberg.com/news/2014-01-19/bitcoin-becomes-commodity-in-finland-after-failing-currency-test.html>.

⁵⁰ Krohn-Grimberghe & Sorge, *supra* note 24.

⁵¹ Mary Thompson, *Bitcoin bickering: How much regulation?*, CNBC (Apr. 18, 2014, 6:00 AM), <http://www.cnbc.com/id/101586349>.

From an economic perspective⁵² shared by the European Central Bank⁵³ and the German Bundesbank, the functions of money are as follows: 1) a store of value, 2) a means of exchange and 3) a unit of account⁵⁴. Here again, there are divergent opinions as to whether Bitcoin possesses each of those functions.

a. Store of Value

An instrument is a store of value if it “retains its purchasing power over time with a good deal of certainty.”⁵⁵ First, acquired Bitcoin do not have to be spent immediately. In principle, the key pairs can be stored for years before the value is retrieved. In the meantime, the value of Bitcoin will fluctuate, like any other conventional currency and “barring hyperinflation, fluctuations of value do not prevent fulfillment of the store of value function.”⁵⁶ Indeed, the economist Cuadras-Morato demonstrates that even a perishable item could operate as money.⁵⁷ However, in the report “Is Bitcoin a Real Currency?” published by the National Bureau of Economic Research, Yermack suggests that Bitcoin is too volatile, such that it undermines its usefulness as a store of value.⁵⁸ Even if Bitcoin is indeed subject to more fluctuation than other currencies at this time because it is limited in supply, its value may still be considered more stable than other currencies, whose supply can double overnight, thereby doubling the prices. Second, there is a general observation that the “store of value function of all major currencies is

⁵² FRANCIS S. MISHKIN, *THE ECONOMICS OF MONEY, BANKING, & FINANCIAL MARKETS* (Denise Clinton ed., 7th ed. 2004).

⁵³ *Virtual Currency Schemes*, EUR. CENT. BANK, 10 (Oct. 2012), <http://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>.

⁵⁴ *Glossary: Functions of money*, DEUTSCHE BUNDESBANK, https://www.bundesbank.de/Navigation/EN/Service/Glossary/Functions/glossary.html;jsessionid=00004rTbm5IbT_uN-6xfGxcg6_-1?nsc=true&https=1&lv2=128958&lv3=145734&tab=0 (last visited Jan. 30, 2015).

⁵⁵ John Butler, *Is Money a Store of Value?*, FIN. SENSE (Nov. 3rd, 2010, 1:00 AM), <http://www.financialsense.com/contributors/john-butler-john-boylan/is-money-a-store-of-value>.

⁵⁶ Krohn-Grimberghe & Sorge, *supra* note 24.

⁵⁷ Xavier Cuadras-Morató, *Can Ice Cream be Money?: Perishable Medium of Exchange*, 66 J. ECONOMICS 103, 103 (1997), available at <https://pantherfile.uwm.edu/vesely/www/831/Papers/Coudras-Morato%201997%20JE.pdf>.

⁵⁸ David Yermack, *Is Bitcoin Real Currency?*, CTR. FOR FIN. STABILITY (Dec. 1, 2013), <http://www.centerforfinancialstability.org/research/DavidYermack-Bitcoin.pdf>.

substantially undermined, either through unsustainable fiscal and monetary policies around the globe or through a general unwillingness to allow meaningful relative currency appreciation.”⁵⁹ Therefore, Bitcoin should not be deprived of the characterization as currency on a strict interpretation of the store of value function of money. Moreover, new products have been developed to address Bitcoin’s price volatility. For instance, Tera Group Inc. has implemented a framework to create swaps linked to Bitcoin in order to hedge risks from it,⁶⁰ and Coinapult has offered a Lock service that allows users to peg the value of their Bitcoin to the price of gold, US dollars, or euros.⁶¹ In the same optic, in October 2014, MIT scientists alleged to have developed a machine-learning algorithm that can predict the price of Bitcoin.⁶²

b. Medium of Exchange

Economists define money as a “medium of exchange,” which:

passes freely from hand to hand throughout the community in final discharge of debts and full payment of commodities, being accepted equally without reference to the character or credit of the person who offers it and without the intention of the person who receives it to consume it or apply it to any other use than in turn to tender it to others in discharge of debts or payment for commodities.⁶³

It is apparent from this definition that Bitcoin may be characterized as such. First, Bitcoin is actually used to exchange goods and services, to allow a trade without direct use of goods. For instance, in the Czech Republic, Bitcoin can be used to pay for a pair of luxury shoes at the

⁵⁹ Butler, *supra* note 55

⁶⁰ Matthew Leising & Silla Brush, *Bitcoin Swaps Near Reality as Tera Creates Legal Framework*, BLOOMBERG (Mar. 24, 2014), <http://www.bloomberg.com/news/2014-03-24/bitcoin-swaps-near-reality-as-tera-group-forms-legal-framework.html>. See also Daniel Cawrey, *Hedgy Hopes to Tackle Bitcoin Volatility Using Multi-Signature Technology*, COINDESK (Oct. 18, 2014, 18:21 GMT), <http://www.coindesk.com/hedgy-hopes-tackle-bitcoin-volatility-using-multi-signature-technology/>.

⁶¹ Melissa Tolentino, *Coinapult Eliminates Bitcoin Volatility with ‘Locks’*, SILICONANGLE (July 31, 2014), <http://siliconangle.com/blog/2014/07/31/coinapult-addresses-bitcoin-volatility-with-locks/>.

⁶² PTI, *New MIT algorithm can predict price of Bitcoin*, ECON. TIMES (Oct. 26, 2014, 4:37 PM IST), <http://economictimes.indiatimes.com/news/science/new-mit-algorithm-can-predict-price-of-bitcoin/articleshow/44939538.cms>.

⁶³ Proctor, *supra* note 45 (citing *Moss v. Hancock*, [1899] 2 Q.B. 111).

Classic Shoes shop.⁶⁴ As a result, as there are more and more merchants who accept Bitcoin and given that the Bitcoin system was designed for that purpose, I conclude that Bitcoin can fulfill the medium of exchange function. In addition, Bitcoin can fulfill the element of “discharge of debt” because a creditor is free to accept Bitcoin in release of its debtor’s liability. Therefore, Bitcoin is usually recognized as a medium of exchange. Indeed, Sweden has recognized it as such since late 2012.⁶⁵ The only critique in that respect is that its actual use as a medium of exchange is still very limited as of 2014. This is why the British Financial Services Authority decided not to consider Bitcoin as money.⁶⁶ It shall be noted, however, that new services, such as market exchange pricing and instantaneous exchange facilities, are now facilitating the use of Bitcoin as a medium of exchange. On the one hand, market exchange pricing facilities allow retailers to set prices in the local currency and simultaneously display it in Bitcoin at current market exchange rates.⁶⁷ For instance, new products such as BitTag operate by automatically updating the price to reflect the constantly changing market exchange rate.⁶⁸ This encourages retailers to accept Bitcoin as a method of payment and makes it easier for shoppers to spend Bitcoin. On the other hand, instantaneous exchange facilities enable retailers “to accept Bitcoin without actually receiving Bitcoin.”⁶⁹ The intermediate payment service providers will receive Bitcoin but transfer to the seller the equivalent in local currency, thereby avoiding the exchange risk associated with holding Bitcoin. These innovative platforms allocate the speculative risk of holding Bitcoin and the concerns for its highly variable value, thereby encouraging its use as a

⁶⁴ Czech News Agency, *Bitcoins Can Buy Beer, Shoes in ČR*, PRAGUE POST (Jan. 1, 2014), <http://praguepost.com/economy/34189-bitcoins-can-buy-beer-shoes-in-cr>.

⁶⁵ Krohn-Grimberghe & Sorge, *supra* note 24.

⁶⁶ *Id.* See also Stephanie Lo & J. Christina Wang, *Bitcoin as Money?*, FED. RESERVE BANK BOSTON (Sept. 4, 2014), <http://www.bostonfed.org/economic/current-policy-perspectives/2014/cpp1404.pdf>.

⁶⁷ William J. Luther & Lawrence H. White, *Can Bitcoin Become a Major Currency?* 5 (George Mason Univ. Dep’t of Econ., Working Paper No. 14-17, 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2446604.

⁶⁸ A physical price tag for a digital currency. BITGAG, <http://bittag.net/> (last visited Jan. 30, 2015).

⁶⁹ Luther & White, *supra* note 67.

medium of exchange. In the same optic, since September 2014, Circle offers to link bank accounts to Bitcoin accounts to facilitate the use of the crypto-currency with no fees associated with the transfers.⁷⁰

c. Unit of Account

Even if there is no legal definition of this term, it is referred to by economists as the ability to express the value of goods by reference to something such as money. It serves as a “unit of account.”⁷¹

Bitcoin could theoretically be a unit of account. Indeed, “as long as the relation of its value to the value of other goods can be determined,”⁷² it can be considered as a unit of account even if those who accept Bitcoin usually state the price of the goods in U.S. dollars. An analogy can be made to Special Drawing Rights, which are recognized as units of account because of the “intent” to be used as such.⁷³

Yermack and others express criticism about characterizing Bitcoin as a unit of account. They suggest that given the lack of correlation of Bitcoin’s daily exchange rates with bona fide currencies, it is “useless for risk management purposes and is exceedingly difficult for its owners to hedge.”⁷⁴ However, in March 2014, the Winklevoss Twins introduced the Winkdex Index for pricing Bitcoin.⁷⁵ They described the index as “a blended price index that is designed to reflect

⁷⁰ Dennis Keohane, *Circle opens up, inviting anyone to link their bank account to Bitcoin*, BETA BOS. (Sept 29, 2014), <http://betaboston.com/news/2014/09/29/circle-opens-up-inviting-anyone-to-link-their-bank-account-to-bitcoin/>.

⁷¹ MISHKIN, *supra* note 52.

⁷² Krohn-Grimberghe & Sorge, *supra* note 24.

⁷³ *Id.*

⁷⁴ Yermack, *supra* note 58.

⁷⁵ Kashmir Hill, *Winklevoss Twins Launch 'Winkdex' For Bitcoin Pricing*, FORBES, (Feb. 19, 2014), <http://www.forbes.com/sites/kashmirhill/2014/02/19/winklevoss-brothers-launch-winkdex-for-bitcoin-pricing/>.

the true price of Bitcoin [and] to price the value of the Bitcoin held in the exchange-traded fund”⁷⁶ they are introducing. The determination of the price will be based on the three qualified Bitcoin Exchanges that see the highest volume of Bitcoin trading in any two-hour period. Such initiative may allow for a better functioning of Bitcoin as a unit of account and most certainly for a market to hedge against Bitcoin’s value.

In sum, one can argue that Bitcoin is simply not a conventional currency; it seems to have the functions of money, but, like any other five-year-old instrument would be, it is still instable and volatile.⁷⁷ Indeed, Bitcoin cannot be deposited in a bank and is not used for transactions such as mortgages. However, Bitcoin ATMs are starting to open in various parts of the world,⁷⁸ and Bitcoin is sometimes even taken as collateral to loans. In other words, and as even the skeptics themselves recognize it, the classification of Bitcoin as money may change rapidly, especially given the similarities with other currencies and the fact that it is evolving in the right direction.⁷⁹

Due to the concerns raised with respect to the classification of Bitcoin, the Financial Crimes Enforcement Network ("FinCEN"), a bureau of the US Department of the Treasury, decided to provide guidance on the concept of “virtual currency,” defining it as a currency with the exception of some of the attributes, in particular the legal tender status requirement. The FinCEN report goes on to define “convertible virtual currency” as a virtual currency that has either an

⁷⁶ *Id.*

⁷⁷ Jon Matonis, *Happy Birthday Bitcoin!*, BITCOIN FOUND. (Jan. 3, 2014), <https://bitcoinfoundation.org/2014/page/36/>.

⁷⁸ Melissa Aparicio, *Meet California's first Bitcoin ATM*, PCWORLD (Apr. 7, 2014, 3:35 AM), <http://www.pcworld.com/article/2140086/meet-californias-first-bitcoin-atm.html>.

⁷⁹ Tim Worstall, *Bitcoin is More Like a Speculative Investment than a Currency*, FORBES (Dec. 23, 2014, 1:16 PM), <http://www.forbes.com/sites/timworstall/2013/12/23/bitcoin-is-more-like-a-speculative-investment-than-a-currency/>.

equivalent value in real currency or acts as a substitute for a real currency.⁸⁰ This seems to be the most appropriate and accurate classification of Bitcoin to date. Before discussing the regulatory framework of virtual currencies, I will do an overview of the two other main characterizations of Bitcoin: as a security and as a commodity.

2. *An Investment*

On the heels of the collapse of what was once the leading exchange for Bitcoin, Mt Gox, Warren Buffet, one of the world's most respected investors, told CNBC television that "Bitcoin does not meet the test of a currency,"⁸¹ especially because it is "very speculative"⁸². This statement is consistent with Yermack's criticism of the characterization of Bitcoin as money. As a result, many suggest that Bitcoin behaves more like a speculative investment and should be regulated as a security.⁸³ At the center of this argument is the high volatility associated with Bitcoin, as pointed out by Ed Coville from RPC in its article, "Bitcoin: "real world" currency or speculative investment?":

With the number of Bitcoin transactions per day topping 100,000 in early December 2013, the same week that Bitcoin values peaked at over US\$1,200, the concern remains that speculation on Bitcoin's value far outweighs the use of the currency to pay for goods or services. Bitcoin market prices dropped below US\$600 later in December 2013, with Alan Greenspan among the commentators naming Bitcoin a bubble. Prices appear to have stabilized in the past few weeks, but the tendency for the currency to fluctuate in price more than US\$50 per day will still deter many investors.⁸⁴

⁸⁰ Ed Colville, *Bitcoin: "Real World" Currency or Speculative Investment?*, LEXOLOGY (Jan. 23, 2014), <http://www.lexology.com/library/detail.aspx?g=4cc94226-367c-44d0-9ba5-94aed79b1b92>.

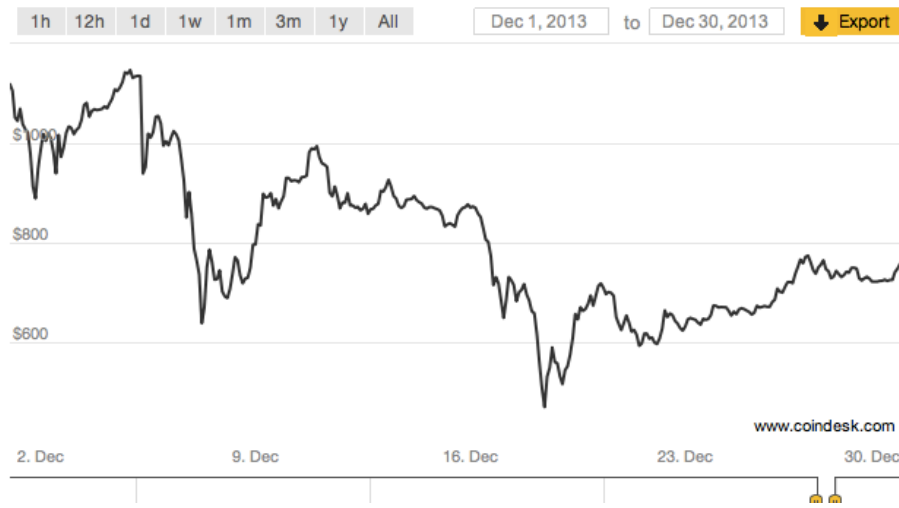
⁸¹ Ben Eisen, *Warren Buffett: Bitcoin is 'Not a Currency'*, MARKETWATCH (MAR. 3, 2014, 7:46 AM), <http://www.marketwatch.com/story/warren-buffett-bitcoin-is-not-a-currency-2014-03-03>.

⁸² *Id.*

⁸³ Joe Nocera, Op-Ed., *The Bitcoin Blasphemy*, N.Y. TIMES, Mar. 1, 2014, at A19, available at http://www.nytimes.com/2014/03/01/opinion/nocera-the-bitcoin-blasphemy.html?hp&rref=opinion&_r=0.

⁸⁴ Colville, *supra* note 80.

Sudden drop in value in December 2013⁸⁵



This concern has been further accentuated when in February 2014, Bitcoin dropped in value from around \$880 to the mid-\$500s,⁸⁶ and even further cratered by over eighty percent in the span of seconds after a modest block of less than 6,000 Bitcoin sent the price plunging from over \$600 to \$102⁸⁷. The fluctuation also materialized in the last days of May 2014 by an increase of twelve and a half percent in less than forty-eight hours,⁸⁸ not to mention the unexpected free fall drop from \$415 down to \$355 in just few days in November 2014⁸⁹.

In Norway, officials qualified Bitcoin as an “investment,” thus providing some protection to investors, but also opening the door for new taxes.⁹⁰ In the U.S., to this date, the SEC’s involvement in the Bitcoin industry remains minimal. Bitcoin has nonetheless gained some

⁸⁵ *Bitcoin Price Index Chart*, COINDESK, <http://www.coindesk.com/price/> (last visited Jan. 30, 2015).

⁸⁶ Nocera, *supra* note 83.

⁸⁷ Tyler Durden, *Bitcoin Flash Crashes, Drops By 80% In Seconds*, ZERO HEDGE (Feb. 10, 2014, 9:23 AM), <http://www.zerohedge.com/news/2014-02-10/bitcoin-flash-crashes-drops-80-seconds>.

⁸⁸ Jonathan Saewitz, *Bitcoin Price Defies Expectations*, CRYPTOCOINSNEWS (June 1, 2014, 2:52 AM), <http://www.cryptocoinsnews.com/bitcoin-price-defies-expectations>.

⁸⁹ David Parker, *Is the Bitcoin price crashing again?*, CRYPTOCOINS NEWS, <https://www.cryptocoinsnews.com/bitcoin-price-crashing/> (last updated Nov. 10, 2014, 1:41 PM).

⁹⁰ Jason Mick, *Norway Says Bitcoins are Speculative Investment “Not Currency”*, DAILYTECH (Dec. 16, 2013, 12:31 PM), <http://www.dailytech.com/Norway+Says+Bitcoins+are+Speculative+Investment+Not+Currency/article33937.htm>.

traction as an investment: there was an actual form S-1 filed as a registration statement for a Bitcoin Exchange Trading Fund (ETF) in July, 2013.⁹¹ The SEC indicated that the activities of the ETF and the Winklevoss Bitcoin Trust were securities transactions.⁹² Similarly, in July 2013, the SEC brought Ponzi scheme charges against a Bitcoin hedge fund and its operator, Trendon T. Shavers.⁹³ The hedge fund had promised investors 7% weekly interest when in reality it was a sham in which Shavers used Bitcoin from new investors to make interest payments on outstanding investments.⁹⁴ The court decided that the hedge fund's activities were under the oversight of the SEC because, for purposes of the securities regulation, Bitcoin is a "currency or a form of money," and, thus, the investors were providing an "investment in money."⁹⁵ The Director of the SEC's New York Regional Office also clearly stated that, "fraudsters are not beyond the reach of the SEC just because they use Bitcoin or another virtual currency to mislead investors and violate the federal securities laws."⁹⁶

This warning was not empty words, as in June 2014 the SEC charged Erik T. Voorhees, a co-owner of two Bitcoin websites, for publishing prospectuses and actively soliciting investors to buy shares using Bitcoin without registering the offerings with the SEC.⁹⁷ The suit was eventually settled as Voorhees agreed to pay full disgorgement of the \$15,843.98 in profits plus a

⁹¹ Winklevoss Bitcoin Trust, Registration Statement (Form S-1) (July 1, 2013), *available at* <http://www.sec.gov/Archives/edgar/data/1579346/000119312513279830/d562329ds1.htm>.

⁹² *Id.*

⁹³ SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182, at *1 (E.D. Texas Aug. 6, 2013).

⁹⁴ *Id.* at *2.

⁹⁵ *Id.*

⁹⁶ Press Release, SEC, SEC Charges Texas Man with Running Bitcoin-Denominated Ponzi Scheme (July 23, 2013), *available at* <http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370539730583#.UxoTnBZCg6U>.

⁹⁷ Press Release, SEC, SEC Charges Bitcoin Entrepreneur With Offering Unregistered Securities (June 3, 2014), *available at* <http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370541972520#.VAKUx1ZN1uY>.

\$35,000 penalty.⁹⁸

The cases *SEC v. Shavers*⁹⁹ and *In the Matter of Erik T. Voorhees*¹⁰⁰ thereby provide valuable insights into the scope of the SEC's authority to regulate virtual currencies¹⁰¹. In sum, interests in entities that own Bitcoin will be characterized as securities subject to SEC regulation, as was the case for Trendon's Trust, and according to Andrew Ceresney, director of the SEC's Division of Enforcement, issuers who seek to raise funds using Bitcoin will also have to comply with the registration provisions of the securities laws.¹⁰² However, the SEC has left the issue of whether Bitcoin itself is a security to specific facts and circumstances regarding the particular use of Bitcoin.¹⁰³ Indeed, from a purely legal perspective, Bitcoin is not stock, option, or bond, nor a foreign currency within the definition of "security" set out at Article 3(a)(10) of the *Securities Exchange Act*.¹⁰⁴ The question is whether Bitcoin can be considered as an "investment contract," which is defined as "any transaction in which 1) individuals were led to invest money, 2) in a common enterprise, 3) with the expectation that [the investor] would earn a profit, and 4) solely through the efforts of the promoter or of someone other than [the investor]."¹⁰⁵

a. Investment of Money

If we focus on the notion of money, Bitcoin does not fit its legal definition as "a medium

⁹⁸ *Id.*

⁹⁹ No. 4:13-CV-416, 2013 WL 4028182, at *1.

¹⁰⁰ Securities Act of 1933 Release No. 9592, 2014 WL 2465620 (June 3, 2014).

¹⁰¹ Richard B. Levin, A. Mackenna Mosier & Madiha M. Zuberi, *Bitcoin Investment Vehicles Beware – The SEC is Watching*, LEXOLOGY, (June 24, 2014), <http://www.lexology.com/library/detail.aspx?g=2d5883c4-d154-4068-8f28-1e8b9359cdee>.

¹⁰² Jonathan Stempel, *UPDATE 2-Bitcoin Entrepreneur Settles SEC Charges Over Stock sales*, REUTERS (June 3, 2014), <http://in.reuters.com/article/2014/06/03/sec-bitcoin-settlement-idINL1N0OK0XX20140603>.

¹⁰³ Letter from Mary Jo White, Chairman, SEC, to Thomas R. Carper, Chairman, Comm. on Homeland Sec. & Governmental Affairs (Aug. 30, 2013), *available at* <http://online.wsj.com/public/resources/documents/VCurrenty111813.pdf>.

¹⁰⁴ Securities and Exchange Act of 1934 § 3(a)(10), 15 U.S.C. § 78c (a)(10) (2014).

¹⁰⁵ *SEC v. W.J. Howey Co.*, 328 U.S. 294, 298 (1946).

of exchange authorized or adopted by a domestic or foreign government,”¹⁰⁶ nor can it be considered “dollar bills and coinage”¹⁰⁷. Indeed, as discussed above, Bitcoin does not have the legal tender requirement. However, we can rely on the preliminary ruling of the court for the Ponzi scheme aforementioned, which stated that Bitcoin is a “form of money” for purposes of the Securities Act.¹⁰⁸ The key element is to distinguish what was the intended use of Bitcoin: there will be an “investment of money” if one expects to profit off of a future sale of the Bitcoin rather than simply use it as a method of payment of a good. This overlaps with the requirement that the investment be made “for the purpose of earning a profit.”

b. Common Enterprise

The concept of an “investment contract” has been interpreted broadly,¹⁰⁹ including vertical and horizontal commonality. In the context of Bitcoin, one can find an element of horizontal commonality as the investors share in the appreciation or depreciation of Bitcoin. Indeed, it is a peer-to-peer network where each transaction contributes to the others. Also, the investors in Bitcoin “share in the benefits of Bitcoin's programming and cryptography, which are essential to the ability to sell Bitcoin in the future.”¹¹⁰ Moreover, there is vertical commonality with the miners, as it can be argued that to a certain extent, the investor “is dependent on the miners’ efforts or expertise for their returns.”¹¹¹ Indeed, miners’ efforts will dictate the productivity of the system, and, by confirming the transactions and building on the blockchain, this will impact both the value of Bitcoin and the returns to the investors.

¹⁰⁶ U.C.C. § 1-201(b)(24) (2014).

¹⁰⁷ *In re* Thompson Boat Co. v. ITT Commercial Fin. Corp., 230 B.R. 817, 820 (Bankr. E.D. Mich. 1995) (arguing that U.S. money means dollar bills and coinage).

¹⁰⁸ SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182, at *1 (E.D. Texas Aug. 6, 2013).

¹⁰⁹ SEC v. C.M. Joiner Leasing Corp., 320 U.S. 344, 349 (1943).

¹¹⁰ *Tradingtitan*, *supra* note 47.

¹¹¹ *Id.*

c. Solely by the Efforts of Another

The premise for this requirement is that investors will be protected if they can demonstrate that they were relying on the efforts of another. Even though in the case of investors in the Winklevoss Trust there was reliance on the efforts of the managers of the trust to increase the value of Bitcoin invested, this will not systematically be the case when a person acquires Bitcoin. We can, however, compare miners to promoters/managers, and consider that the value of the investment will depend on their work. Indeed, if one can meet the requirement that they acquired Bitcoin in order to make a profit, then one could perceive the miners as the ones allowing this mechanism to function by creating a blockchain. Even if those efforts can be perceived as conducted prior to the actual investment, it does not preclude the characterization as an investment contract. Indeed, in the case *SEC v. Mutual Benefits Corp*, the court found that the efforts of another could be done prior to the investment.¹¹² However, some remain skeptical as to the role of miners, suggesting that they are more analogous to a “farmer that merely buys tools and equipment to increase output,”¹¹³ which would not be sufficient to meet the “sole efforts” requirement of the definition of investment contract.

In conclusion, the characterization of Bitcoin as a security will depend on how broadly one will interpret the concept of “investment contract” in light of the specific facts of each case. Bitcoin participants should be warned that the concept will likely be adapted “to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits,”¹¹⁴ as pressed in the *Howey* case.¹¹⁵ The few enforcement actions by the SEC

¹¹² 408 F.3d 737, 743 (11th Cir. 2005). *See also* Stempel, *supra* note 102.

¹¹³ Tradingtitan, *supra* note 47.

¹¹⁴ James D. Gordon III, *Defining a Common Enterprise in Investment Contracts*, 72 OHIO ST. L.J. 59, 66 (2011) (quoting *SEC v. W.J. Howey Co.*, 328 U.S. 293, 299 (1946)).

support this interpretation. Therefore, it is likely that more and more actions will be brought where Bitcoin are used as an investment to make a profit, subjecting themselves to the SEC scrutiny. In any event, even if Bitcoin is not found to be a security, the SEC can exert some authority over it and other virtual currencies under the anti-fraud provisions of the federal securities laws.¹¹⁶

3. *Bitcoin as a Commodity*

Proponents of the classification of Bitcoin as a commodity share the same concern as proponents of its classification as an investment: all are concerned about the volatility of Bitcoin. Indeed, given the limited number of Bitcoin in circulation, “the speculative ride has been pretty wild,”¹¹⁷ undermining their classification as a currency. Despande, the Managing Director at Bain Venture Capital, expressed a similar opinion as follow:

The proper way to think about Bitcoin for now is not as a currency, due to its lack of price-stability, but rather as a commodity . . . Subtracting the industrial value of gold from the current trading value of gold yields the diversification value of gold, and this is the value addressable by Bitcoin over the long term.¹¹⁸

Indeed, Bitcoin shares many similarities with gold. First of all, neither is overseen by a single government. Second, as Bitcoin’s supply will cease in 2040,¹¹⁹ they both have a finite supply, whereas currencies can always be printed by their respective governments. Finally, with respect to the concerns over fluctuation, the price of gold fluctuates much more than the price of

¹¹⁵ *SEC v. W. J. Howey Co.*, 328 U.S. 293, 298 (U.S. 1946).

¹¹⁶ The Clearing House & Indep. Cmty. Bankers of Am., *Virtual Currency: Risks and Regulation*, INDEP. CMTY. BANKERS AMERICA (June 23, 2014), <http://www.icba.org/files/ICBASites/PDFs/VirtualCurrencyWhitePaperJune2014.pdf>.

¹¹⁷ Nocera, *supra* note 83.

¹¹⁸ *Top Predictions For 2014 By VCs*, FORBES, <http://www.forbes.com/pictures/ekij45gile/think-of-bitcoin-as-a-commodity-not-a-currency-2/> (last visited Jan. 30, 2015).

¹¹⁹ *Bitcoin Basics*, BITCOIN TRADING PRO, <http://bitcointradingpro.com/bitcoin-basics/> (last visited Jan. 30, 2015).

currencies, as demand against the finite supply fluctuates, just like Bitcoin.¹²⁰ Given the similarities between Bitcoin and gold, a real dialogue was initiated on the classification of Bitcoin as a commodity. Indeed the Commodity Futures Trading Commission ("CFTC") has spoken to that effect more definitively than the SEC has addressed the issue of Bitcoin as a security. The CFTC Commissioner Bart Chilton clearly stated on behalf of the CFTC that Bitcoin would come under CFTC supervision as commodity for future delivery.¹²¹

From a legal perspective, Bitcoin can indeed fall under the definition of commodity in U.S. law.¹²² Indeed Bitcoin falls under the definition of "useful articles of commerce"¹²³ as it is traded online for goods and services or dollars. Bitcoin is also "capable of being possessed,"¹²⁴ as a specific user has control over distribution of its Bitcoin in his wallet. Lastly, Bitcoin is tangible, even if it is not physical coins nor in the actual possession of the investors. Based on the concept of constructive possession, holders of Bitcoin do indeed have "an appreciable ability to guide the destiny of Bitcoin."¹²⁵

However, even if they fall under the definition of commodities and even though the CFTC has "broad enforcement powers on commodities,"¹²⁶ the extent of its supervision over Bitcoin remains undefined. The CFTC has brought enforcement actions for fraud and Ponzi

¹²⁰ Patricia Estridge, *Bitcoin: Currency, Community or Commodity?*, BITCOIN CHANNEL (Aug. 4, 2013, 12:53 PM), <http://www.thebitcoinchannel.com/archives/19402>.

¹²¹ *CFTC's Chilton Eyes Bitcoin 'House of Cards' Risk*, CNBC (May 7, 2013, 6:32 AM), <http://video.cnbc.com/gallery/?video=3000166533>. See also Todd P. Zerega & Thomas H. Watterson, *United States: Regulating Bitcoins: CFTC vs. SEC?*, MONDAQ (Jan. 2, 2014), <http://www.mondaq.com/unitedstates/x/283878/Commodities+Derivatives+Stock+Exchanges/Regulating+Bitcoins+CFTC+vs+SEC>.

¹²² See BALLENTINE'S LAW DICTIONARY 225 (3d ed. 1969); *State ex rel. Moose v. Frank*, 169 S.W. 333, 336 (Ark. 1914). See also *Williams v. Board of Comm'rs*, 114 P. 858, 859-60 (Kan. 1911).

¹²³ Thomas Johnson III, *What U.S. Regulations Apply to Bitcoins as Commodities?*, BITCOIN TITAN & TRADING TITAN, (2012), <http://blog.bitcointitan.com/post/17789738826/what-u-s-regulations-apply-to-bitcoins-as-commodities> (last visited Oct. 4, 2014).

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ See also Zerega & Watterson, *supra* note 121.

schemes relating to retail forex transactions and forex pools which could be compared to Bitcoin pools or trusts.¹²⁷ Nonetheless, many argue that Bitcoin transactions would fall under the exception from CFTC regulation stated in the Commodity Exchange Act at Article 7 U.S.C. 1A(19). Indeed, even if the CFTC was given exclusive jurisdiction over transactions involving contracts of sale of a commodity for future delivery, the definition of “future delivery” was limited such that it does not include “any sale of any cash commodity for deferred shipment or delivery.”¹²⁸ Therefore, the CFTC will concretely have jurisdiction for options¹²⁹ but not for forward contracts, where delivery is either made at the point of purchase or is deferred. This has excluded a lot of Bitcoin transactions from the purview of the CFTC¹³⁰.

Nonetheless, as pointed out by the CFTC commissioner, the CFTC shall have a claim to regulate derivative products of Bitcoin such as options, swaps, or rolling spot Bitcoin transactions,¹³¹ and potentially any price manipulation attempts¹³². More specifically, in the wake of the Mt. Gox bankruptcy, the CFTC is considering to regulate Bitcoin exchanges as commodities exchanges, subjecting them to registration requirements and many other laws applicable to commodities pool operators, advisers, and brokers.¹³³

In sum, the classification of Bitcoin remains a contentious subject. In light of the foregoing, there could be as many classifications as there are uses of Bitcoin. Indeed, it is clear

¹²⁷ *Id.*

¹²⁸ Johnson III, *supra* note 123.

¹²⁹ *See In re Stovall*, No. 75-7, 1979 WL 11475, *4 (C.F.T.C. Dec. 6, 1979). *See also* CFTC v. Zelener, 387 F.3d 624, 625 (7th Cir. 2004).

¹³⁰ Johnson III, *supra* note 123.

¹³¹ *Id.* *See also* Joon Ian Wong, *CFTC Chairman: We Have Oversight of Bitcoin Derivatives*, COINDESK (Dec. 11, 2014, 13:51 GMT) <https://www.coindesk.com/cftc-chairman-oversight-bitcoin-derivatives/>.

¹³² Nermin Hajdarbegovic, *Commissioner Claims CFTC Can Intervene in Bitcoin Markets*, COINDESK (Nov. 18, 2014, 17:25 GMT), <http://www.coindesk.com/commissioner-claims-cftc-can-intervene-bitcoin-markets/>.

¹³³ The Clearing House & Indep. Cmty. Bankers of Am., *supra* note 116 .

that Bitcoin can be used as much as a method of payment than as an investment or a commodity, and it could be regulated accordingly. This, however, creates concern about overburdening the industry with the intervention of many regulators and various regulatory frameworks. As a result, government regulators should provide guidelines on exactly how each regulatory framework will apply and coexist without hindering the promising growth potential of this innovative financial platform.

III. REGULATORY FRAMEWORK(S)

Bitcoin has attracted the attention of regulators who all agree that regulation is inevitable.¹³⁴ However, as this industry is in expansion, it is “critical not to overly burden its participants”¹³⁵ by state or federal regulation. Therefore, the question becomes what kind of regulation will be imposed on the industry, and, more specifically, how much regulation is too much.

Indeed, under the current framework, virtual currencies are subject to the guidelines developed by FinCEN,¹³⁶ but they could equally be subject to the CFTC and/or the SEC based on the classification of the Bitcoin as used. As discussed above, these regulators intend to further explore the scope of their supervision over Bitcoin, and, meanwhile, enforcement actions are

¹³⁴ Amor Sexton, *Evolution, Not Revolution: How to Sell Bitcoin to Regulators*, COINDESK (Dec. 6, 2014, 17:47 GMT), <http://www.coindesk.com/evolution-revolution-sell-bitcoin-regulators/>. See also Peter J. Henning, *More Bitcoin Regulation Is Inevitable*, N.Y. TIMES (Feb. 3, 2014, 10:56 AM), http://dealbook.nytimes.com/2014/02/03/more-bitcoin-regulation-is-inevitable/?_r=0.

¹³⁵ Stephen Joyce, *New York Will Propose Rules to Regulate State's Virtual Currency Firms, Lawsky Says*, BLOOMBERG (Jan. 29, 2014), <http://www.bloomberglaw.com/search/results/bd887773541d755f37a5a61b0134bf4e/document/X962D3N400000?search32=C9P6UQR5E9FN6PB1E9HMGNRKCLP6QFB2D5Q66RR9DOTJMRJFBTKMQS2VE1K74OBJCLPJQC8>.

¹³⁶ Press Release, Financial Crimes Enforcement Network, FinCen issues Guidance on Virtual Currencies and Regulatory Responsibilities (Mar. 18, 2013), available at http://www.fincen.gov/news_room/nr/pdf/20130318.pdf.

multiplying. This will lead to significant regulatory compliance costs, which might overwhelm small startups or prevent entrepreneurs from developing virtual currency technologies. Indeed, as pointed out by a partner of a small startup:

[L]ots of the companies innovating in Bitcoin payments [have] a team of three or four individuals operating with just a few hundred thousand dollars in seed funding [you] have to run [your] server, . . . write [your] code, and . . . deal with . . . customers and . . . [now] apply for a money-transfer licenses in all 50 states [It would be unreasonable to expect them] to do the same things that a global financial company with thousands of employees can do.¹³⁷

In addition to this horizontal overlap between various regulators, participants in the Bitcoin industry might find themselves subject to a vertical overlap of regulations with rules coming from all levels of international, federal, and state laws.

What must be determined is why should there be regulations, and to whom should they apply? Indeed, as a decentralized virtual currency, Bitcoin intended to stand out because it would not be regulated in the same manner as other currencies. However, according to Brian Patrick, EHA, “in any industry, one of the strongest arguments in favor of regulation is the need for consumer protection,”¹³⁸ something Bitcoin currently lacks. Recent incidents related to Bitcoin suggest that there is a good cause for regulation to mitigate the risks and concerns associated with transactions in Bitcoin. In other words, there is a “general agreement that end users should not face regulation, while currency exchangers, or those entities that exchange virtual currency for US dollars or another fiat currency, should be regulated.”¹³⁹ This is the approach that FinCEN has chosen to adopt in implementing its guidelines on virtual currencies, as described

¹³⁷ Christine Lagorio-Chafkin, *Regulators and Investors Clash on Bitcoin*, INC., <http://www.inc.com/christine-lagorio/bitcoin-investors-and-regulators-clash.html> (last updated Jan. 28, 2014).

¹³⁸ Brian Patrick EHA, *Why Reregulate Bitcoin?*, NEW YORKER (Nov. 18, 2013) <http://www.newyorker.com/business/currency/why-regulate-bitcoin>.

¹³⁹ *Hearing, supra* note 19, at 10.

below. Moreover, these observations call for an effort of harmonization on the part of regulators.¹⁴⁰

For the purposes of this piece, I have chosen to focus on three main areas that I believe regulators should have under their purview: A) measures to prevent financial crimes, B) taxation, and C) consumer protection, including data security issues. Despite the obstacles and uncertainty with respect to Bitcoin's classification, such areas can still be addressed as Bitcoin can be subject to general principles of private law, criminal law, and, in certain cases, financial services law, as pointed out in the analytical report on Bitcoin's legal and regulatory framework in Canada.¹⁴¹

A. Financial Crime: Anti-Money Laundering and Other Illegal Activities

The regulatory framework is usually dictated by the legal status of the instrument to be regulated. With respect to Bitcoin, as discussed above, there has not been an official determination of its status. Instead, its characterization varies according to the use being made of it. This is why federal regulators have generally not issued guidelines with respect to Bitcoin, with FinCEN as the one exception.

Indeed, given the potential abuse of virtual currencies and the increasing recognition that they were used to facilitate illicit transactions and to launder criminal proceeds,¹⁴² on March 18 2013, FinCEN provided guidelines on "virtual currencies," subjecting them to the regulations applicable to money transmitters¹⁴³. In order to distinguish between the parties requiring

¹⁴⁰ *Id.*

¹⁴¹ JILLIAN FRIEDMAN & JOSEPH NEUDORFER, BITCOIN AND THE LAW, AN ANALYTICAL REPORT ON BITCOIN'S LEGAL AND REGULATORY FRAMEWORK IN CANADA (Bitcoin Foundation Canada, 2014), available at <http://btcfoundation.ca/wp-content/uploads/2014/07/BITCOIN-AND-THE-LAW1.pdf>.

¹⁴² Christopher M. Matthews & Robin Sidel, *Two Charged in Alleged Bitcoin-Laundering Scheme*, WALL ST. J. (Jan. 27, 2014, 7:38 PM), <http://www.wsj.com/articles/SB10001424052702303553204579346711725068816>.

¹⁴³ Press Release, Financial Crimes Enforcement Network, *supra* note 136.

protection from the parties likely to engage in abusive transactions, FinCEN guidelines on virtual currencies exclude users from the definition of money transmission service, but include exchangers and administrators. A “user” is defined as a person that merely obtains a virtual currency to purchase goods or services, whereas an “exchanger” is the person engaged as a business in the exchange of virtual currency for real currency, funds, or other virtual currency.¹⁴⁴ An “administrator” is the person who has the authority to redeem such virtual currency, provided that it (i) accepts and transmits a convertible virtual currency or (ii) buys or sells convertible virtual currency for any reason.¹⁴⁵ In other words, FinCEN tied its regulatory framework to those transactions that were not using Bitcoin simply as a method of payment. In the same optic, on January 30, 2014, FinCEN explained that “miners of Bitcoin . . . who are engaging in mining solely for the miner’s own personal purposes [will be considered] users of virtual currency,” regardless of whether they are individuals or corporations.¹⁴⁶ FinCEN found this to be the case “even if the miner from time to time must convert the mined Bitcoin . . . into real currency or another convertible virtual currency, so long as the conversion is solely for the miner’s own purposes and not as a business service performed for the benefit of another.” In its release, FinCEN also stated “that a company that develops its own software to purchase virtual currency for its own account and to resell the virtual currency at the company’s own discretion and based on the company’s . . . own investment decisions is not a [Money Service Business (“MSB”)] under FinCEN’s prior guidelines”.¹⁴⁷

¹⁴⁴ Financial Crimes Enforcement Network, *Application of FinCEN’s Regulations to Person Administering, Exchanging, or Using Virtual Currencies*, DEP’T TREASURY (Mar. 18, 2013), http://fincen.gov/statutes_regs/guidance/pdf/FIN-2013-G001.pdf.

¹⁴⁵ *Id.*

¹⁴⁶ BuckleySandler LLP, *FinCEN Releases Additional Guidance Related to Virtual Currency Mining, Software, and Investment Activity*, LEXOLOGY (Jan. 31, 2014), <http://www.lexology.com/library/detail.aspx?g=445cc47e-1c91-48ad-bdbf-a64331d4e9df>.

¹⁴⁷ *Id.*

For businesses considered as MSB, they have to comply with the AML and the Counter-Terrorist Financing ("CFT") regulatory regimes established by the Bank Secrecy Act ("BSA"), and if they are U.S. persons, they must also comply with the Office of Foreign Assets Control ("OFAC") prohibitions on transacting with Specially Designated Nationals or Blocked Persons ("SDNs").¹⁴⁸ With respect to BSA, regulations include being “subject to the registration requirements, record-keeping requirements for certain transactions, and mandatory reporting requirements for certain suspicious activities that might include money laundering, tax evasion, or other criminal activities.”¹⁴⁹ A FinCEN official said that the “anti-money-laundering rules would apply depending on the ‘factors and circumstance’s’ of each business.”¹⁵⁰

Those regulations are crucial because the attributes of virtual currencies make them an attractive means of exchange for illicit actors. Indeed, virtual currencies “facilitate international transfers of value between relatively anonymous users and are unconstrained by transaction limits.”¹⁵¹ According to the Secretary of Terrorism and Financial Intelligence during the conference “Addressing the Illicit Finance Risks of Virtual Currency:”

Users of virtual currency today can transfer value – around town, across the country, and over oceans – in the blink of an eye with comparatively little or, in some cases, no regulatory oversight. This poses clear risks to consumers and investors alike. For consumers, anonymity and transaction irrevocability expose them to fraud or theft. And unlike FDIC insured banks and credit unions that guarantee the safety of deposits, there

¹⁴⁸ *Guidance for Financial Institutions on the Risks and Threats of Virtual Currency*, GIBSON DUNN (Jan. 16, 2014), <http://www.gibsondunn.com/publications/Documents/Guidance-for-Financial-Institutions-on-the-Risks-and-Threats-of-Virtual-Currency.pdf>

¹⁴⁹ Gray Plant Mooty, *Convertible Virtual Currency (Like Bitcoin) is Subject to U.S. Money-Laundering Rules*, LEXOLOGY (Mar. 22, 2013), <http://www.lexology.com/library/detail.aspx?g=0a1eb010-bb31-4468-8e57-7e2a49aeeb00>.

¹⁵⁰ Jeffrey Sparshott, *Web Money Gets Laundering Rule*, WALL ST. J., <http://online.wsj.com/news/articles/SB10001424127887324373204578374611351125202?mg=reno64-wsj&url=http%3A%2F%2Fonline.wsj.com%2Farticle%2FSB10001424127887324373204578374611351125202.html> (last updated Mar. 21, 2013, 10:02 PM).

¹⁵¹ GIBSON DUNN, *supra* note 148.

are no such safeguards provided to virtual wallets.¹⁵²

Virtual currencies are also appealing to terrorist financiers who could swiftly send funds across borders in a secure, cheap, and highly secretive manner.¹⁵³ The anonymity would also allow them to better cover their tracks.¹⁵⁴

This is why less than two months after FinCEN issued its regulatory guidance, the Department of Homeland Security “seized an aggregate of \$5 million from Mt Gox’s U.S. accounts”¹⁵⁵ on the basis that Mt Gox failed to register with FinCEN as a MSB and on suspicions that this amount was connected with illegal activities. Similarly, in November and December 2013, FinCEN sent letters to various Bitcoin related businesses with “warnings to register with the agency as money transmitters.”¹⁵⁶

In addition to failures to register, there were actions against actual money laundering conducted by using virtual currency. For instance, in May 2013, the Department of Justice, in a coordinated international effort with other prosecutors, indicted the centralized virtual currency administrator Liberty Reserve and its executives for running a \$6 billion money laundering operation for those engaged in criminal activities, including “credit card fraud, identity theft, computer hacking, wire fraud, child pornography, and narcotics trafficking.”¹⁵⁷ This Costa Rica-based company had become “a popular payment processor for cybercriminals because it allowed

¹⁵² David S. Cohen, Under Sec’y, Terrorism & Fin. Intelligence, Remarks, “Addressing the Illicit Finance Risks of Virtual Currency” (Mar. 18, 2014), *available at* <http://www.treasury.gov/press-center/press-releases/Pages/jl2672.aspx>.

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ Peter Luce & Jerry Wang, *Virtual Currency Year-In-Review: Bitcoin and Beyond*, PAYMENT LAW ADVISOR (Dec. 31, 2013), <http://www.paymentlawadvisor.com/2013/12/31/virtual-currency-year-in-review-bitcoin-and-beyond/>.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

users to send and receive payments without verifying their identities.”¹⁵⁸ The enforcement action taken against Liberty Reserve illustrated both the scale and scope of how criminals can abuse virtual currency. More specific to Bitcoin, federal prosecutors charged Charlie Shrem and Robert Faiella, prominent figures among Bitcoin entrepreneurs, for operating an unlicensed MSB since December 2011, engaging in a money-laundering conspiracy, and willful failure to file suspicious activity reports, with the Treasury Department.¹⁵⁹ These violations were made in connection to Silk Road, a Bitcoin-driver website recognized “as a marketplace for purchasing illegal goods and services including drugs, hacking services, and identity theft tools.”¹⁶⁰ The transactions taking place on Silk Road were conducted in Bitcoin through the website’s internal Bitcoin bank. As a result, in October 2013, the FBI arrested the owner and operator of Silk Road, and the website was shut down. All Bitcoin on Silk Road were seized, which were “worth approximately \$33.6 million at the time.”¹⁶¹

The U.S. has been perceived as proactive in this area by providing guidelines and ongoing clarifications on the applications of the BSA to the Bitcoin industry and by carrying on active enforcement actions.¹⁶² In addition, in order to avoid similar crimes to be committed, many states in the U.S. subjected Bitcoin transactions to existing banking regulations independently of Bitcoin’s legal classification. This is what took place in New Jersey with the introduction of a regulated Bitcoin investment fund, the Global Advisors Bitcoin Investment Fund, which ensures

¹⁵⁸ *Id.* See also BuckleySandler LLP, *Federal Authorities Announce Major Money Laundering Action Against Virtual Currency Service*, LEXOLOGY (June 3, 2013), <http://www.lexology.com/library/detail.aspx?g=206c7011-c04c-4ea0-aa76-c99f87da65b9>.

¹⁵⁹ Rob Wile, CEO of Bitcoin exchange arrested, January 27, 2014 (<http://www.businessinsider.com/report-ceo-of-major-bitcoin-exchange-arrested-2014-1#ixzz3NsnLeqAz>)

¹⁶⁰ Luce & Wang, *supra* note 155.

¹⁶¹ *Id.*

¹⁶² *Recent Key Bitcoin and Virtual Currency Regulatory and Law Enforcement Developments*, KATTEN MUCHIN ROSENMAN LLP (Nov. 13, 2014), <http://www.kattenlaw.com/Bitcoin-Current-US-Regulatory-Developments>.

that “any cash or any Bitcoin coming into or out of [the] fund [will have] to be fully identified under KYC (Know Your Customer) procedures.”¹⁶³ But as financial crimes associated with Bitcoin continue developing, FinCEN will have to remain alert to maintain its lead and impose those regulations to those businesses that do not voluntarily comply with them. In this optic, FinCEN is currently reviewing its Suspicious Activity Reports to collect more detailed information and account for the “rise in the number of SARs flagging virtual currencies as a component of suspicious activity.”¹⁶⁴

B. Tax Implications

Another area that has attracted the attention of regulators is the fiscal area. Indeed, by presenting themselves as an alternative to traditional currencies, virtual currencies invited regulatory scrutiny with respect to taxation.¹⁶⁵ In addition, the untraceable attribute of virtual currencies raise the question of whether instruments such as Bitcoin are “tomorrow’s tax havens.”¹⁶⁶

As a result, the U.S. Government Accountability Office (“GAO”) followed FinCEN’s lead by submitting a report in May 2013 outlining possible tax compliance risks associated with virtual currencies.¹⁶⁷ The GAO clearly stated how virtual currency transactions might create taxable income, but while discussing the noncompliance risk it did not address the potential that

¹⁶³ *Jersey Approves First Regulated Bitcoin Fund*. BBC NEWS, <http://www.bbc.com/news/world-europe-jersey-28247796> (last updated July 10, 2014, 10:44 AM).

¹⁶⁴ BuckleySandler LLP, *New FinCen SAR summary report discusses Bitcoin-related filings*, LEXOLOGY (July 25, 2014), <http://www.lexology.com/library/detail.aspx?g=ad5cb918-547a-45d6-9409-13116f2271a9>.

¹⁶⁵ Brian J. Hurh, *GAO Issues Report On Tax Compliance Issues Regarding Virtual Economies and Currencies*, PAYMENTLAWADVISOR.COM (Sept. 4, 2013), <http://www.paymentlawadvisor.com/2013/09/04/gao-issues-report-on-tax-compliance-issues-regarding-virtual-economies-and-currencies>.

¹⁶⁶ Lauren French, *Bitcoin: Tax haven of the future*, POLITICO, (Aug. 10, 2013, 6:45 PM), <http://www.politico.com/story/2013/08/bitcoin-tax-haven-95420.html?hp=f1>.

¹⁶⁷ U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-13-506, ADDITIONAL IRS GUIDANCE COULD REDUCE TAX COMPLIANCE RISKS (2013), available at <http://www.gao.gov/assets/660/654620.pdf>.

virtual currencies be used to intentionally evade income taxes. The GAO assumed that the participants were honest but confused taxpayers who needed additional information. As such, and given that the IRS report of 2009 does not provide the necessary information, its recommendation was that in order to mitigate the risk of noncompliance from virtual currencies “the IRS should find relatively low-cost ways to provide information to taxpayers, such as the web statement IRS developed on virtual economies, on the basic tax reporting requirements for transactions using virtual currencies developed and used outside virtual economies.”¹⁶⁸ Until recently, the IRS had not issued guidance, leaving the question raised by Law360 of “how do members of the Bitcoin community report their profits to the relevant tax authorities”¹⁶⁹ unanswered. The IRS had nonetheless made a statement to the National Journal that “[t]he IRS continues to study virtual currencies and intends to provide some guidance on the tax consequences of virtual-currency transactions,”¹⁷⁰ which it did before the April 15 deadline.

The key in determining the tax consequences of Bitcoin is its legal characterization. The main distinction is whether Bitcoin is property (capital asset like a stock or commodity), in which case capital gains rules apply with tax rates up to twenty-four percent, or a nonfunctional currency, which would be subject to ordinary income taxes with a top rate of 39.6%.¹⁷¹ Despite acknowledging that Bitcoin functions as a medium of exchange, a unit of account, and/or store of value and operates like real currency in some environments, the IRS characterized Bitcoin as property for tax purposes. As such, an investor who buys Bitcoin would typically have a capital

¹⁶⁸ *Id.* at 17.

¹⁶⁹ Beth Seals, *Bitcoin Continues To Make Headline News*, SQUIRE PATTON BOGGS (Feb. 5, 2014), <http://www.ipotechblog.com/2014/02/draft-post-on-bitcoin/>.

¹⁷⁰ Catherine Hollander, *How Is Bitcoin Taxed? The IRS Doesn't Know*, NAT'L J. (Jan. 26, 2014), <http://www.nationaljournal.com/economy/how-is-bitcoin-taxed-the-irs-doesn-t-know-20140126>. *See also* Danny Bradbury, *What the IRS Bitcoin Tax Guidelines Mean For you*, COINDESK (Mar. 26, 2014, 7:33 GMT), <http://www.coindesk.com/irs-bitcoin-tax-guidelines-mean/>.

¹⁷¹ Joe Harpaz, *Who Will Tax Bitcoin and How?*, FORBES (Jan. 16, 2014, 12:25 PM), <http://www.forbes.com/sites/joeharpaz/2014/01/16/who-will-tax-bitcoin-and-how/>.

gain or loss when it is sold: “Purchasing a \$2 cup of coffee with Bitcoin . . . bought for \$1 would trigger \$1 in capital gains for the coffee drinker and \$2 of gross income for the coffee shop.”¹⁷²

According to a venture partner who invests in technology businesses, the IRS’s decision could “reduce the volume of transactions conducted with [Bitcoin], . . . [as it is] challenging . . . to think about capital gains before you buy a cup of coffee;”¹⁷³ similarly, a person who mines will be considered to have received income and could be subject to self-employment tax if he engages in mining as a trade or business. Some miners raised concerns with respect to this rule as “[a] capital gain tax on all coins mined could drive mining revenue below cost of power for many, forcing them to shut down.”¹⁷⁴

Moreover, Americans who were concerned that they “could open themselves to penalties, interest and possible fraud prosecution”¹⁷⁵ in not reporting their Bitcoin transactions were right. Indeed, the IRS indicated that taxpayers could be penalized for having treated Bitcoin transactions in a different manner before this notice if they underpaid tax or didn’t report income. There will, however, be a penalty relief available to persons that can prove a reasonable cause for the non-filing.¹⁷⁶

It is relevant to see the choices made by other countries to better understand the potential competition faced by the U.S. On the one hand, some countries focused on which category Bitcoin should fall under. For instance, Canada came to the conclusion that, in the absence of a legal tender characteristic, Bitcoin fails the currency test and should, therefore, be considered as

¹⁷² Eric Blair, *IRS Makes Bitcoin Rules Simple for Wall Street, Impossible for Everyday Users*, THE DAILY SHEEPE (Mar. 26, 2014), http://www.thedailysheep.com/irs-makes-bitcoin-rules-simple-for-wall-street-impossible-for-everyday-users_032014.

¹⁷³ *Id.*

¹⁷⁴ Bradbury, *supra* note 170.

¹⁷⁵ Mike Flacy, *IRS Continues to Remain Silent on Bitcoin Tax Liability*, DIGITAL TRENDS (Jan. 27 2014), <http://www.digitaltrends.com/cool-tech/irs-continues-remain-silent-potential-bitcoin-tax-liability/#ixzz2yGA1OfJa>.

¹⁷⁶ Laura Sander, *Q&A: The New IRS Rules on Bitcoin*, Wall St. J. (Mar. 25, 2014, 2:00 PM), <http://blogs.wsj.com/totalreturn/2014/03/25/qa-the-new-irs-rules-on-bitcoin/>.

a commodity for tax purposes.¹⁷⁷ More specifically, the Canadian Revenue Agency confirmed in January 2014 that when one uses Bitcoin to purchase goods or services, the “transactions involving bitcoins should be reported as would any other barter transaction.”¹⁷⁸ On the other hand, the Inland Revenue Authority of Singapore (IRAS) chose not to focus on Bitcoin’s legal definition but rather on the use made of it.¹⁷⁹ Therefore, “the supply of Bitcoin . . . is examined under [Goods and Services Tax (“GST”)] and varies according to how the service is provided.”¹⁸⁰ For instance, if the company merely facilitates and is acting as an agent in the Bitcoin trade (eg, Bitcoin exchange transfer Bitcoin directly to the customer's wallet), GST is chargeable only on the commission fees received. However, if the company is acting as a principal in the Bitcoin trade (eg, buys and onward sells Bitcoin to the customer), GST is chargeable on the full amount received (eg, the sale of Bitcoin and commission fees). Lastly, Germany¹⁸¹ and the U.K.¹⁸² have decided to adapt their tax system based on what would be economically viable. Indeed, despite the fact that Bitcoin is not a currency because it is denationalized, Germany chose to recognize Bitcoin as an equivalent to private money, and, therefore, gave it the tax regulation of a currency.¹⁸³ Similarly, in the U.K., the tax authority HM Revenue and Customs recently decided to reclassify Bitcoin as a “private currency.”¹⁸⁴ It was

¹⁷⁷ Jon Southurst, *Bitcoin is Not Legal Tender, Says Canada Government Official*, COINDESK (Jan. 17, 2014, 18:10 GMT), <http://www.coindesk.com/bitcoin-not-legal-tender-canada-government-official/>.

¹⁷⁸ Ian Gamble, *CRA Confirms its View of Bitcoin Transactions*, LEXOLOGY (Jan. 27, 2014), <http://www.lexology.com/library/detail.aspx?g=f0fb2563-91a2-4128-9e17-ee021efb0509>.

¹⁷⁹ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *Regulation of Bitcoin in Selected Jurisdictions*, L. LIBRARY OF CONGRESS (Jan. 2014), <http://www.loc.gov/law/help/bitcoin-survey/regulation-of-bitcoin.pdf>.

¹⁸⁰ Michael Lee, *Singapore Issues Tax Guidance on Bitcoins*, ZDNET (Jan. 9, 2014, 6:10 GMT), <http://www.zdnet.com/singapore-issues-tax-guidance-on-bitcoins-7000024966/>.

¹⁸¹ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 179, at 2.

¹⁸² Kelly Phillips Erb, *UK Bows to Pressure, Likely to Reverse Course on Taxation of Bitcoin: Will the US be Next?*, FORBES (Jan. 17, 2014, 3:28 PM), <http://www.forbes.com/sites/kellyphillipserb/2014/01/17/uk-bows-to-pressure-likely-to-reverse-course-on-taxation-of-bitcoin-will-the-us-be-next/>. See also Eric Calouro, *United Kingdom Will Dump Tax on Bitcoin Trading*, NEWSBTC, <http://newsbtc.com/2014/03/02/united-kingdom-will-cancel-tax-bitcoin-trading/> (last updated Mar. 2, 2014).

¹⁸³ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 3.

¹⁸⁴ Phillips, *supra* note 182.

previously classified as a “tradable voucher,” under which about twenty percent Value Added Tax was charged each time Bitcoin were used. This was undeniably “killing off the Bitcoin market in the UK,”¹⁸⁵ hence calling for a change.

In sum, by providing guidance, the IRS has helped avoid both a serious compliance problem, as more businesses such as Overtstock.com have jumped on the Bitcoin bandwagon, and avoid the creation of an electronic black market, similar to the cash economy.¹⁸⁶ Nonetheless, the IRS will still have to provide additional guidance, as this remains an innovative financial tool. Indeed, as reported by a Washington state programmer, even accountants are unwilling to help in reporting Bitcoin’s gains because of the complexity in determining how it should be done and there is additional uncertainty as to whether virtual currency accounts will have to be reported on a Foreign Bank and Financial Accounts (FBAR) at some time in the future.¹⁸⁷ On a brighter side, some entrepreneurs perceived an opportunity to develop a Bitcoin tax compliance solution for businesses, such as LibraTax, which allows processing up to 500 transactions for free (taxes calculated).¹⁸⁸

From a content perspective, the IRS decision has triggered different reactions, from approbation to criticisms. For instance, the Winklevoss Twins think that because foreign currency gains are taxable at a higher rate, this classification makes them better off. Some, however, argue that there is a risk that “the more dynamic and voluminous activities will be located in more amenable jurisdictions, which imposes potentially adverse opportunity costs and

¹⁸⁵ Calouro, *supra* note 182.

¹⁸⁶ Christopher Faille, *Bitcoin: Regulation, Taxation, and Optimism*, ALLABOUTALPHA.COM (Apr. 3, 2014), <http://allaboutalpha.com/blog/2014/04/03/bitcoin-regulation-taxation-and-optimism/>.

¹⁸⁷ Kelly Phillips Erb, *IRS Says Bitcoin Not Reportable On FBAR (For Now)*, FORBES (June 30, 2014, 11:06 AM), <http://www.forbes.com/sites/kellyphillipserb/2014/06/30/irs-says-bitcoin-not-reportable-on-fbar-for-now/>.

¹⁸⁸ Caleb Chen, *Libratix Announces \$500K funding for IRS Compliant Bitcoin Tax Prep*, CRYPTOCOINSNEWS, <https://www.cryptocoinsnews.com/libratix-announces-500k-funding-irs-compliant-bitcoin-tax-prep/> (last updated Oct. 11, 2014, 10:25 PM).

long-term revenue losses at the macro-economic . . . level.”¹⁸⁹ Others even consider it as being “effectively a ban on using bitcoin as currency,”¹⁹⁰ given that users will have to maintain extensive records of the dollar price of Bitcoin when they acquired them compared to their value when they spent them in order to report any gain or loss¹⁹¹.

More specifically, the character of the gain or loss will depend on the use made of Bitcoin in that taxpayer’s hands. Some guidance has been provided for purposes of valuation: the IRS notice provides that if a virtual currency is listed on an exchange and the exchange rate is established by market supply and demand, the taxpayer can use the fair market value as determined by converting it into U.S. dollars at the exchange rate.¹⁹² This, however, begs the question of what is recognized as an “exchange.” As a result, the IRS might want to reconsider its classification in order to remain competitive in the global market, the same way the U.K. did. In the meantime, the fact that the IRS issued guidance should be perceived as an evolution for Bitcoin towards more legitimization.¹⁹³

C. Consumer Protection

For now, Bitcoin is operating in a sort of regulatory vacuum, with the exception that exchangers and administrators are subject to AML and BSA rules as MSBs. If one can argue that such regulations ensure some protection to consumers, there is a need for additional protections of consumers in the Bitcoin industry.

¹⁸⁹ Pyburn, *supra* note 34.

¹⁹⁰ Blair, *supra* note 172.

¹⁹¹ *Id.*

¹⁹² Thomas A. Humphreys et al., *IRS Issues Guidance on Virtual Currency*, TAX TALK (Morrison & Foerster Quartley News, New York, N.Y.), Apr. 2014, at 1, 6, available at <http://media.mofo.com/files/Uploads/Images/140417-Tax-Talk.pdf>.

¹⁹³ Phillips, *supra* note 182.

Among the reasons to have regulations, consumer protection might be one of the best. Indeed, consumers are usually the first victims because of their lack of sophistication and/or access to the information necessary to protect themselves. With respect to Bitcoin, there is an agreement that this is an area in which regulatory intervention would “make a lot of sense,” as put by Gavin Andresen, chief scientist at the Bitcoin Foundation.¹⁹⁴ He even went further to say that consumer protection was one way that governments could perform “useful oversight.”¹⁹⁵ Many articles have tried to highlight the various consumer risks caused by Bitcoin. Among those risks, the most important is the possibility of losing your Bitcoin if they are not secured enough. This risk has materialized with the loss of \$6 billion worth of Bitcoin due to hack of Mt. Gox, as will be discussed below. Other risks include lack of disclosures, Bitcoin’s high volatility, and some internal mining mechanisms.

I will look first at the current state of regulation at the state and federal levels, and then examine in more details the areas that need further protection.

1. Current State of Regulation

a. State Level

One of the measures taken at the state level at this stage consists in issuing customer advisories on Bitcoin. Indeed, Alabama issued a consumer alert on February 25, 2014,¹⁹⁶ followed two days later by a similar release in Hawaii from the Department of Commerce and Consumer Affairs’ Division of Financial Institutions.¹⁹⁷ The Illinois legislature issued a warning

¹⁹⁴ Julian Hattern, *Bitcoin Leader: Regulation Should Protect Consumers*, THE HILL (Feb. 6, 2014, 9:40 AM), <http://thehill.com/blogs/hillicon-valley/technology/197624-bitcoin-leader-regulation-should-protect-consumers>.

¹⁹⁵ *Id.*

¹⁹⁶ Chuck Jaffe, *Regulator Sounds Alarm on Bitcoin*, MARKETWATCH (Feb. 25, 2014, 9:12 AM), <http://www.marketwatch.com/story/regulator-to-sound-alarm-on-bitcoin-2014-02-24?siteId>.

¹⁹⁷ Press Release, Dep’t of Commerce & Consumer Affairs of Haw., State Warns Consumers on Potential

on Cyber security with a specific mention with respect to Bitcoin.¹⁹⁸ In March 2014, the Department of Financial Institutions of Washington issued a consumer alert,¹⁹⁹ followed by the Massachusetts Office of Consumer Affairs and Business Regulation,²⁰⁰ and the Florida Office of Financial Regulation²⁰¹. Indeed, if consumers' need for protection stems from the informational inequity, it seems more than relevant to provide them with guidance on the strengths and weaknesses that accompany Bitcoin, and to warn them of the risks associated with it. In Boston, this decision was further supported by the concomitant installation of a Bitcoin automated teller machine in Boston's South Station.²⁰²

One question being raised is whether for the sake of consumer protection, Bitcoin and related instruments should be subject to existing regulations or technology-specific regulations. For instance, there is a discussion in Boston as to whether this new ATM will fall under the ATM registration law, which requires a license.²⁰³ Similarly, the New York Superintendent of Financial Services said that Bitcoin companies should be subject to existing consumer-protection

Bitcoin Issues (Feb. 26, 2014), *available at* <http://cca.hawaii.gov/dfi/news-releases/news-release-state-warns-consumers-on-potential-bitcoin-issues/>.

¹⁹⁸ *2014 Cyber Security Outlook*, MONTHLY CYBER SECURITY TIPS NEWSLETTER (State of Ill. Cent. Mgmt. Servs./Ctr. for Internet Sec., East Greenbush, N.Y.), Jan. 2014, *available at* http://www.illinois.gov/bccs/news/Documents/Security/2014/Cybertip_01.2014.pdf.

¹⁹⁹ Wash. State Dep't of Fin. Inst., *Consumer Alert: Bitcoin and Virtual Currencies*, DFI.WA.GOV, <http://www.dfi.wa.gov/consumers/alerts/bitcoin.htm> (last updated May 15, 2014). *See also* Pamela Yip, *Regulators Advise Caution on Bitcoin*, THE COLUMBIA DISPATCH (Mar. 16 2014, 9:27AM), <http://www.dispatch.com/content/stories/business/2014/03/16/regulators-advise-caution-on-bitcoin.htm>.

²⁰⁰ Saumya Vaishampayan, *Massachusetts Plans to Issue Bitcoin Consumer Advisory*, MARKETWATCH (Feb. 28, 2014, 3:59 PM), <http://online.wsj.com/news/articles/SB10001424052702304071004579409552545220612>.

²⁰¹ Eric Calouro, *Regulators in Florida Issue Consumer Advisory Related to Bitcoin*, NEWSBTC, <http://newsbtc.com/2014/03/19/regulators-florida-issue-consumer-advisory-related-bitcoin/> (last updated Mar. 19, 2014, 12:33 AM).

²⁰² *Bitcoin ATM Arrives at South Station*, WCVB.COM (Feb. 20, 2014 8:34 AM), <http://www.wcvb.com/money/bitcoin-atm-arrives-at-south-station/24577580#!DiNXc>.

²⁰³ Ryan Tracy & Scott Patterson, *Bitcoin Oversight Falls Outside Central Bank's Purview*, WALL ST. J. (Feb. 27, 2014, 7:51 PM), <http://online.wsj.com/news/articles/SB10001424052702304071004579409552545220612>.

requirements.²⁰⁴ One could also look at Canada, where it is suggested that Bitcoin companies will likely have to comply with consumer protection legislation in each of the provinces in which their clients are located.²⁰⁵ This might be a concern with respect to overlap of different sets of regulations, calling for a uniform regulatory framework.²⁰⁶ In addition, others think that the existing state rules are not robust enough to be extended to the virtual currency industry and that new adapted regulations are needed. Indeed, according to Marco Santorini, “if digital technologies such as Bitcoin create entirely new services and markets, or if existing services provided with decentralized digital currencies have different effects than their analog or centralized counterparts, new regulation may be appropriate,”²⁰⁷ but this would violate the principle of technology neutrality.

This is a concern that New York has been trying to address since fall 2013 by trying to put together the first comprehensive framework for licensing and regulating virtual currencies, the “BitLicense.”²⁰⁸ If the announcement of the release was attended with great excitement by the Bitcoin community, it quickly deceived the enthusiasts, especially as it reflected New York’s choice “to treat virtual currencies in the same manner as other financial instruments by fitting them into an existing legal framework.”²⁰⁹ Indeed, the BitLicense requires anyone engaged in Virtual Currency Business Activity - anyone that stores, controls, buys, sell, transfers, or

²⁰⁴ *Id.*

²⁰⁵ Nathalie Beauregard, *Can You Carry Out Bitcoins Activities in Canada Without Legal Risks?*, OSLER INSIGHTS (Dec. 17, 2013), <http://www.technologylawcanada.com/2013/12/17/can-you-carry-out-bitcoins-activities-in-canada-without-legal-risks-2/>.

²⁰⁶ *Hearing, supra* note 19, at 10.

²⁰⁷ *Hearing, supra* note 19, at 10.

²⁰⁸ Russell Brandom, *New York State considers licensing Bitcoin traders*, VERGE (Nov. 16, 2013, 10:09 PM), <http://www.theverge.com/2013/11/16/5111546/new-york-state-weighs-bitlicense-certification-for-bitcoin-traders>.

²⁰⁹ Jerin Mathew, *Bitcoin: 'Digital Currency Regulation Would Curtail Innovation and Harm Businesses and Consumers'*, IB TIMES UK (Aug. 2, 2014, 11:41 BST), <http://www.ibtimes.co.uk/bitcoin-digital-currency-regulation-would-curtail-innovation-harm-businesses-consumers-1459443>.

exchanges virtual currencies in New York or with New York residents - to be licensed.²¹⁰ Therefore, those engaged would submit themselves to ongoing compliance, robust anti-money laundering compliance program, certain Bank Secrecy Act reporting and recordkeeping requirements, advertising and marketing requirements, a cybersecurity program, a business continuity and disaster recovery plan, and a customer complaint process and consumer protections, all of which are regulations applicable to existing financial institutions.²¹¹

The extent of such requirements makes it hard to give credibility to Lawson's statement that this proposal is "an appropriate balance that helps protect consumers and root out illegal activity – without stifling beneficial innovation."²¹² *A contrario*, the Bitcoin community considers that only the best capitalized firms will be able to obtain licenses – at least in the short term – and it will stifle too much of the entrepreneurial zeal in the community.²¹³ One of the main rules under scrutiny is the requirement to provide "clear and concise disclosures to consumers and provide names and addresses for customers."²¹⁴ Indeed, founders of virtual currency startups aren't keen to disclose personal financial information and fingerprints or to keep consumer complaints on file for ten years. Another effect of the BitLicense requirements that is strongly attacked is the requirement that any new products or material changes made by BitLicensees to their activities, as well as any new alternative currency that could be created, will be subject to the approval of the N.Y. superintendent of financial services, whose discretion

²¹⁰ Richard B. Levin, Aaron A. O'Brien & Madiha M. Zuberi, *The Empire State Strikes Back: New York Proposes Rules for Virtual Currency*, LEXOLOGY (Aug. 7, 2014), <http://www.lexology.com/library/detail.aspx?g=d3ca9c14-458a-4efa-96e1-7353ea89a94c>.

²¹¹ *Id.*

²¹² John W. McGuinness et al., *NY Regulator Releases First Regulatory Framework for Virtual Currency*, LEXOLOGY (July 31, 2014), <http://www.lexology.com/library/detail.aspx?g=8aa4e4d1-9f82-41d7-933f-f3ac5ccf96fc>.

²¹³ *Id.*

²¹⁴ Ian Kar, *Proposed N.Y. State Regulation Would End Bitcoin Anonymity*, BANK INNOVATION (July 17, 2014), <http://www.bankinnovation.net/2014/07/proposed-n-y-state-regulation-gets-rid-of-bitcoin-anonymity/>.

seems overbroad.²¹⁵ Such requirement of prior approval of business activities in this fast-paced industry troubles high-tech innovators, who worry that their products aren't well understood. Lastly, the anticipated cost of the N.Y. BitLicense, regulatory compliance programs, and required audit and reporting are also perceived as “dampers on a fledgling industry.”²¹⁶

In light of the foregoing, it is not surprising that the DFS received an overwhelming response to kill the proposal and extended its comment period until October 21, 2014 to better be able to address all criticisms and comments.²¹⁷ In light of the comments being received, the DFS has issued a revised proposal in December 2014 with a number of rules being softened, including, for instance, the possibility for “start-up companies dealing in the budding technology [to get] a two-year partial waiver from complying with the full set of rules to help them continue their business.”²¹⁸

In sum, if the Empire State has taken the lead in the regulatory area and has given consumers more confidence in Bitcoin by offering them more protection,²¹⁹ New York has to remember that the complexity and myriad of requirements of its final law could drive business away from the U.S. towards more accommodating countries such as Canada,²²⁰ and would also undermine Bitcoin's international feature²²¹.

²¹⁵ Robert Wenzel, *How Bitcoin Will Be Smothered by New York State Regulators*, ECON. POL'Y J. (July 25, 2014, 6:05 PM), <http://www.economicpolicyjournal.com/2014/07/how-bitcoin-will-be-smothered-by-new.html>.

²¹⁶ Amy Davine Kim, *Will NY's BitLicense Stifle an Industry (or just relocate it)?*, LEXOLOGY (Aug. 1, 2014), <http://www.lexology.com/library/detail.aspx?g=ef584512-7fcf-44b7-83f3-c4f95a3d78d7>.

²¹⁷ Stan Higgins, *New York Extends Comment Period for BitLicense Proposal*, COINDESK (Aug. 21, 2014, 1:46 AM), <http://www.coindesk.com/new-york-extends-comment-period-bitlicense-proposals/>.

²¹⁸ Douwe Miedema, *New York regulator lays out tweaks to bitcoin rules*, REUTERS (Dec. 18 2014, 2:54 PM), <http://www.reuters.com/article/2014/12/18/us-bitcoin-regulation-idUSKBN0JW1ZN20141218>.

²¹⁹ Jeffrey Roman, *NY Proposes Bitcoin Regulations*, GOV. INFO SEC. (July 28, 2014), <http://www.govinfosecurity.com/ny-proposes-bitcoin-regulations-a-7107>.

²²⁰ Francis Pouliot, *Proposed BitLicense regulations will isolate New York*, BITCOIN FOUND. CAN. (July 18, 2014), <http://ca.bitcoinfoundation.org/proposed-bitlicense-regulations-will-isolate-new-york/>.

²²¹ Rob Wile, *Bitcoin Evangelists Are Furious About New York's Proposed New Digital Currency Rules*,

As New York opened up itself to Bitcoin early on and is being proactive in offering some consumer protection and regulation, in June 2014 California adopted a new bill making digital and virtual currencies legal money in order to remain competitive.²²² Indeed, the old law prohibited commerce using anything other than U.S. currency, and characterized alternative forms of value as not having the status of lawful money, which would likely inhibit the growth of virtual currency in California.²²³ In addition, according to Dickinson, a Democratic member of the California State Assembly, “this new law would allow regulators to make certain that various forms of alternative currency remain within the law and protect citizens and merchants.”²²⁴

Overall, the states seem to have been working their way steadily towards accepting Bitcoin, while acknowledging its dangers and eventually regulating it. There is a hope that some states will explore more technology-based regulations that would lend themselves better to the unchartered nature of Bitcoin, as pressed by many, including Jesse Powell, the CEO of San Francisco-based Bitcoin exchange Kraken.²²⁵

b. Federal Level

As of February 2014, representatives of two consumer-protection authorities - the Consumer Financial Protection Bureau ("CFPB") and the Federal Trade Commission ("FTC") - declined to comment on their authority to oversee Bitcoin.²²⁶ However, both authorities have begun to hold staff briefs on virtual currencies. In an article on the risks and regulations with

BUS. INSIDER (July 18, 2014, 4:03 AM), <http://www.businessinsider.my/bitcoin-rules-response-2014-7/#.UkafRbyHII>.

²²² Pete Rizzo, *California's Bill to make Bitcoin 'Lawful Money' Heads to Governor*, COINDESK (June 24, 2014, 19:45 GMT), <http://www.coindesk.com/california-bill-bitcoin-lawful-money-heads-to-governor/>.

²²³ Mick Grasmick et al., *Bitcoin in the News: International Reports, California Makes it Legal*, LEXOLOGY (July 18, 2014), <http://www.lexology.com/library/detail.aspx?g=c0c7ff22-9078-4d70-8fe9-2c0d1043d8b1>.

²²⁴ Sharon Bernstein, *California lawmakers pass bill to update currency law, aid Bitcoin users*, Reuters (June 24, 2014, 11:14 AM), <http://www.reuters.com/article/2014/06/24/us-usa-california-bitcoin-idUSKBN0EZ07O20140624>.

²²⁵ Mathew, *supra* note 209.

²²⁶ Tracy & Patterson, *supra* note 203.

respect to virtual currencies, the Clearing House addresses the possibility for the CFPB to subject Bitcoin to the Remittance Transfer Rule to oblige the entities facilitating transfers to make disclosure, ensure reversibility, and error-resolution requirements, thereby providing protections for consumers engaged in cross-border Bitcoin transactions, and/or to subject Bitcoin to the same regulations as reloadable general-use prepaid cards (Electronic Fund Transfer Act and Regulation E).²²⁷ In addition, on June 26, 2014, the GAO issued a report recommending the CFPB to be more active and to take steps to identify and participate in pertinent interagency working groups addressing virtual currencies, in coordination with other participating agencies.²²⁸ The CFPB agreed with the GAO's conclusions, and, as a result, on August 11, 2014, it released a consumer advisory outlining Bitcoin's major risks (including hackers, lack of protections, costs, and scams) and addressing protection measures.²²⁹ Moreover, as briefly discussed in a CFPB proposal issued in fall 2014, the CFPB new consumer protections could protect virtual currency products such as Bitcoin wallets against fraud.²³⁰

The FTC has more clearly acknowledged that regulation of virtual currencies is within its role. The associate director of the FTC's division of marketing practices said that the FTC's goal is "to protect consumers, whether they pay by credit card, check, [or] by some sort of virtual currency."²³¹ However, he also stated that consumer protections with virtual currencies are in "no way comparable to the protections for credit cards or other traditional payment methods,"

²²⁷ *Virtual Currencies: Risks and Regulations*, CLEARING HOUSE (June 23, 2014), <https://www.theclearinghouse.org/publications/2014/tch-releases-white-paper-on-virtual-currencies>.

²²⁸ Richard Fischer, Obrea Poindexter, Jeremy R. Mandell & James C.H. Nguyen, *CFPB to Assume a Larger Role in Virtual Currency Initiatives*, LEXOLOGY (July 7, 2014), <http://www.lexology.com/library/detail.aspx?g=1ed0a44a-238a-4cd6-9f4e-b5970cd33157>.

²²⁹ Priya Anand, *Feds to Bitcoin Users: You're on Your Own*, MARKETWATCH (Aug. 16, 2014, 8:24 AM), <http://www.marketwatch.com/story/cfpb-to-bitcoin-investors-youre-in-the-wild-west-2014-08-11>.

²³⁰ Michael J. Casey, *BitBeat: New Consumer Protection Laws Might Cover Bitcoin Wallets*, WALL ST. J. (Nov. 13 2014, 7:23 PM), <http://blogs.wsj.com/moneybeat/2014/11/13/bitbeat-new-consumer-protection-laws-might-cover-bitcoin-wallets/>.

²³¹ Ryan Tracy & Stephanie Armour, *Losses Mobilize the Bitcoin Police*, WALL ST. J. (Mar. 2, 2014, 6:29 PM), <http://online.wsj.com/news/articles/SB10001424052702304585004579415422696315770>.

suggesting that current regulations of the FTC might not be appropriate or sufficient for virtual currencies.²³² Nonetheless, in September 2014, the FTC became more proactive by filing a complaint against Butterfly Labs alleging that the company charged consumers thousands of dollars for marketed computers designed to produce Bitcoin, which failed to be provided until they were almost obsolete. The director of the FTC's Bureau of Consumer Protection noted that these scams were frequent in situations where a new and little-understand opportunity like Bitcoin presents itself. As a result of the FTC's complaint, a U.S. court shut down Butterfly Labs,²³³ and the court authorized the FTC to sell the Bitcoins obtained by the company.

Therefore, it is only a question of time for federal regulators to confirm the extent to which they will intervene. There is a hope that all regulators will come together to provide for a uniform streamlined approach for purposes of certainty, cost savings, and the viability of Bitcoin businesses. Lastly, with respect to disclosures and volatility, as discussed above, the SEC and the CFTC have yet to determine the extent of their potential oversight over Bitcoin as investments or commodities. The Federal Reserve has however been clear in stating that Bitcoin is not within its authority to regulate because it is not part of the banking system the Federal Reserve oversees.²³⁴

2. *Areas Calling for Increased Protection*

a. Data Security

Inherent properties of Bitcoin make them vulnerable to data security breaches. First, Bitcoin are just stored in a file on a computer. If one loses the file, the Bitcoin are lost. This has actually happened to more than one Bitcoin user. More specifically, James Howells, a miner,

²³² *Id.*

²³³ Ros Krasny, *U.S. court halts bitcoin mining operation Butterfly Labs: FTC*, REUTERS (Sept. 23, 2014, 3:41 PM), <http://www.businessinsider.sg/r-us-court-halts-bitcoin-mining-operation-butterfly-labs-ftc-2014-9/#.VE8DJIZN1uY>.

²³⁴ Tracy & Amour, *supra* note 231.

threw out a computer drive containing more than nine million dollars worth of Bitcoin, which are now almost impossible to find.²³⁵ This raises issues as to how to protect users. Moreover, if someone gains access to the file on someone else's computer, this person's Bitcoin can easily be stolen. To that aspect, many have suggested that Bitcoin users make "cold storage" or have a "paper wallet"²³⁶: they should print off slips of paper and store them securely and periodically to account as records of their transactions. This is, however, too cumbersome for individuals who do not use Bitcoin in very large volumes. The company Prismatic came up with an innovative security solution using open source smart cards. This system allows users to secure their private keys within a smart card.²³⁷ The platform where the smart card is being put, whether it is a computer, smartphone or tablet, is not exposed because the information and signature process remains on the smart card itself. In addition, the portable player used to read the smart card prevents any redirected transaction because the real details of the transaction requested appear on the player before being validated.²³⁸ The most popular hardware wallet on the market as of October 2014 is the Trezor, creation of Prague-based SatoshiLabs, which combines simplicity, security, and efficiency.²³⁹

The most controversial feature of Bitcoin is its irreversibility, which means that "it can never be undone, . . . no control-Z."²⁴⁰ This feature, in combination with the concept of "private

²³⁵ Anne Lu, *British Man James Howells Accidentally Throws Away Bitcoins Worth \$7.5M*, INT'L BUS. TIMES (Nov. 28, 2013, 7:33 PM), <http://au.ibtimes.com/articles/525840/20131128/bitcoin-james-howells-newport-wales-digital-currency.htm#.U0TTFxZCju0>.

²³⁶ *How to Make a Paper Bitcoin Wallet*, COINDESK, <http://www.coindesk.com/information/paper-wallet-tutorial/> (last visited Jan. 31, 2015).

²³⁷ *Secure Bitcoin Hardware Wallet With Open Source Smart Card: PRISMicide Crowdfunding Campaign*, DIGITAL J. (July 7, 2014), <http://www.digitaljournal.com/pr/2036778>.

²³⁸ *Id.*

²³⁹ Eric Mu, *Meet Trezor, A Bitcoin Safe That Fits Into Your Pocket*, FORBES (Oct. 15, 2014, 12:32 PM), <http://www.forbes.com/sites/ericximu/2014/10/15/meet-trezor-a-bitcoin-safe-that-can-fit-into-your-pocket/>.

²⁴⁰ Scott Thill, *Once You Use Bitcoin You Can't Go 'Back' — And That's Its Fatal Flaw*, WIRED (Nov. 26, 2013), <http://www.wired.com/2013/11/once-you-use-bitcoin-you-cant-go-back-and-that-irreversibility-is-its-fatal-flaw/>.

key,” makes Bitcoin attractive to hackers and thieves.²⁴¹ Indeed, an individual’s security is entirely dependent on the secrecy of their private key, which is loaded on some computational device to allow the transaction to take place. If someone gets a hold of that “string of alphanumeric,” they will be able to send those Bitcoin to another address. Individuals will have a very low chance of recovering them, given the irreversibility of transactions.²⁴² Some argue in this sense that Bitcoin is not as safe as credit cards because transactions can’t be reversed. However, others suggest that they are safer because the private key is never sent as part of the transaction and no personal data is transmitted or stored, leaving potential data thieves empty-handed.²⁴³ Regardless, there have been a large number of incidents of stolen Bitcoin, calling for additional protections to be put in place. For instance, in November 2013, a hacker attacked a Czech exchange called Bitcash.cz and emptied four thousand digital wallets belonging to customers.²⁴⁴ Once it had transferred all their funds to its private key, the transactions couldn’t be undone, except by a second voluntary transaction of the same amount in the opposite way. A few months later, about 1.4 million worth of Bitcoin were robbed from TradeFortress, a Bitcoin bank operated by an eighteen year old Australian.²⁴⁵ The takeaway from those incidents is to stick with well-known Bitcoin exchanges, and to keep your digital wallet encrypted and stored on a device that is not connected to the Internet.²⁴⁶

Indeed, in that later incident described above, the bitcoins were accessed through

²⁴¹ Will Weisser, *Why Security Issues May Chronically Hinder Bitcoin Adoption*, STATE OF SEC. (Nov. 26, 2013), <http://www.tripwire.com/state-of-security/security-data-protection/security-issues-may-chronically-hinder-bitcoin-adoption/>.

²⁴² *Id.*

²⁴³ David Zeiler, *Why Using Bitcoin Could Make a Target-Style Data Breach Obsolete*, MONEY MORNING (Jan. 17, 2014), <http://moneymorning.com/2014/01/17/using-bitcoin-make-target-style-data-breach-obsolete/>.

²⁴⁴ Brian Patrick Eha, *Why regulate Bitcoin?*, NEW YORKER (Nov. 18, 2013), <http://www.newyorker.com/online/blogs/currency/2013/11/why-regulate-bitcoin.html>.

²⁴⁵ Andre Infante, *Down the Mt. - Bitcoin, theft, and regulations*, MEDIUM (Feb. 28, 2014), <https://medium.com/on-banking/c6c3a9c09a53>.

²⁴⁶ Thill, *supra* note 240.

malware that scans Bitcoin wallets and removes the funds from them instantly. It would not be sufficient to encrypt a wallet on a hard drive because malware waits for a user to eventually enter their password to record its keystroke, and then use it to decrypt and access the coins. There has also been improvement on smartphones, suggesting that it could be a better alternative for storage. Indeed, the mobile malware infection is very low and there is an application called the Mycelium Bitcoin Wallet, which backs up encrypted wallets to the cloud with one tap: “By automating what was previously a cumbersome, manual process, the folks behind Mycelium have created perhaps the most secure method for a technology-averse user to store and use Bitcoin.”²⁴⁷ Lastly, if dedicated hardware might be the security solution, it would also be a threat to the competitiveness of Bitcoin, because it would push costs onto the consumer.

In light of the collapse of one of the biggest Bitcoin exchanger, Mt. Gox, there is a consideration to involve law enforcement. Indeed, Bitcoin transactions can technically be traced to the destination of stolen funds because all transactions are recorded in a publically available ledger. However, this is costly and there has been generally a lack of manpower to investigate a large number of small cases. There is still some hope that “MtGox is a big enough target that it may face consequences,”²⁴⁸ especially as it may face Ontario class action suit²⁴⁹. Another suggestion, in the long term, would be to have a bigger player like Coinbase hand out Bitcoin cards with the option to restore lost private keys from backup via conventional identity verification, for a modest fee.²⁵⁰ In the same light, consideration should be given to creating a

²⁴⁷ Weisser, *supra* note 241.

²⁴⁸ Bailey Reutzel, *A MtGox Bankruptcy May Be Good News for Bitcoiners*, PAYMENT SOURCE (Feb. 25, 2014, 3:16 PM), <http://www.paymentssource.com/news/a-mtgox-bankruptcy-may-be-good-news-for-bitcoiners-3017073-1.html>.

²⁴⁹ The Canadian Press, *Bitcoin exchange Mt. Gox could face Ontario class action suit*, CBC NEWS (Sept. 24, 2014, 4:27 PM), <http://www.cbc.ca/news/business/bitcoin-exchange-mt-gox-could-face-ontario-class-action-suit-1.2776858>.

²⁵⁰ Weisser, *supra* note 241.

private insurance to cover Bitcoin thefts the same way such insurance would provide coverage for banks.

Recently, there was also a suggestion to create a community-backed Federal Deposit Insurance Corporation ("FDIC"), which would have the purpose to provide standards in accounting and security for Bitcoin transactions. This could provide standardization rather than centralization, and, therefore, lead to an increase in value and in security.²⁵¹ Moreover, by December 2013, a new program called Bitrated has been introduced, with the intention to bring to Bitcoin the standards of consumer protection that customers expect from payment systems.²⁵² The Bitrated system is inspired by an old consumer protection tool: the escrow account. The concept is to send the payment into escrow rather than directly to the merchant, such that it will only be released when the customer confirms that it has received the appropriate product or service. However, Bitrated has slightly modified the escrow service by a decentralized arbitration, and thus does not subject the Bitcoin industry to the strict escrow regulations, licensing requirements, and associated high costs.²⁵³ Instead of making Bitcoin reversible *per se*, which would expose it to the dangers of fraudulent chargebacks, it uses Bitcoin's inbuilt multi-signature feature. This requires that two of three transactions be signed off before the transaction is approved.²⁵⁴ This way, if there is a problem with the goods, a Bitcoin user can send back its Bitcoin upon the arbitrator's signature to receive them.²⁵⁵ The arbitrator will, therefore, do an investigation, make a ruling, and agree or not to transfer the funds back to the user or to the

²⁵¹ Cameron Keng, *Bitcoin Must Create a Community Backed FDIC*, FORBES (Mar. 20, 2014, 4:08 PM), <http://www.forbes.com/sites/cameronkeng/2014/03/20/bitcoin-must-create-a-community-backed-fdic/>.

²⁵² Vitalik Buterin, *Bitrated: You Can No Longer Say Bitcoin Has No Consumer Protection*, BITCOIN MAG. (Dec. 10, 2013), <http://bitcoinmagazine.com/8834/bitrated-you-can-no-longer-say-bitcoin-has-no-consumer-protection/>.

²⁵³ *Id.*

²⁵⁴ *Id.*

²⁵⁵ *Id.*

merchant. Bitrated's arbitrators are not required for releasing the Bitcoin payment. Due to the use of multi-signature Bitcoin transactions, if the transaction ends well, both parties can easily release the funds without any intervention from the arbitrator.²⁵⁶

Many claim that in light of this innovative program, "it can no longer be said that Bitcoin has no consumer protection."²⁵⁷ Bitrated brings safety to purchases, an open arbitration marketplace, buyer fraud protection mechanisms, and niche experts. This concept was further explored in the fall of 2014 with the introduction of a popular bitcoin wallet, Multibit, which has multisig support built-in.²⁵⁸ Multisig should be further explored and adapted accordingly as Bitcoin and other crypto-currencies become mainstream. Similar innovative solutions to bring security to Bitcoin platforms are multiplying, such as the wallet service introduced by Circle and the Virtual Trading Sandbox, and SMS Price Alerts developed by Coinsetter, both offering more transparency and better information to Bitcoin participants.²⁵⁹

b. Double Spending and Transaction Malleability

Looking more specifically at the Mt. Gox incident, there is another aspect of Bitcoin that calls for security improvement: the notion of "transaction malleability."²⁶⁰ Indeed, even if the Mt. Gox's incident pointed to many deficiencies in the exchange policies themselves and in its behavior to deal with potential issues, the theft of six billion dollars was indirectly made possible by the "small window where transaction ID's can be 'renamed' before being confirmed in the

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ *Introducing BRIT*, MULTIBIT, <https://multibit.org/blog/2014/04/11/multibit-hd-brit.html> (last visited Jan. 31, 2015).

²⁵⁹ Andrew Saks-McLeod, *Bitcoin Exchange Coinsetter Undeterred by Instability: Invests in New Innovations*, LEAP RATE (June 2, 2014), <http://leaprate.com/2014/06/02/bitcoin-exchange-coinsetter-undeterred-by-instability-invests-in-new-innovations/>.

²⁶⁰ Danny Bradbury, *What the 'Bitcoin Bug' Means: A Guide to Transaction Malleability*, COINDESK (Feb. 12, 2014, 7:26 PM), <http://www.coindesk.com/bitcoin-bug-guide-transaction-malleability/>.

blockchain.”²⁶¹ Hackers use this small window to duplicate a transaction before it is confirmed and bypass it at the confirmation stage.

This concept has been well known since 2011, and companies should have included in their software a way to validate transaction IDs to protect themselves from it. In addition, it can also be countered by the creation of whitelisted addresses, so called green addresses, which are trusted not to double spend.²⁶² However, for transactions involving those whitelisted addresses, Bitcoin can no longer be seen as a peer-to-peer system.²⁶³ Technology experts need to come together to eliminate the transaction malleability, or otherwise Bitcoin will lose its beneficial features.

c. Miners’ Collusion

Based on technical considerations specific to the mechanism of Bitcoin, some argue that, if miners colluded, they would obtain revenue larger than their fair share. Rational miners would, therefore, prefer to join the selfish miners, and the colluding group will increase in size until it becomes a majority and threatens the decentralized aspect of Bitcoin. As a result, there has been a suggestion to modify the Bitcoin protocol to protect against concentration of computational power in “mining pools.” Indeed, an attacker that has more computational power available than all honest miners combined could create and confirm bogus transactions: given that the attacker has more computational power; its version of the blockchain will grow faster than the correct

²⁶¹ Gavin Andrensen, *Contrary to Mt. Gox’s Statement, Bitcoin is Not at Fault*, BITCOIN FOUND. (Feb. 10, 2014), <https://bitcoinfoundation.org/2014/02/contrary-to-mt-goxs-statement-bitcoin-is-not-at-fault/> (internal quotation omitted).

²⁶² Krohn-Grimberghe & Sorge, *supra* note 24.

²⁶³ *Id.*

one, such that it will be accepted as legitimate. This could result in a monopoly on Bitcoin.²⁶⁴ This is why there should be a threshold ensuring that mining pools never command more than 1/4 of the resources: “This threshold is lower than the wrongly assumed 1/2 bound, but better than the current reality where a group of any size can compromise the system.”²⁶⁵

In June 2014, this threat materialized despite the threshold when one entity, GHash.IO, repeatedly provided more than fifty percent of the total computational power for long periods of time, thereby calling into question the decentralized structure of Bitcoin.²⁶⁶ Newspapers’ headlines cautioned the community about what they called a “miner takeover.” To date, there is no evidence that GHash.IO used its power in any such ways, and to the contrary, it pledged never to cross the fifty-one percent threshold.²⁶⁷ However, the mere possibility and position of power of GHash.IO undermines Bitcoin’s credibility as an independent payment system and erodes the trust of its users. This was confirmed by the drop of six percent in Bitcoin’s value in the week following this incident.²⁶⁸

Given the potential negative consequences, the Bitcoin community cannot simply rely on a pledge, especially as GHash.IO was accused less than a year ago of using its considerable hashing power to attack a gambling site.²⁶⁹ More importantly, this is directly in violation of the

²⁶⁴ J.C. Torres, *Bitcoin Miner Could Discredit Currency’s Decentralized Benefits*, SLASH GEAR (June 16, 2014), <http://www.slashgear.com/bitcoin-miner-could-discredit-currencys-decentralized-benefits-16333740/>.

²⁶⁵ Ittay Eyal & Emin Gün Sirer, *Majority is Not Enough: Bitcoin Mining is Vulnerable*, CORNELL UNIV. DEP’T COMPUTER SCI. (Nov. 4, 2013), <http://www.cs.cornell.edu/~ie53/publications/btcProcArXiv.pdf>.

²⁶⁶ Dan Goodin, *Bitcoin Security Guarantee Shattered by Anonymous Miner with 51% Network Power*, ARS TECHNICA (June 15, 2014, 3:15 PM), <http://arstechnica.com/security/2014/06/bitcoin-security-guarantee-shattered-by-anonymous-miner-with-51-network-power/>.

²⁶⁷ *Id.*

²⁶⁸ Peter Svensson, *Bitcoin Faces Previously Unimaginable Threat: Takeover by a Pool of ‘Miners’*, CALGARY HERALD (June 17, 2014), http://www.calgaryherald.com/business/Bitcoin+faces+previously+unimaginable+threat+takeover+pool/9945385/story.html?_federated=1.

²⁶⁹ Goodin, *supra* note 266. See also Kyle Torpey, *Bitcoin Mining Centralization: Bitcoin’s Achilles Heel?*, INSIDE BITCOINS (Nov. 21, 2014, 12:39 PM), <http://insidebitcoins.com/news/bitcoin-mining-centralization-bitcoins-achilles-heel/26647>.

spirit and intent of Bitcoin as a currency and, therefore, it is necessary to have a clear intervention to prevent miners' monopoly and collusion. As the concerns become more real, some suggestions have been explored and will have to be further considered, including a change in the design and enforcement mechanisms using non-outsourcable puzzles to deter collusion,²⁷⁰ or the redesign proposed by Eyal and Sirer with restructuring blocks to close the threat of selfish mining²⁷¹.

In sum, at this point in time, there is a general agreement that consumer protections are lacking for Bitcoin businesses and users. Some argue that Bitcoin should simply be subject to current consumer regulations,²⁷² but in light of the aforementioned concerns, it seems that a technology-specific approach might be necessary. If piracy techniques and flaws seem to come up to light quite frequently, innovative solutions are similarly being developed. Initiatives such as the Bitrated program should, therefore, be considered and encouraged as they internalize the actual mechanism of the Bitcoin protocol. However, the recurrent criticism remains the lack of some sort of police to prevent a massive industry-damaging theft of funds.²⁷³ Indeed, as Bitcoin lacks governmental accountability, it is harder to maintain its security. The various consumer regulators should position themselves and offer further guidance to the participants of the Bitcoin industry before similar incidents lead to the death of this promising financial instrument.

D. Regulation of Bitcoin in Other Jurisdictions

It is interesting and relevant to consider how other jurisdictions have dealt with Bitcoin, its use, its legal characterization, and other concerns. Overall, there seems to be three types of

²⁷⁰ Andrew Miller, Elaine Shi, Ahmed Kosba, & Jonathan Katz, *Nonoutsourcable Scratch-Off Puzzles to Discourage Bitcoin Mining Coalitions*, U. MD. (July 7, 2014), <http://cs.umd.edu/~amiller/nonoutsourcable.pdf>.

²⁷¹ Eyal & Sirer, *supra* note 265. *See also* Goodin, *supra* note 266.

²⁷² GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 16.

²⁷³ James Sanders, *Over 700,000 Bitcoin Missing in Mt. Gox Security Flaw*, TECHREPUBLIC (Feb. 26, 2014, 4:41 PM), <http://www.techrepublic.com/article/over-700000-bitcoin-missing-in-mt-gox-security-flaw>.

approach: the countries that have regulations specific to Bitcoin as used, the countries that consider it unnecessary at this stage, and those who have declined to regulate Bitcoin as it doesn't fall under specific definitions, but nonetheless issue warnings to their users.

First, there are only very few countries that have implemented regulations specific to Bitcoin. One example is Brazil, where Law No. 12,865 was implemented in October 2013, normalizing the creation of electronic currencies, including Bitcoin. This law uses broad definitions of “payment arrangement,” “payment institution,” and “electronic currency.”²⁷⁴ The latter is defined as resources stored on a device or electronic system that allow the end user to perform a payment transaction.²⁷⁵ The law further provides authority to the Brazilian Central Bank to set principles in accordance with the directives of the National Monetary Council that the Bitcoin industry will have to respect, or otherwise be liable for penalties.²⁷⁶ The Brazilian Central Bank has also been given competence to issue the necessary norms and instructions for the fulfillment of its provisions.²⁷⁷ In other words, it treats Bitcoin as a legal tender and thereby allows peer-to-peer mobile transfers.²⁷⁸

Another example is China, where Bitcoin is treated as a special virtual commodity,²⁷⁹ and where a Notice on Precautions Against the Risks of Bitcoins was issued on December 2, 2013, prohibiting the use of Bitcoin as a currency, and forbidding such use by banks and

²⁷⁴ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 16.

²⁷⁵ *Id.* at 11.

²⁷⁶ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 3.

²⁷⁷ *Id.* at 12.

²⁷⁸ Becky Liggero, *Regulation of Bitcoin with David Gzesh*, CALVINAYRE.COM (Mar. 19, 2014), <http://calvinayre.com/2014/03/19/business/bitcoin-regulations-david-gzesh-interview-bl-video/>.

²⁷⁹ Kenda Shaheen, *Regulation of Bitcoin around the world*, LEXICOLOGY (May 22, 2014), <http://www.lexology.com/library/detail.aspx?g=d92a33fe-3f11-43f6-b0cf-d8476ca612b1>.

payment institutions.²⁸⁰ It also requires strict oversight of websites providing registration, trading, and other services. However, recently, the People’s Bank of China indicated that it would accept deposits into its corporate bank account and transfer funds into customer accounts, even though banks *per se* were barred from engaging in BTC businesses and transactions.²⁸¹ Russia has taken a similar approach, as the General Prosecutor’s Office first announced that the use of any monetary instruments other than the ruble was forbidden.²⁸² However, later on, the General Prosecutor’s Office softened its stance in a letter from the central bank to an individual asking for clarification. In July 2014, the bank of Russia even showed signs that it may be ready to legalize Bitcoin,²⁸³ but for now the “exact status of Bitcoin in Russia is still a grey area, but it is likely they will be tolerated until such time as proper legislation is brought in.”²⁸⁴ Lastly, Colombia announced that it would issue a report outlining the government’s stance on Bitcoin with a likely prohibition on all Bitcoin-related transactions.²⁸⁵ Some suggest that it will be a complete prohibition,²⁸⁶ whereas others believe that “the ban may very well focus on Bitcoin handling activities, rather than outright purchase by consumers”²⁸⁷.

In sum, there is still uncertainty with respect to the extent of this prohibition, but what is

²⁸⁰ *Press Releases, Monitoring the use of bitcoins*, NEWS.GOV.HK (Jan. 8, 2014, 12:50 HKT), <http://www.info.gov.hk/gia/general/201401/08/P201401080357.htm>.

²⁸¹ Pyburn, *supra* note 34. *See also* Matthew Phillips, *Bitcoin Isn't Really Banned in China—and It's Quickly Gaining Ground*, BLOOMBERG BUSINESSWEEK (Mar. 20, 2014), <http://www.businessweek.com/articles/2014-03-20/btc-chinas-bobby-lee-bitcoin-isnt-really-banned-in-china-and-its-quickly-gaining-ground>.

²⁸² GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 10.

²⁸³ Andrey Ostroukh, *Russia Softens Stance on Bitcoin*, WALL ST. J. (July 2, 2014), <http://online.wsj.com/articles/russia-softens-stance-on-bitcoin-1404305139>.

²⁸⁴ *Is Bitcoin Legal*, COINDESK (Aug. 19, 2014), <http://www.coindesk.com/information/is-bitcoin-legal/>. *See also* Evander Smart, *Russia Reconsidering Bitcoin Ban*, CRYPTOCOINS NEWS, <https://www.cryptocoinsnews.com/russia-reconsidering-bitcoin-ban-2015/> (last updated Dec. 27, 2014, 8:53 PM CET).

²⁸⁵ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 3.

²⁸⁶ *Is Colombia’s Central Bank Thinking about Outlawing Bitcoin?*, BITCOINEXAMINER.ORG (Apr. 6, 2014), <http://bitcoinexaminer.org/colombia-central-bank-outlawing-bitcoin/>.

²⁸⁷ *Is Bitcoin Legal*, COINDESK (Aug. 19, 2014), <http://www.coindesk.com/information/is-bitcoin-legal/>.

certain is that the Superintendencia Financiera de Colombia is concerned with the virtual phenomenon and recently issued a “warning to consumers, and blocked financial institutions from holding, investing in or brokering bitcoin transactions.”²⁸⁸ Interestingly enough, and by contrast to the aforementioned countries, Ecuador decided to ban all crypto-currencies, but simultaneously created its own state crypto-currency that will be backed up by the assets of the central bank.²⁸⁹

On the other hand, some countries have taken the position that existing laws will be sufficient to deal with Bitcoin, if necessary. For instance, Spain suggested that Bitcoin can be considered digital goods or things under the Civil Code and therefore transactions in Bitcoin are governed by the rules of barter contained in the Civil Code.²⁹⁰ Experts in Argentina came to the same conclusion with Bitcoin being considered as a good or a thing under the Civil Code, and thereby subjecting the transactions with Bitcoin to the rules of the sales of goods under the Civil Code.²⁹¹ Similarly in Canada, a report prepared by the Bitcoin Foundation of Canada in July 2014 says that usage of the leading crypto-currency is already well covered by existing legislation. This view is supported by Canada’s Bill C-31, which classified Bitcoin as “money,” the companies dealing with it as “MSBs,” and required the Bitcoin-related businesses such as exchange operators to register with Canada’s Financial Transactions and Reports Analysis Centre (“Fintrac”).²⁹² Indeed all those regulations were built on existing regulatory framework

²⁸⁸ Pete Rizzo, *Colombia Stops Short of Bitcoin Ban, Bars Banks From Industry*, COINDESK, (Mar. 26, 2014, 19:51 GMT), <http://www.coindesk.com/colombia-stops-short-bitcoin-ban-bars-banks-sector/>.

²⁸⁹ Petar Kotevski, *Bitcoin Banned in Ecuador as Government Plans Own Cryptocurrency*, FOREXNEWS (July 26, 2014, 3:30 AM), <http://www.forexnews.com/blog/2014/07/26/bitcoin-banned-ecuador-government-plans-cryptocurrency/>.

²⁹⁰ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 3.

²⁹¹ *Id.* at 6.

²⁹² Ian Kar, *Canada Passes World’s First Law Regulating Bitcoin*, BANK INNOVATION (June 24 2014), <http://www.bankinnovation.net/2014/06/canada-passes-worlds-first-law-regulating-bitcoin/>.

now officially applicable to Bitcoin in that country.

Many countries have not yet decided whether to intervene, and have even declined to do so as of now. For instance, the Belgian Finance Minister stated that based on studies from the Belgian central bank, “Bitcoin does not present any significant risks to price stability, to the financial system in general, or to its individual users . . . such that government intervention with regard to the Bitcoin system does not appear necessary at the present time.”²⁹³ Similarly, the governor of the Bank of Japan has stated that the Bank was “researching issues of Bitcoin, but that [he] ha[d] nothing to say regarding Bitcoin at the moment,”²⁹⁴ and the Japanese Government ruled that it is not necessary to regulate sales, purchases, and/or exchanges of Bitcoin. Nonetheless, Japan has asked members within the Bitcoin industry to form a self-regulatory authority, the Japan Authority of Digital Assets (“JADA”), which is not regulated by any governmental office as of October 2014.²⁹⁵

Lastly, some countries or association of countries have expressed more concerns with respect to Bitcoin. Coming to the conclusion that Bitcoin did not fall under the definitions of either the Electronic Money Directive or Payment Services Directive, the European Banking Authority (“EBA”) pointed out that since Bitcoin is not regulated, there are dangers associated with transactions, such as buying, holding, or trading virtual currencies, especially for consumers.²⁹⁶ The EBA even stated in a study published in July 2014 that banks should steer clear of virtual currencies and refrain from offering customer accounts in virtual currencies like

²⁹³ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 5.

²⁹⁴ *Id.* at 8

²⁹⁵ Kevin Cruz, *Bitcoin Regulation in Japan*, BITCOIN MAG. (Oct. 23, 2014), <http://bitcoinmagazine.com/17508/bitcoin-regulation-in-japan/>.

²⁹⁶ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 3.

Bitcoin until regulatory safeguards are in place.²⁹⁷ France, Italy,²⁹⁸ Thailand,²⁹⁹ New Zealand and Estonia issued similar warnings targeting consumers³⁰⁰. Other countries have been more proactive with respect to their concerns. For instance, in Canada, despite finding that Bitcoin is not a legal tender, the government stated that it would continue to “monitor developments involving virtual currencies”³⁰¹ and the Financial Transactions and Reports Analysis Centre of Canada examined whether major Canadian Bitcoin service operators were in violation of the money laundering and terrorist financing regulations. Also, in India, in addition to issuing a public notice regarding the “financial, operational, legal, customer protection and security related risks that they are exposing themselves to,”³⁰² the police also raided the premises of the person in Ahmedabad who hosted the Bitcoin trading platform BuySellBitCo.in because of alleged violations of the India’s Foreign Exchange Management Act rules.

IV. CONCLUSION

Throughout this article, the recurrent question is what would be the best regulatory framework for Bitcoin and “not whether there will be greater regulation of firms developing

²⁹⁷ *European regulators tells banks to shun Bitcoin*, AFP, July 3, 2014, available at <http://news.yahoo.com/european-regulator-tells-banks-shun-bitcoin-005850775.html>.

²⁹⁸ Giulio Coraggio, *Bank of Italy Warns on Bitcoin and its Illegal Usage*, LEXOLOGY (July 15, 2014), <http://www.lexology.com/library/detail.aspx?g=3f221e29-dad9-4387-9123-6c17ec02d684>.)

²⁹⁹ *Bitcoin Virtual Currency Sparks BOT Warning*, NATION (Mar. 19, 2014, 1:00 AM), <http://www.nationmultimedia.com/business/Bitcoin-virtual-currency-sparks-BOT-warning-30229523.html>.

³⁰⁰ GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 11.

³⁰¹ David George-Cosh, *Canada Says Bitcoin Isn't Legal Tender*, WALL ST. J. (Jan. 16, 2014, 4:26 PM), <http://blogs.wsj.com/canadarealtime/2014/01/16/canada-says-bitcoin-isnt-legal-tender/>.

³⁰² GLOBAL LEGAL RESEARCH DIRECTORATE STAFF, *supra* note 192, at 3.

those new methods of transmitting payments with nongovernment currencies.”³⁰³ Indeed, as discussed above, regulation is inevitable, and in light of the collapse of two major platforms handling Bitcoin in less than a week, investors and entrepreneurs are calling for it.³⁰⁴ However, one has to understand that regulation is needed “both to protect consumers, but also to bring legitimacy to digital currencies,”³⁰⁵ as explained by Tom Robinson, director of the U.K. Digital Currency Association. This is supported across the industry, as many suggest that Bitcoin will need to prove safer and less vulnerable to large-scale theft before being widely adopted for everyday purchases. In other words, it is in its own advantage to offer some “regulatory certainty.” It is argued that this will help drive associated business innovation, while boosting its acceptance among merchants and retail consumers.³⁰⁶ In other words, financial transparency and financial innovation can be mutually reinforcing, and in the case of Bitcoin, effective regulation can allow the technology to gain mainstream acceptance and become a real part of global commerce.³⁰⁷

The issue, however, is how much regulation should Bitcoin face, and more specifically how much regulation is too much. Indeed, it will be determinative for Bitcoin’s success to weigh the benefits of regulation with the costs associated with it, and the potential deterrent effect on emerging businesses. This is the issue with which New York is grappling in perfecting the BitLicense. An interesting example to consider would be a regime with exemptions or phase-in-periods to protect small startups from being overwhelmed by regulatory compliance costs. There

³⁰³ Peter J. Henning, *More Bitcoin Regulation Is Inevitable*, N.Y. TIMES (Feb. 3, 2014, 6:12 PM), http://dealbook.nytimes.com/2014/02/03/more-bitcoin-regulation-is-inevitable/?_php=true&_type=blogs&_r=0.

³⁰⁴ Kieran Mackintosh, *Investors Call for Regulation of Bitcoin after Recent Collapse*, GAMERHEADLINES, (Mar. 6, 2014), <http://www.gamerheadlines.com/2014/03/investors-call-for-regulation-of-bitcoin-after-recent-collapse/>.

³⁰⁵ *Id.*

³⁰⁶ Trevor Murphy, *The big problem with bitcoin regulations*, CNBC (Nov. 20, 2014, 1:35 PM), <http://www.cnbc.com/id/102204945#>.

³⁰⁷ Cohen, *supra* note 152.

is even a suggestion being brought in December 2014 by US Representative Steve Stockman to introduce a law that prohibits any state or federal regulator from passing bitcoin regulation for the next five years on the basis that “it is necessary to give Bitcoin more time to develop and protect it from special interests that might threaten its growth.”³⁰⁸ As desirable as this could be, it is questionable whether this is a realistic alternative, and the U.S. will have to make an informed decision in 2015.

In the same optic, the concerns are that overbroad; nonspecific regulation will not be beneficial for Bitcoin.³⁰⁹ Indeed, if Rinearson, a partner at Lightspeed Venture Partners, says that new rules should strive to be technology neutral; this ignores to a certain extent the specificities of Bitcoin. In this sense, it does not seem fair to say that existing state rules are robust enough, such that new regulations are not needed. New regulations could be built on the basis of existing regulations - as is the case for the BitLicense inspired from licenses requirements - but those new regulations will have to be subject to significant adjustments. As highlighted, “if we are going to take seriously the potential of Bitcoin . . . or any other cryptocurrency . . . we must understand its relationship to more familiar payment systems”³¹⁰ and recognize the need for different measures where it proves to be fundamentally different.

Another strong argument in that direction is that Bitcoin was created with the intention of offering an alternative to traditional payments by depriving it from governmental supervision, which is often a flaw. For instance, Bitcoin is not subject to inflation and correlated deflationary measures because it is not tied to the politics of a central bank. It would therefore be

³⁰⁸ Stan Higgins, *Congressman Stockman: It's Too Early to Regulate Bitcoin*, COINDESK (Dec. 5, 2014, 23:05 GMT), <https://www.coindesk.com/congressman-stockman-too-early-bitcoin-regulation/>.

³⁰⁹ *Hearing*, *supra* note 19, at 10.

³¹⁰ Weisser, *supra* note 241.

counterintuitive to transform Bitcoin into exactly what it tried to avoid being. Therefore, regulators need to achieve “genuine specificity.” An interesting idea brought by a London Bitcoin trader who lost around £200,000 worth of the currency in the collapse of Mt.Gox, is to use this industry as an opportunity for new exchange auditing businesses to certify the standards of individual exchanges, and, therefore, potentially replace government regulation in countries that do not wish to regulate.³¹¹

In light of all the foregoing, regulators and other actors need to come forward with suggestions. If regulation usually falls along the lines of legal characterization, it needs to adapt itself to a fast growing industry that can’t afford to wait for a lengthy study of the status of Bitcoin. Instead, in order to allow its continuing growth, regulatory efforts in the area need to be done now and in reaction to unraveling issues. Bitcoin was created as a democratic process for peers to be in control of their own transactions of money. The solutions should be found based on the same premise, offering to people the opportunity to come forward with ingenious strategies to make Bitcoin safer. Many Bitcoin websites invite people to make suggestions or even offer scholarships for innovative programs, and this seems to be one way to tackle the problem of security.

In conclusion, there will always be skepticism about Bitcoin,³¹² but the recent collapses of exchangers should be a reminder that Bitcoin is still young and experimental. “As with any nascent technology, digital currencies like Bitcoin face a turbulent start but they fill a void and

³¹¹ Oscar Williams-Grut, *Bitcoin Investors Call for Digital Currency Regulation*, LONDON EVENING STANDARD, <http://www.standard.co.uk/business/business-news/bitcoin-investors-call-for-digital-currency-regulation-9170280.html> (last updated Mar. 5, 2014, 11:01).

³¹² Infante, *supra* note 245 (The fall of Mt. Gox isn’t going to destroy Bitcoin, because it would be difficult for the media to be harsher on cryptocurrencies than it already is).

serve a market shunned by others,³¹³ such that they should not be abandoned or banned like Russia chose to do. Indeed, one could make a list of technologies that went through similar turbulences but have since become everyday features of our lives. Incidents taking place should instead serve as lessons for Bitcoin to progress and replace “early-adopter overgrown hobbyist ventures”³¹⁴ like Mt. Gox with more mature, responsible and experienced financial institutions. Many even suggest that Mt. Gox will only make Bitcoin stronger,³¹⁵ as its value already stabilized and as it will pressure the international community as a whole to find a way to make Bitcoin appropriate for average consumers. Others also perceive it as a move from negative connotations to a more legitimate framework.³¹⁶ Indeed, with the take down of Silk Road followed by the collapse of questionable exchangers, Bitcoin seems to be making its way to a framework that will be more easily adopted by all, with the introduction of new digital currency companies that are “better financed and have stronger backbone technologically and are regulated,” such as Circle.com.³¹⁷ This was recently illustrated by the decision of BitStamp, one of the largest bitcoin exchanges in terms of daily USD trading volume, to subject its users to KYC and AML restrictions.³¹⁸ Bitstamp stated that users who fail to go through its account verification process will be deemed to have violated its terms of services and be subject to the related penalties. Its hope in doing so is to maintain a leading edge over other international

³¹³ Sanders, *supra* note 273.

³¹⁴ Infante, *supra* note 245.

³¹⁵ Emily Spaven, *Bitcoin: Whatever Doesn't Kill it Only Makes it Stronger*, FORBES (Mar. 04, 2014, 3:28 PM), <http://www.forbes.com/sites/coindesk/2014/03/04/bitcoin-whatever-doesnt-kill-it-only-makes-it-stronger/>.

³¹⁶ Kaylene Hong, *Mt. Gox's Fall is Good News for Bitcoin, says Blockchain, As it Buys Trading Platform RTBTC*, THE NEXT WEB (Mar. 4, 2014, 8:08 PM), <http://thenextweb.com/insider/2014/03/04/mt-goxs-fall-good-news-bitcoin-says-blockchain-buys-trading-platform-rtbtc/#!yIzW2>.

³¹⁷ Press Release, *Bitcoin Will Suprass PayPal in US Dollar Transactions, According to BVI Hedge Fund*, DIGITAL JOURNAL (May 23, 2014), available at <http://www.digitaljournal.com/pr/1939110#ixzz39fkngACR>.

³¹⁸ Pete Rizzo, *Bitstamp: Unverified Bitcoin Accounts at Risk of Government Seizure*, COINDESK (Oct. 16, 2014, 23:01 GMT), <http://www.coindesk.com/bitstamp-unverified-accounts-risk-government-seizure-28-days/>.

exchange offerings, irrespective of some customers' desire to remain anonymous.³¹⁹

The fate of Bitcoin and other crypto-currencies thus lies in the hands of every one, as Satoshi Nakamoto intended. If users continue to use it, this will pressure regulators to work with it rather than against it, and in turn recognize its potential benefits. Bitcoin is praised for its ability to travel thousands of miles and over frontiers, but this is equally the source of concerns for potential financial crimes. For Bitcoin to become more widely accepted, it needs to gain the trust of its participants and should be able to demonstrate that it has matured since Silk Road's take down, and that it will find answers to the thousands of consumers who lost all of their Bitcoin in 2014.

For that matter, international collaboration will be needed. According to the Secretary of Terrorism and Financial Intelligence, "while we know that domestic regulations are vital to establishing much-needed transparency, we also recognize that we cannot do this alone. The virtual economy is a global economy, and any value-transfer mechanism that transcends international borders needs a regulatory framework that does the same."³²⁰ Indeed, the U.S. has implemented regulations against AML and BSA, but it did not have any oversight authority over the Japanese exchanger Mt. Gox. So far, the global approach to regulating digital currency has been completely unilateral: each nation has taken a different approach in isolation. The attempt to have the U.K. lead an international approach at the Financial Innovators Summit was rejected on the basis that it would be too difficult and too long.³²¹ This time again there is a call for

³¹⁹ *Id.*

³²⁰ Cohen, *supra* note 152.

³²¹ Emily Spaven, *UK Policy Makers Discuss Bitcoin Regulation at 10 Downing Street*, COINDESK (Sept. 4, 2013, 2:30 PM), <http://www.coindesk.com/uk-policy-makers-discuss-bitcoin-regulation-at-10-downing-street/>.

international collaboration on the part of Japan.³²² This call should not be left unanswered, because it is precisely what is needed. Indeed, a consistent standardized approach would be better both for those who need to comply with it, and for those trying to prevent financial crimes.

In addition, in light of the decentralized nature of Bitcoin, it would only be appropriate to have a globalized framework rather than burdensome requirements developed by each state, such as the BitLicense. There must be more advancement at the end of the North American Bitcoin Conference that was held in Miami on January 16, 2015.³²³ Furthermore, one can hope that the G20 will sit and engage in a democratic discussion on a global framework for regulating and overseeing digital currency, to the extent necessary. Only time will tell whether the industry, the market, or national regulators will be able to bring about the stability and security necessary to the virtual currency market through scalable regulation that wouldn't prevent further financial innovation,³²⁴ but I am confident that whether it survives or not, Bitcoin will make a long lasting impression on the financial landscape³²⁵.

³²² Pete Rizzo, *Japan Pushes for International Effort on Bitcoin Regulation*, COINDESK (Feb. 27, 2014, 7:59 PM), <http://www.coindesk.com/japan-pushes-international-effort-bitcoin-regulation/>.

³²³ *The North American Bitcoin Conference*, <http://btcmiami.com/> (last visited Jan. 31, 2015).

³²⁴ Cohen, *supra* note 152.

³²⁵ ECONOMIST, *supra* note 18.