XI.   *Bitcoin: The Legal Implications of a Novel Currency*

A.   Introduction

In 2009 the domain name "Bitcoin.org" was officially registered, serving as a virtual home for the world's "first decentralized peer-to-peer payment network."[1] Although the minutia of its creation remain mysterious, Bitcoin's beginnings are attributable to a white paper published online for the "Cryptography Mailing List" in 2008.[2] At that time, an entity known only by the pseudonym "Satoshi Nakamoto" published a piece outlining the theoretical framework for the Bitcoin network: an open-source payment system fueled by the Bitcoin currency.[3] Unlike traditional hard currencies, Bitcoin is a form of cryptocurrency, or a type of currency that "uses cryptography to control its creation and transactions."[4]

This article discusses recent legal developments affecting Bitcoin. Part B briefly explains how Bitcoins are used and issued. Part C lays out regulatory concerns and current domestic and foreign regulations affecting Bitcoin. Part D then provides an anecdote showing why regulation is necessary. Finally, Part E concludes by offering some predictions regarding Bitcoin's regulatory future.

B.   Background

1.   Usage

Prospective users can obtain Bitcoins through the process of Bitcoin mining, from virtual Bitcoin currency exchanges, or by trading goods and services with online vendors and vendees that transact business in Bitcoins.[5] As of November 19, 2013, according

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[1] *Frequently Asked Questions*, BITCOIN, www.bitcoin.org/en/faq#what-is-bitcoin (last visited Nov. 18, 2013).

[2] *See Who Is Satoshi Nakamoto?*, COINDESK, http://www.coindesk.com/information/who-is-satoshi-nakamoto (last updated Nov. 26, 2013).

[3] *See generally* SATOSHI NAKAMOTO, BITCOIN: A PEER-TO-PEER ELECTRONIC CASH SYSTEM (2008), *available at* www.bitcoin.org/bitcoin.pdf.

[4] *Frequently Asked Questions*, *supra* note 1.

[5] *See* Joshua Kolden, *How Do You Obtain Bitcoins?*, WEUSECOINS, www.weusecoins.com/en/questions (last visited Nov. 18, 2013).

to Mt. Gox, the world's largest Bitcoin exchange, a user should expect to pay roughly $699 for one Bitcoin.[6] Once obtained, users then store their Bitcoins either in a cloud-based "online wallet service" or a "personal digital wallet" kept locally on their computer's hard drive.[7] Users can spend their Bitcoins at any e-commerce storefront that accepts Bitcoins.[8]

The primary advantage of using Bitcoins is the inherent anonymity of a decentralized system of cryptocurrency.[9] This anonymity means that "participants in transactions are not explicitly identified."[10] To those interested in maintaining a high level of privacy in an exceedingly transparent marketplace, this level of anonymity is paramount.

2.   Issuance

Bitcoin issuance occurs via a largely user-dependent and resource-intensive process known as Bitcoin "mining."[11] Following each Bitcoin transaction, a detailed log of the pending transaction is created.[12] Once Bitcoin miners verify a number of pending transactions, the network forms a "block" that is comprised of verified transaction logs.[13] The network then appends each newly created block to a string of existing blocks, which collectively form block "chain[s]."[14] The master transaction log indefinitely stores these block chains, which are thereafter universally broadcast to all users on the network via public access to the published master

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[6] *Today's Bitcoin Price*, MT. GOX, www.mtgox.com (last visited Nov. 19, 2013).

[7] J.P. & G.T., *Virtual Currency: Bits and Bob*, ECONOMIST (June 13, 2011, 8:30 PM), www.economist.com/blogs/babbage/2011/06/virtual-currency.

[8] *See* Byron Acohido, *Silk Road Drug Bust Could Lift Value of Bitcoins*, USA TODAY (Oct. 3, 2013, 12:00 PM), http://www.usatoday.com/story/cybertruth/2013/10/03/silk-road-drug-bust-could-lift-value-of-bitcoins/2913751.

[9] NAKAMOTO, *supra* note 3, at 6.

[10] Sarah Meiklejohn et al., *A Fistful of Bitcoins: Characterizing Payments Among Men with No Names*, ;LOGIN:, Dec. 2013, at 10, 10.

[11] eMansipater, *What Exactly is Mining?*, WEUSECOINS, www.weusecoins.com/en/questions (last visited Nov. 18, 2013).

[12] NAKAMOTO, *supra* note 3, at 2.

[13] *Id.*

[14] *Id.*

transaction log.[15] Not only does this process prevent individual Bitcoins from being reused, but it also prevents defraudment of the broader payment network.[16]

To verify each transaction, the mathematical problem—or "proof-of-work"—by which each pending transaction log is encrypted, must be solved.[17] Various servers that are managed independently by network peers run software that "hashes," or solves, the proof-of-work that encrypts each pending transaction.[18] Upon completion, hashing generates a determinable number of Bitcoins for each block created.[19]

A predefined formula determines the number of Bitcoins issued per block, which—coupled with the 21 million coin limit on the number of Bitcoins ultimately created—is intended to curb potential inflation.[20] Although the speed at which miners hash Bitcoins is largely determined by the processing resources each server dedicates to hashing, the difficulty of solving each proof-of-work continually changes, "targeting an average number of blocks created per hour."[21] These measures safeguard the payment network against both long-term economic risk and future advances in computing technology.[22]

C.   Regulations, Oversight, and Enforcement

1.   State and Federal Concerns

Considering its many unique characteristics and infinite potential, it is no surprise that Bitcoin garners attention from both state and federal regulators.[23] An inherent consequence of any

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[15] *Id.*

[16] J.P. & G.T., *supra* note 7.

[17] NAKAMOTO, *supra* note 3, at 3.

[18] eMansipater, *supra* note 11.

[19] *Id.*

[20] NAKAMOTO, *supra* note 3, at 4; Chris Moore, *Why Was 21 Million Picked as The Number of Bitcoins to Be Created?*, WEUSECOINS, www.weusecoins. com/en/questions (last visited Nov. 18, 2013).

[21] NAKAMOTO, *supra* note 3, at 3.

[22] *Id*.

[23] *See* Memorandum from Benjamin M. Lawsky, Superintendent, N.Y. Dep't of Fin. Servs., *Notice of Inquiry on Virtual Currencies* 1 (Aug. 12, 2013), *available at* http://www.dfs.ny.gov/about/press2013/memo1308121. pdf; Tracy Alloway, Gregory Meyer & Stephen Foley, *US Regulators Eye*

payment network is the risk that the exchange of currency imposes on users.[24] With this risk comes the responsibility of regulatory agencies to provide safeguards that protect especially vulnerable parties.[25] In particular, the New York State Department of Financial Services ("NYDFS") recently began mulling the promulgation of "appropriate regulatory guidelines" and oversight procedures to regulate cryptocurrencies such as Bitcoin.[26] Following a preliminary investigation, NYDFS believes that businesses facilitating the transfer of Bitcoins fall within the state's jurisdiction.[27] On the federal level, the U.S. Treasury reached a similar conclusion, considering Bitcoin exchanges such as Mt. Gox to be "money services businesses" and informally placing them within federal regulatory jurisdiction as well.[28]

As of August 12, 2013, NYDFS had issued investigative "subpoenas to several companies associated with Bitcoin" to inquire into whether consumer protection and anti-money laundering laws can effectively regulate "the business practices of the virtual currency industry."[29] NYDFS's primary reasons for proposed regulation are to: (1) maintain the market's "faith and confidence" in virtual currency; (2) "root out [the] illegal activity" that virtual currency enables; and (3) "promot[e] sustained, long-term investment" in Bitcoin.[30]

2.   The *Shavers* Case

Though Bitcoin's official legal definition remains unclear, the Eastern Texas District Court's decision in *SEC v. Shavers* sheds

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Bitcoin Supervision, FIN. TIMES (May 6, 2013, 7:30 PM), http://www.ft.com/intl/cms/s/0/b810157c-b651-11e2-93ba-00144feabdc0.html#axzz2dONCwimd.

[24] Alloway, Meyer & Foley, *supra* note 23.

[25] *Id.*; Memorandum from Benjamin M. Lawsky, *supra* note 23.

[26] *See* Memorandum from Benjamin M. Lawsky, *supra* note 23.

[27] *Id.* ("[V]irtual currency exchangers may be engaging in money transmission as defined in New York law, which is an activity that is licensed and regulated by DFS.").

[28] Alloway, Meyer & Foley, *supra* note 23.

[29] Sakthi Prasad, *NY Regulator Issue Subpoenas to Firms Tied to Bitcoin: WSJ*, REUTERS (Aug. 12, 2013, 12:10 AM), http://www.reuters.com/article/2013/08/12/us-digitalcurrency-subpoena-bitcoin-idUSBRE97B03720130812.

[30] Memorandum from Benjamin M. Lawsky, *supra* note 23, at 2.

light on the judiciary's definition of Bitcoin.[31] According to the court, because Bitcoins meet *Howey*'s criteria for defining investment contracts, Bitcoin "investments are both investment contracts and notes, and, thus, are securities" under *Howey*.[32] Nevertheless, the court merely drew this conclusion to establish subject-matter jurisdiction in federal court, since the SEC—pursuant the Securities Act of 1933—holds jurisdiction over "any note, stock . . . , transferable share, [or] investment contract."[33] Further confusing the issue, the SEC fails to refer to Bitcoins as a security in its initial complaint.[34] Therefore, although it appears that state regulators, the Treasury, and the federal judiciary are pushing towards regulation of both Bitcoin exchanges and the currency itself, whether the SEC is pushing in a similar direction is unclear.

3.   Foreign Treatment

In an effort to stem the tide of potential abuse, but without creating any official provisions specifically for Bitcoin, Canada, Australia, and Germany each identified existing regulatory provisions that will apply to Bitcoin moving forward.

In Canada, the Canada Revenue Agency stated that "two separate tax rules" will apply to Bitcoins.[35] The first "barter transaction" rule levies a tax anytime users "exchange [Bitcoins] for another good without the use of cash," and the second rule applies a tax when users buy Bitcoins for trading as a commodity.[36] Similarly, in Australia, the Australian Taxation Office announced that existing "tax rules that apply to conventional commercial transactions

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[31] *See generally* SEC v. Shavers, 2013 Fed. Sec. L. Rep. (CCH) ¶ 97,596 (E.D. Tex. Aug. 6, 2013).

[32] *Id.*

[33] Reuben Grinberg, *Bitcoin: An Innovative Alternative Digital Currency*, 4 HASTINGS SCI. & TECH. L. J. 160, 194 (2012) (quoting Securities Act of 1933 § 2(a)(1), 15 U.S.C. § 77b(a)(1) (2013)).

[34] *See* Complaint at 1, SEC v. Shavers, 2013 Fed. Sec. L. Rep. (CCH) ¶ 97,596 (E.D. Tex. Aug. 6, 2013), *available a*t http://www.sec.gov/litigation/complaints/2013/comp-pr2013-132.pdf.

[35] Bonnie Allen, *Revenue Canada Says BitCoins Aren't Tax Exempt*, CBC NEWS (Apr. 26, 2013, 5:02 PM), http://www.cbc.ca/news/business/revenue-canada-says-bitcoins-aren-t-tax-exempt-1.1395075.

[36] *Id*.

generally apply in the same way" to Bitcoin transactions.[37] Perhaps most interesting is Germany's treatment of Bitcoin, which follows a similar standard taxation approach with one important caveat: Bitcoins "will be considered assets subject to the country's standard capital gains tax," unless they are sold more than one year after they are bought, wherein they are tax exempt.[38]

D.   Future Considerations

Despite the numerous inconsistencies and opaque nature of existing U.S. federal policy on virtual currencies, it is clear that the Bitcoin network requires some form of regulation. Because of the risks imposed on both consumers and the broader economic sphere, continued use of Bitcoins and the Bitcoin payment system will inevitably invite state and federal oversight in the proximate future.[39]

One example of the risks Bitcoin users face is illustrated in the rise and fall of the Silk Road, formerly one of the most well-known online marketplaces to allow Bitcoin payment.[40] Widely considered the "most sophisticated and extensive criminal marketplace on the Internet," the Silk Road was a "sprawling black-market bazaar, where illegal drugs and other illicit goods and services [were] regularly bought and sold by the site's users."[41] Bitcoin's inherent anonymity naturally married itself to an online marketplace dealing almost exclusively in illegal transactions. In

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[37] Katie Walsh & Jason Murphy, *ATO Targets Bitcoin Users*, FIN. REV. (June 24, 2013, 5:00 AM), http://www.afr.com/p/technology/ato_targets_bitcoin_users_oawpzLQHDz2vEUWtvYLTWI.

[38] Devin Coldeway, *Germany to Tax Bitcoins, But How Will They Know Who Has Them?*, NBC NEWS (Aug. 19, 2013, 6:29 PM), http://www.nbcnews.com/technology/germany-tax-bitcoins-how-will-they-know-who-has-them-6C10945775.

[39] *See* Memorandum from Benjamin M. Lawsky, *supra* note 23, at 2 ("We look forward to working with the virtual currency industry and other stakeholders as our inquiry proceeds, and we move to put in place appropriate regulatory guardrails to protect consumers and our national security.").

[40] Donna Leger, *Feds Seize 'Silk Road' Online Drug Site*, USA TODAY (Oct. 3, 2013, 2:38 PM), http://www.usatoday.com/story/news/nation/2013/10/02/fbi-shuts-down-silk-road-website/2909023.

[41] Sealed Verified Complaint at 5–6, U.S. v. Ulbricht, No. 13 CIV 6919 (S.D.N.Y. Sept. 30, 2013).

aggregate, the FBI estimated that this underground market generated approximately $1.2 billion in sales.[42]

On October 1, 2013, federal authorities arrested the Silk Road owner, Ross Ulbricht, and the FBI subsequently shut down the Silk Road.[43] Unfortunately for Silk Road users, the 26,000 Bitcoins seized by the FBI as part of Ulbricht's arrest actually belonged to the users who stored their own Bitcoins on the site, rather than to Ulbricht himself.[44] Since each Bitcoin has an attributable value in U.S. currency, the shutting down of the Silk Road represented a considerable loss for consumers. It is precisely this sort of risk that necessitates regulation.

E.   Conclusion

Overall, the extent to which the regulation of cryptocurrency will parallel that of physical currencies remains uncertain. For now, while state regulatory agencies, the U.S. Department of the Treasury, and some federal courts claim that Bitcoin falls within the scope of their regulatory jurisdiction, the SEC has not yet taken a stance on the subject either way. Nevertheless, policy drafting will surely rely on not only how the courts define the intricacies of the Bitcoin system, but also how regulatory agencies interpret relevant judicial precedents.

Joseph Burleson[45]

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[42] Alex Konrad, *Feds Say They've Arrested 'Dread Pirate Roberts,' Shut Down His Black Market 'The Silk Road'*, FORBES (Oct. 2, 2013, 12:08 PM), http://www.forbes.com/sites/alexkonrad/2013/10/02/feds-shut-down-silk-road-owner-known-as-dread-pirate-roberts-arrested.

[43] *Id.*

[44] Andrea Peterson, *The Switchboard: The FBI Has Only Seized 26,000 of the 600,000 Bitcoins Silk Road Raked in*, WASH. POST (Oct. 7, 2013, 8:54 PM), http://www.washingtonpost.com/blogs/the-switch/wp/2013/10/07/the-switchboard-the-fbi-has-only-seized-26000-of-the-600000-bitcoins-silk-road-raked-in.

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