

Bitcoin Basics: a Primer on Virtual Currencies

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In the past five years, virtual currencies, or ‘cryptocurrencies’ have evolved tremendously and are quickly establishing themselves as a payment system. Today, virtual currencies are a multibillion-dollar venture with dual potential as both an investment and an electronic medium of exchange.¹ Increasingly, mainstream retailers are announcing plans to accept Bitcoins, Bitcoin ATMs are growing in prominence,² the first Bitcoin debit cards have been delivered³ and the first Bitcoin derivative transactions have been executed on a US-regulated exchange.⁴ Yet, there remain numerous risks and challenges

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1 Exchange rates, market capitalisations, etc, are correct as of 21 October 2014.

2 There are currently an estimated 200 Bitcoin ATMs worldwide. See Sydney Embrier, ‘On To-Do List: Deposit Cash in Bitcoin A.T.M.’ (*The New York Times* 25 August 2014) <http://dealbook.nytimes.com/2014/08/25/on-to-do-list-deposit-cash-in-bitcoin-a-t-m/>

3 Xapo launched what has been billed as the world’s first Bitcoin debit card in late July 2014. See <https://in.xapo.com/campaign/debit>.

4 See TeraExchange, LLC, ‘TeraExchange Completes First Bitcoin Derivatives Trade on Regulated Exchange’, Press Release (9 October 2014) www.prnewswire.com/news-releases/teraexchange-completes-first-bitcoin-derivatives-trade-on-regulated-exchange-278661591.html.

associated with virtual currencies. In addition to experiencing significant volatility in exchange rates and susceptibility to attacks from and illicit use by cybercriminals, the virtual currency marketplace remains largely unregulated. Governments around the globe are taking widely divergent actions – or taking no action at all – to define and regulate virtual currencies. This article will provide an overview of the virtual currency landscape, including legislative, regulatory and law enforcement developments.

What are virtual currencies?

Virtual currencies are decentralised peer-to-peer payment systems that are digital representations of value and can be transferred, stored and traded electronically. At their core, they are distinct from other digital payments (eg, PayPal, Facebook credits, airline miles, etc) because they provide a means to transfer value between two parties without needing an intermediate party. They do not have legal tender status; they operate with no central authority or banks, and their issue is carried out collectively by a distributed network. While the transaction between buyer and seller is direct, the identities of the parties are encrypted and therefore no personal information is transferred. However, virtual currency transactions such as Bitcoin transactions are not fully anonymous. A transaction record of every Bitcoin and every Bitcoin user's encrypted identity is recorded on a public ledger. As a result, it is most appropriate to characterise Bitcoin and many other virtual currencies as 'pseudonymous' as opposed to anonymous. This pseudonymity, combined with its efficient and decentralised nature, makes it appealing to both consumers and criminals alike.⁵

Virtual currencies have grown exponentially in recent years. Today, there are several hundred virtual currencies in existence with a market capitalisation of over \$5.75bn.⁶ The Bitcoin system is the most prominent, with an estimated market capitalisation of over \$5bn.⁷ The exchange rate of dollars to Bitcoin soared to more than \$1,200 at its peak last November,

5 See 'Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies', hearing before the US Senate Committee on Homeland Security and Governmental Affairs, 113th Cong (2013) (Mythili Raman, Acting Assistant Attorney General Criminal Division, US Department of Justice), www.hsgac.senate.gov/hearings/beyond-silk-road-potential-risks-threats-and-promises-of-virtual-currencies.

6 The Crypto-Currency Market Capitalizations website lists over 500 virtual currencies; however, many of these have market capitalisations of several thousand dollars or less. See <https://coinmarketcap.com/all.html>.

7 According to Crypto-Currency Market Capitalizations, as of 28 August 2014. See <http://coinmarketcap.com/currencies/views/all>.

although it has since retreated and was recently less than \$400 per Bitcoin.⁸ Ripple, which recently outpaced Litecoin as the virtual currency with the second-largest market capitalisation, has a market capitalisation of over \$140m and an exchange rate of about \$0.0049.⁹ Other mineable virtual currencies with a sizeable market capitalisation include BitSharesX, Peercoin and Dogecoin. However, as Bitcoin is the dominant virtual currency, this article (and the attention of regulators and policy-makers) focuses primarily on it.

While these descriptions provide a helpful understanding of what a virtual currency is and some of the different virtual currencies in existence today, they do not clarify the role of virtual currencies in the modern financial system. Are they a commodity, a currency or a medium of exchange? Can they be more than one of these? As will be discussed in more depth in the following sections, policy-makers and regulators are still trying to answer these questions. The Department of the Treasury's Financial Crimes Enforcement Network (FinCEN) has defined virtual currency as a 'medium of exchange that operates like currency in some environments, but does not have all the attributes of real currency... [including that it] does not have legal tender status in any jurisdiction'.¹⁰ In its recent ruling, the Internal Revenue Service (IRS) held that virtual currency will be treated as property, not currency, for tax purposes.¹¹ And, a former acting Commissioner of the Commodity Futures Trading Commission (CFTC) stated in May 2013 his belief that Bitcoins would be likely to be considered a 'commodity' under the Commodity Exchange Act.¹²

8 *Ibid.*

9 While Ripple shares many similarities with Bitcoin, it is distinct. The Ripple protocol uses a native currency, XRP, which, like Bitcoin, is based on a mathematical formula and has a finite number of units that can be mined. But, in addition to serving as a payment system, it is designed to serve as an exchange for both fiat currencies as well as virtual currencies. In late September 2014, Ripple announced two partnerships that will bring the Ripple protocol's low-cost currency transfer and remittance capabilities to two US banks, in addition to a prior agreement with a German bank to integrate the Ripple protocol. See <https://ripple.com>.

10 Department of the Treasury Financial Crimes Enforcement Network Guidance, 'Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies' FIN-2013-G001 (18 March 2013) www.fincen.gov/statutes_regs/guidance/pdf/FIN-2013-G001.pdf.

11 Internal Revenue Service, Notice 2014-21, www.irs.gov/pub/irs-drop/n-14-21.pdf (hereinafter 'IRS Notice 2014-21').

12 Tracy Alloway, Gregory Meyer and Stephen Foley, 'US regulators eye Bitcoin supervision', (*Financial Times* 6 May 2013), www.ft.com/intl/cms/s/0/b810157c-b651-11e2-93ba-00144feabdc0.html?siteedition=intl#axzz2SXW5ro8d.

The evolution of Bitcoin

The Bitcoin system came into existence in 2009. Bitcoins are created, or ‘mined’, in Bitcoin parlance, through the completion of complex mathematical equations using sophisticated computers. By design, each new equation is more difficult to solve; this feature limits the rate at which new Bitcoins can be added and is designed to result in a total cap of 21 million Bitcoins. There are over 13 million Bitcoins today,¹³ and it is projected that the number of new Bitcoins will be halved every four years until the maximum circulation is reached. Users install Bitcoin wallets on their computer or mobile phone, which generates a unique address and a public and private encryption ‘key’ that verifies transactions.

During the early years, virtual currencies became most prominent for their association with illicit activities, including money laundering, drug trafficking and child exploitation. Virtual currencies grew popular with online black markets such as the black market internet bazaar Silk Road, which accepted only Bitcoins owing to their pseudonymity. It was estimated that the Silk Road marketplace was responsible for nearly half of all transactions involving Bitcoins. As we discuss below, the FBI shut down Silk Road in October 2013; in total, nearly 174,000 Bitcoins (worth over \$33m at the time)¹⁴ were seized in the process and, according to one estimate, nearly 13,000 drug listings were shut down.¹⁵ Even with the closure of the Silk Road marketplace, Bitcoin has struggled to emerge from the shadow cast by this illegal underworld. Part of this is due to the fact that the shutdown of Silk Road served temporarily to increase business to other black market bazaars.¹⁶ Indeed, according to a report by the Digital Citizens Alliance, drug listings on the private networks that comprise the Darknet economy have increased 75 per cent since the Silk Road shutdown.¹⁷ And, Silk Road has since come back online, with an even larger marketplace – just six months after it was shut down, there were nearly 13,650 listings for drugs on the site.¹⁸

13 Blockchain Info, ‘Total Bitcoins in Circulation’, <https://blockchain.info/charts/total-bitcoins>.

14 US Attorney’s Office, ‘Manhattan U.S. Attorney Announces Seizure of Additional \$28 Million Worth of Bitcoins Belonging to Ross William Ulbricht, Alleged Owner and Operator of “Silk Road” Website’, (FBI 25 October 2013) www.fbi.gov/newyork/press-releases/2013/manhattan-u.s.-attorney-announces-seizure-of-additional-28-million-worth-of-bitcoins-belonging-to-ross-william-ulbricht-alleged-owner-and-operator-of-silk-road-website.

15 Digital Citizens Alliance, *Busted, but Not Broke: The State of Silk Road and the Darknet Marketplaces*, 30 April 2014. The report focuses on the unintended consequences of the closure of the Silk Road marketplace: a rise in the number of black market sites and an increase in the total.

16 According to the Digital Citizens Alliance, black market site BMR experienced a 70 per cent increase and Sheep Marketplace experienced a 400 per cent increase within weeks of the FBI shutdown of Silk Road. *Ibid* 6.

17 *Ibid*.

18 *Ibid*.

Yet, despite its continued association with the black market and other illicit activities, Bitcoin's popularity has continued to grow, albeit with some notable setbacks. In the autumn of 2013, the first Bitcoin ATM was established and investor support for the virtual currency was so enthusiastic that for a brief period in late November, Bitcoin traded at prices higher than gold. However, its price fell significantly beginning in December 2013, and Bitcoin suffered a tremendous blow when MtGox, the most popular Bitcoin exchange, suspended trading on 25 February 2014. MtGox, which had once handled over 70 per cent of Bitcoin transactions, announced the disappearance of 850,000 Bitcoins (approximately seven per cent of the total number of Bitcoins), worth in excess of \$470m at the time.¹⁹ Its computer systems had been hacked. MtGox filed for bankruptcy protection and the collapse of the exchange highlighted concerns over the security of virtual currencies. The collapse also increased concerns about the stability of virtual currencies, which are not backed by any central bank.

Despite concerns over cybersecurity, Bitcoin is increasingly accepted by online and brick-and-mortar retailers. In January 2014, Overstock.com became one of the first large US online retailers to accept Bitcoin, and in September 2014, it became the first to accept Bitcoin payments in all foreign countries.²⁰ By the summer of 2014, Dish Network, Expedia and Dell all started accepting Bitcoin.²¹ An estimated 63,000 retailers worldwide accepted Bitcoin by the summer of 2014, and that number was projected to reach 100,000 by the end of 2014.²² In addition to stores that directly accept payment in Bitcoins, the virtual currency can be used at other retailers, such as Amazon, CVS, Target, Zappos, Home Depot and Whole Foods, by purchasing gift cards through eGifter or Gyft.²³ Further, Xapo, which offers online Bitcoin wallets and underground Bitcoin vaults,²⁴ recently released the world's first debit card backed by Bitcoins.²⁵

19 Alex Hern, 'Bitcoin exchange MtGox offline amid rumours of theft' (*The Guardian* 25 February 2014) www.theguardian.com/technology/2014/feb/25/bitcoin-exchange-mtgox-offline-amid-rumours-of-theft.

20 See www.overstock.com/bitcoin.

21 Gertrude Chavez-Dreyfuss and Michael Connor, 'Bitcoin shows staying power as online merchants chase digital sparkle' (*Reuters* 28 August 2014), www.reuters.com/article/2014/08/28/us-usa-bitcoin-retailers-analysis-idUKKBN0GS0AG20140828.

22 *Ibid.* For a more detailed discussion of retailers accepting Bitcoin, see CoinDesk, 'What Can You Buy with Bitcoin?' (16 October 2014) www.coindesk.com/information/what-can-you-buy-with-bitcoins.

23 Gift cards from over 200 retailers can be purchased with Bitcoin from either Gyft or eGifter. See www.gyft.com/bitcoin and www.egifter.com/bitcoin.

24 See Evelyn Rusli, 'Latest Bitcoin Craze? Actual Bank Vaults' (*The Wall Street Journal* 13 March 2014), http://online.wsj.com/news/articles/SB10001424052702303546204579437462303753346?mod=_newsreel_4/

25 Evelyn Rusli, 'First Bitcoin Vaults, Now Xapo Debuts Debit Cards', (*The Wall Street Journal* 24 April 2014) <http://blogs.wsj.com/digits/2014/04/24/first-bitcoin-vaults-now-xapo-debuts-debit-cards/>. Note that Xapo currently is not shipping its debit cards to addresses located in the US owing to regulatory restrictions.

The continued evolution of Bitcoin?

While Bitcoin and other virtual currencies have evolved tremendously in the past five years, their future remains unclear. Broad challenges exist that will have an impact on their usage, starting with the question: what precisely is Bitcoin? Is it a security, a commodity or a currency? Or could it be all three? And, can it be different things for different countries and groups of people? The legislative and regulatory treatment of virtual currencies will have a significant impact on their evolution. Another key factor is public confidence in Bitcoin – regardless of what it is defined as. While these topics will be explored further, it is worth mentioning that there are two other significant factors that will shape the future of virtual currencies: technical protocols (and, specifically, the potential for fatal technical issues) and the use of virtual currencies by the black market and for illicit activities, including terrorism and money laundering.

The legislative landscape

Congressional hearings

To date, there has been limited Congressional attention on the issues presented by virtual currencies. Only two committees have held hearings on the topic – both of which were informational. The first Congressional hearing on virtual currencies was held in November 2013 by the US Senate Committee on Homeland Security and Government Affairs. This hearing, titled ‘Beyond Silk Road: Potential Risks, Threats, and Promises of Virtual Currencies’, was held both to gain a greater understanding of and gather facts on virtual currencies, as well as in response to the government shutdown of e-commerce site Silk Road in October 2013. Chair Tom Carper, in his opening statement, summarised the general attitude towards virtual currencies: ‘[v]irtual currencies, perhaps most notably Bitcoin, have captured the imagination of some, struck fear among others, and confused the heck out of many of us.’²⁶

This hearing focused primarily on the dark side of Bitcoin: its use as an effective tool for illicit activities. At the time of the hearing, an estimated \$8bn had been transacted via Bitcoin, an amount that highlighted the importance of ensuring the proper mechanisms are in place to combat Bitcoin-funded illegal transactions. US attorney Mythili Raman testified that US authorities have ‘been able to keep pace with [the increased use of Bitcoin], and we’ve

26 See n5.

been able to develop protocols and strategies to address it'.²⁷ Jennifer Shasky Calvery, Director of FinCEN, echoed Raman saying, 'I feel like we have a pretty good basis to act', and also noting that virtual currency transactions are still comparatively small next to global criminal proceeds.²⁸ Notably, Calvery also said that it was irrelevant whether Bitcoin was classified as a currency or a commodity for her department, as they are tasked with targeting money laundering.²⁹ The hearing generally outlined the promises and the dangers that come with virtual currencies, but determined that nothing more needed to be implemented to safeguard against the potential problems posed by virtual currencies.

Congress did not directly address virtual currencies again until April 2014. On 2 April 2014, the House Committee on Small Business held a hearing titled 'Bitcoin: Examining the Benefits and Risks for Small Business', to address directly the pros and cons this payment method may offer small businesses. Committee Chair Sam Graves, in his opening comments, explained that the purpose of the hearing was meant to increase information on a topic shrouded in uncertainty, as well to examine the benefits and risks associated with Bitcoin as a payment for small businesses. Members on the panel enumerated three benefits that Bitcoin may provide small businesses:

1. lower processing fees;
2. protection against fraud;
3. potential penetration of new markets not included in current global payment networks.

The considerable risks of Bitcoin were discussed as well, including potential volatility in the exchange rate and security concerns.

While these are the only two hearings to date to focus directly on virtual currencies, the topic has been raised in other Congressional hearings in recent months. For instance, Federal Reserve Chair Janet Yellin testified in February before the Senate Banking, Housing and Urban Affairs Committee that the Federal Reserve does not 'have the authority to supervise or regulate Bitcoin in anyway'.³⁰ Further, Securities and Exchange Commission (SEC) Chair Mary Jo White and former acting CFTC Chair Mark Wetjen have both testified

27 *Ibid* (statement of Sen Carper, Member, Senate Committee on Homeland Security and Governmental Affairs).

28 *Ibid* (statement of Jennifer Shasky Calvery).

29 *Ibid*.

30 Steven Russolillo, 'Yellen on Bitcoin: Fed Doesn't Have Authority to Regulate It in Any Way' (*The Wall Street Journal* 27 February 2014), <http://blogs.wsj.com/moneybeat/2014/02/27/yellen-on-bitcoin-fed-doesnt-have-authority-to-regulate-it-in-any-way/>.

regarding virtual currencies.³¹ And, as will be discussed later, in his April 2014 testimony before the House Committee on the Judiciary on the topic of recent achievements of the Department of Justice, Attorney-General Eric Holder discussed the challenges that virtual currencies pose for law enforcement.³²

Proposed legislation

While few Congressional hearings have been held concerning virtual currencies, and those have been informational in nature, there is at least one effort to introduce legislation addressing virtual currency. On 8 April 2014, Congressman Steve Stockman of Texas introduced HR 4602, the ‘Virtual Currency Tax Reform Act’. The bill was referred to the Committee on Ways and Means on 7 May 2014, but has not made further progress.³³ The purpose of the bill is to authorise the IRS to treat virtual currencies as legal tender for tax purposes. This would result in Bitcoin transactions triggering sales taxes, rather than capital gains taxes based on the recent IRS notice (discussed in more depth below). Representative Stockman stated, ‘This is a nascent industry... cryptocurrency is the future. We need to encourage it, not discourage it’.³⁴ Representative Stockman has established himself as an early advocate for Bitcoin – he was one of the first politicians to accept Bitcoin campaign contributions, following the Federal Election Committee (FEC) ruling that political committees may accept a limited amount of Bitcoin contributions (discussed in more depth below).³⁵

While these hearings and the proposed legislation demonstrate that Congress has some interest in the oversight and regulation of virtual currencies in the past year, it is unlikely that Congress will take affirmative action in the near future. Adding a new dimension to the Congressional debate, in April 2014, a lobbying firm working for MasterCard registered

31 ‘Oversight of the SEC’s Agenda, Operations and FY 2015 Budget Request’, 114th Cong (2014) (testimony of Chair Mary Jo White, Committee on Financial Services) www.sec.gov/News/Testimony/Detail/Testimony/1370541674457#U_94M5hOWkQ; 114th Cong (2014) (testimony of Acting Chairman Mark Wetjen, Committee on Banking, Housing & Urban Affairs) www.cftc.gov/PressRoom/SpeechesTestimony/opawetjen-5.

32 ‘Oversight of the U.S. Department of Justice’, 114th Cong (2014) (testimony of Attorney-General Eric Holder, Committee on the Judiciary) www.justice.gov/ola/testimony/112-2/06-12-12-ag-holder.pdf/

33 See HR 4602, www.gpo.gov/fdsys/pkg/BILLS-113hr4602ih/pdf/BILLS-113hr4602ih.pdf; see also press release, United States Representative Steve Stockman, ‘Stockman plans to introduce the “Virtual Currency Tax Reform Act”’ (8 April 2014) <http://stockman.house.gov/media-center/press-releases/stockman-plans-to-introduce-the-virtual-currency-tax-reform-act>.

34 *Ibid.*

35 Make Your Laws, ‘Political organizations accepting Bitcoin’, <https://makeyourlaws.org/fec/bitcoin/pacs>.

as the first lobbyists to lobby Congress on virtual currencies and Bitcoin.³⁶ In July 2014, the leading Bitcoin trade organisation, Bitcoin Foundation, announced that it had hired a lobbying firm.³⁷

The regulatory landscape

On 19 May 2014, the Chair and Ranking Member of the Senate Committee on Banking, Housing and Urban Affairs sent a letter to the heads of the SEC, Department of Treasury, CFTC, Office of the Comptroller of the Currency, Federal Deposit Insurance Corporation (FDIC) and the Federal Reserve.³⁸ They asked the following:

‘What is your perspective on how virtual currencies fit within the U.S. banking system? How do they fit within the U.S. payment processing system and the U.S. trading markets?... What are your expectations of your supervised entities for Bank Secrecy Act compliance with regard to virtual currencies? Additionally, what is your perspective on how virtual currencies fit or should fit within the existing regulatory framework?³⁹ And, Does your agency have jurisdiction to supervise or regulate virtual currencies, and what actions, if any, does your agency plan to take or has taken in this area?’⁴⁰

These questions demonstrate that despite the significant growth in popularity and market capitalisation of virtual currencies in recent years, the regulatory framework for virtual currencies is still in its infancy. Yet, regulators are increasingly taking steps to address various challenges posed by virtual currencies.

The IRS takes a stance

Until recently, there was limited guidance regarding the US tax consequences of transactions involving virtual currency. However, in Notice 2014-21 (the ‘Notice’), the IRS provided clarification with its announcement that virtual currency will be treated as property, not as currency, for US federal tax purposes. This distinction can affect both the timing and character of

36 Perianne Boring, ‘SEC’s Investor “Warning” On Bitcoin Could Stifle Innovation’ (*Forbes* 9 May 2014) www.forbes.com/sites/perianneboring/2014/05/09/secs-investor-warning-on-bitcoin-could-stifle-innovation/.

37 Ryan Tracy, ‘Bitcoin Foundation Hires Lobbying Firm’ (*The Wall Street Journal* 9 July 2014) <http://online.wsj.com/articles/bitcoin-foundation-hires-lobbying-firm-1404918261>.

38 Chair Tim Johnson and Mike Crapo, letter dated 19 May 2014, www.aba.com/Tools/Ebulletins/Documents/johnson-crapo_bitcoin_letter.pdf.

39 *Ibid.*

40 *Ibid.*

income. The Notice confirmed that tax liability and reporting obligations can result from the sale or exchange of virtual currency, or the use of virtual currency to pay for goods or services in a real-world economy transaction.

The Notice only applies to ‘convertible virtual currency’, which is virtual currency that has an equivalent value in real currency or that acts as a substitute for real currency – this includes Bitcoin. Applying the general tax principles applicable to property transactions, the Notice describes the US tax consequences of two common transactions involving virtual currency: receipt of virtual currency in exchange for goods or services and the exchange of virtual currency for other property or services. Each is described in turn below.

RECEIPT OF VIRTUAL CURRENCY IN EXCHANGE FOR GOODS OR SERVICES

The Notice stipulates that a taxpayer who receives virtual currency as payment for goods or services, including a taxpayer who successfully ‘mines’ virtual currency, must include in gross income the US dollar fair market value of the virtual currency, determined on the date of receipt. When a virtual currency is listed on an exchange and the exchange rate is established by market supply and demand, the virtual currency’s fair market value is determined by converting the virtual currency into US dollars at the exchange rate in a reasonable manner that is consistently applied. The fair market value on the date of receipt also constitutes a taxpayer’s basis in virtual currency that it receives as payment for goods or services.

An independent contractor who receives virtual currency as payment for services has self-employment income in an amount equal to, and is subject to self-employment tax on, the US dollar fair market value of the virtual currency on the date of receipt. Similarly, an individual taxpayer who mines virtual currency as a trade or business other than as an employee is subject to self-employment tax on his or her net earnings from such activity.

EXCHANGE OF VIRTUAL CURRENCY FOR OTHER PROPERTY OR SERVICES

If a taxpayer exchanges virtual currency for other property with a fair market value that exceeds the taxpayer’s basis in the virtual currency, the taxpayer has taxable gain in an amount equal to such excess. If a taxpayer exchanges virtual currency for other property with a fair market value that is less than the taxpayer’s basis in the virtual currency, the taxpayer has a loss. A taxpayer’s gain or loss is characterised as capital or ordinary under the character rules applicable to property generally.

In addition, the fair market value of virtual currency paid by an employer as remuneration for services constitutes ‘wages’ for employment tax purposes.

Therefore, such amounts are subject to federal income tax withholding, Federal Insurance Contributions Act (FICA) tax and Federal Unemployment Tax Act (FUTA) tax and must be reported on IRS Form W-2. Payments made in virtual currency are subject to information reporting and backup withholding to the same extent as other payments made in property.

Growing interest by the SEC

On 30 August 2013, SEC Chair Mary Jo White wrote in a letter responding to an inquiry from the Senate Committee on Homeland Security and Government Affairs that '[w]hether a virtual currency is a security under the federal securities laws, and therefore subject to our regulation, is dependent on the particular facts and circumstances at issue'.⁴¹ However, she proceeded to note that '[r]egardless of whether an underlying virtual currency is itself a security, interests issued by entities owning virtual currencies or providing returns based on assets such as virtual currencies likely would be securities and therefore subject to our regulation'.⁴² The SEC has recently taken action in two forms: various enforcement actions and the issue of investor advisory notices. Recent actions indicate that even in the absence of new regulations specifically addressing virtual currency, the SEC has significant existing authority to regulate a wide range of matters involving Bitcoin.

The first SEC enforcement action relating to virtual currency occurred in July 2013, when the SEC charged Trendon Shavers of Texas with defrauding investors in a Bitcoin-denominated Ponzi scheme. Shavers, the founder and operator of Bitcoin Savings and Trust, offered and sold Bitcoin-denominated investments online, raising at least 700,000 Bitcoins in what was allegedly a Ponzi scheme. Commenting on the action, Andrew Calamari, Director of the SEC's New York Regional Office stated, '[f]raudsters are not beyond the reach of the SEC just because they use Bitcoin... to mislead investors and

41 Mary Jo White, letter to Senate Committee on Homeland Security and Government Affairs (30 August 2013) <http://online.wsj.com/public/resources/documents/VCurrenty111813.pdf>.

42 *Ibid.* The Securities Act of 1933, as amended, provides the statutory definition of a security in s 2(a)(1). Virtual currencies are not one of the enumerated financial instruments defined under this section. Nor are they defined in the Uniform Securities Act, which is the model statute designed to serve as a framework for state securities law. Under the *Howey* test, an instrument is deemed a security if it (i) is an investment of money (ii) due to an expectation of profits arising from (iii) a common enterprise (iv) which depends solely on the efforts of a promoter or third party. *SEC v WJ Howey Co*, 328 US 293 (1946).

violate the federal securities laws'.⁴³ In September 2014, a US federal judge found that the SEC established that the company was a Ponzi scheme, and ordered Bitcoin Savings and Trust and Shavers to pay a combined \$40.7m.⁴⁴ In so finding, the court held that the Bitcoin investments at issue qualified as 'investment contracts' and 'securities' under the Securities Act of 1933, as amended, and the Exchange Act of 1934, as amended.⁴⁵ The finding that Bitcoins are properly treated as 'securities' is likely to have broad implications in the future.

In conjunction with the civil enforcement action, the SEC issued an investor alert at the same time warning investors of the dangers of Ponzi schemes and other potential scams using virtual currencies.⁴⁶ In the alert, the SEC expressed its concern that heightened use of virtual currencies 'may entice fraudsters to lure investors into Ponzi and other schemes in which these currencies are used to facilitate fraudulent, or simply fabricated, investments or transactions'.⁴⁷

In February 2014, the SEC issued an order of suspension of trading for Imogo Mobile Technologies, a company developing a mobile platform for Bitcoin. The two-week trading suspension was issued 'because of questions that have been raised about the accuracy and adequacy of publicly disseminated information concerning, among other things, [the company's] business, revenue, and assets'.⁴⁸

The SEC published a new investor alert in May 2014 to warn investors of the potential risks of investments involving virtual currencies.⁴⁹ The alert identified several areas of concern, such as a heightened risk of fraud, limited recovery options in the event of fraud or theft, lack of insurance, a history of

43 US Securities and Exchange Commission, 'SEC Charges Texas Man with Running Bitcoin-Denominated Ponzi Scheme', Press Release (23 July 2013) www.sec.gov/News/PressRelease/Detail/PressRelease/1370539730583

44 Jonathan Stempel, 'U.S. Judge Awards \$40.7 Million in SEC Case Over Bitcoin Ponzi Scheme' (*Reuters* 19 September 2014) www.reuters.com/article/2014/09/19/us-sec-bitcoin-fraud-idUSKBN0HE1Z820140919.

45 Jeff Sistrunk, 'Virtual Bank Founder Must Pay \$40M For Bitcoin Ponzi Scheme' (*Law360* 18 September 2014) www.law360.com/articles/578917/virtual-bank-founder-must-pay-40m-for-bitcoin-ponzi-scheme.

46 US Securities and Exchange Commission, 'Ponzi Schemes Using Virtual Currencies', Investor Alert (SEC Pub No 153(7/13), 23 July 2013) www.sec.gov/investor/alerts/ia_virtualcurrencies.pdf.

47 *Ibid.*

48 *In the Matter of Imogo Mobile Technologies Corp*, Order of Suspension of Trading (19 February 2014) www.sec.gov/litigation/suspensions/2014/34-71568.pdf.

49 US Securities and Exchange Commission, 'Bitcoin and Other Virtual Currency-Related Investments', Investor Alert (7 May 2014) <http://investor.gov/news-alerts/investor-alerts/investor-alert-bitcoin-other-virtual-currency-related-investments>

volatility, government regulation and security concerns.⁵⁰ A similar investor alert was released by independent regulator Financial Industry Regulatory Authority (FINRA), also in May 2014.⁵¹ In ‘Bitcoin: More than a Bit Risky’, FINRA also cautioned investors about the ‘numerous’ risks of buying and using virtual currencies.⁵²

The SEC fined Bitcoin entrepreneur Erik Voorhees in June 2014 in connection with two offerings of unregistered securities valued in Bitcoin. An SEC investigation found that Voorhees had published prospectuses online and actively solicited investors to buy shares in SatoshiDICE and FeedZeBirds; the investors paid for shares using Bitcoin.⁵³ Voorhees failed to register the offerings with the SEC. Under the terms of the settlement, Voorhees agreed to pay full disgorgement of the \$15,000 profit as well as a \$35,000 penalty.⁵⁴ The director of the SEC’s Division of Enforcement, Andrew Ceresney reiterated that ‘[a]ll issuers selling securities to the public must comply with the registration provisions of the securities laws, including issuers who seek to raise funds using Bitcoin’.⁵⁵ Laying the foundation for future actions by the SEC, Ceresney emphasised that the SEC ‘will continue to focus on enforcing our rules and regulations as they apply to digital currencies’.⁵⁶ In an October 2014 speech, SEC Chair White discussed SEC enforcement initiatives, attributing the SEC’s ‘significant jump’ in the number of enforcement actions involving financial fraud and issuer disclosures to the SEC’s ‘concentration on bringing new approaches and actions to enlarge [its] enforcement footprint and to strengthen deterrence of wrongdoing’.⁵⁷ As an example, Chair White specifically cited the filing of enforcement actions involving Bitcoin.

Review by the CFTC

The CFTC, which is charged with regulating the vast majority of the derivatives markets, which includes futures, options and swaps, is currently

50 *Ibid.*

51 Financial Industry Regulatory Authority, ‘Bitcoin: More Than a Bit Risky’, investor alert (7 May 2014) www.finra.org/investors/protectyourself/investoralerts/fraudsandscams/p456458.

52 *Ibid.*

53 *In the Matter of Erik T Voorhees*, Order Instituting Cease-and-Desist Proceedings Pursuant to Section 8A of the Securities Act of 1933, Making Findings, And Imposing a Cease-And-Desist Order (3 June 2014) www.sec.gov/litigation/admin/2014/33-9592.pdf.

54 *Ibid.*

55 US Securities and Exchange Commission, ‘SEC Charges Bitcoin Entrepreneur with Offering Unregistered Securities’, Press Release (3 June 2014) www.sec.gov/News/PressRelease/Detail/PressRelease/1370541972520.

56 *Ibid.*

57 Mary Jo White, ‘The Challenge of Coverage, Accountability and Deterrence in Global Enforcement’, IOSCO 39th Annual Conference (1 October 2014) www.sec.gov/News/Speech/Detail/Speech/1370543090864.

reviewing whether virtual currencies would be considered ‘commodities’ under the Commodity Exchange Act. Such a determination would ensure the CFTC’s fraud and manipulation authority over the cash markets of such virtual currencies and would subject derivatives referencing such virtual currencies, such as swaps, futures and options, to the full panoply of the CFTC’s regulations.⁵⁸ In May 2013, then CFTC Commissioner Bart Chilton expressed in several interviews his uncertainty over whether Bitcoin should be regulated, but that Bitcoin ‘is for sure something we need to explore’.⁵⁹ However, former Commissioner Chilton was clear that if it was determined that Bitcoin was a commodity used as a derivative, it would come under the authority of the CFTC to regulate, stating that ‘[i]n essence, we’re talking about a type of shadow currency, and there is more than a colorable argument to be made that derivative products relating to Bitcoin falls squarely in our jurisdiction’.⁶⁰ Yet, the CFTC has not yet issued clear guidance concerning the regulation of virtual currencies, although former acting CFTC Chair Mark Wetjen testified before the Senate Banking, Housing and Urban Affairs Committee in February 2014 that virtual currency ‘does present new risk, as a firm would be interacting outside of bank payment channels, increasing the risk of hacking or fraud, among other cybersecurity issues’.⁶¹ He further noted that the CFTC is ‘working with registrants that are seeking to accept virtual currencies to educate them about best practices’.⁶² He also told reporters at a Futures Industry Association meeting in the spring of 2014 that the CFTC continues to analyse whether the agency can regulate Bitcoin.⁶³ He stated that while no determination has been made, he ‘think[s] people believe there is a pretty good argument that it would fit [the definition of a commodity]’.⁶⁴ The current CFTC Chair Timothy Massad has not yet provided his views to the public on the status of the CFTC’s jurisdiction over Bitcoins and other virtual currencies.

Even as regulators continue to analyse their jurisdiction to regulate virtual currencies, new developments seem to increase the likelihood that the

58 See 7 USC ss 9(1) and 9(3); see also 17 USC ss 180.1 and 180.2.

59 Tracy Alloway, Gregory Meyer and Stephen Foley, ‘US regulators eye Bitcoin supervision’ (*Financial Times* 6 May 2013) www.ft.com/intl/cms/s/0/b810157c-b651-11e2-93ba-00144feabdc0.html

60 *Ibid.*

61 Testimony of Acting Chair Mark P Wetjen before the Committee on Senate Banking, Housing and Urban Affairs (6 February 2014).

62 *Ibid.*

63 Andrew Ackerman, ‘CFTC studying Jurisdiction Over Bitcoin’ *The Wall Street Journal* (11 March 2014).

64 Matthew Leising and Silla Brush, ‘Bitcoin Swaps Near Reality as Tera Group Creates Legal Framework’ (*Bloomberg* 24 March 2014) www.bloomberg.com/news/2014-03-24/bitcoin-swaps-near-reality-as-tera-group-forms-legal-framework.html.

CFTC will become involved in regulating the emerging use of derivatives linked to Bitcoin. Tera Group Inc announced in March 2014 that it had drafted a legal framework for buying and selling swaps linked to Bitcoin, which would enable investors to hedge risks from trading volatile virtual currencies.⁶⁵ At that time, Tera Group Inc sought informal approval from the CFTC to start trading US dollar to Bitcoin swaps through TeraExchange, its swap execution facility that is provisionally registered with the CFTC.⁶⁶ Following these discussions with CFTC staff and the provision of several draft submissions to the CFTC, in September 2014 TeraExchange submitted, pursuant to the CFTC's regulations, a self-certification to the CFTC to list a US dollar to Bitcoin non-deliverable forward transaction (USD/Bitcoin Swap).⁶⁷ TeraExchange's USD/Bitcoin Swap is a bilateral, non-cleared transaction with a credit support annex that bases its price on a price index of widely utilised Bitcoin exchanges by utilising 'proprietary methodology' to 'ensure that only reliable, active and dependable exchanges qualify'.⁶⁸ The USD/Bitcoin Swap is a cash-settled non-deliverable forward contract where no actual Bitcoin is exchanged by the parties. Following TeraExchange's self-certification, the USD/Bitcoin Swap saw its first live trading day on 8 October 2014 and the first USD/Bitcoin Swap has since been executed on TeraExchange.⁶⁹

On 9 October 2014, the CFTC's Global Markets Advisory Committee held a panel discussion, which included CFTC staff and industry participants relating to Bitcoin and in particular, the TeraExchange USD/Bitcoin Swap and the regulation of virtual currencies.⁷⁰ There are currently no US futures exchanges that are listing Bitcoin futures contracts at this time, but some exchanges outside the US are currently listing USD to Bitcoin futures contracts.⁷¹ If these contracts are indeed recognised as futures contracts by the CFTC, there could be regulatory issues with US customer participation in such futures contracts.

65 *Ibid.*

66 *Ibid.*

67 See TeraExchange Self-Certification pursuant to CFTC Regulation 40.2(a) (11 September 2014) www.cftc.gov/filings/ptc/ptc091114teraexcsef001.pdf.

68 *Ibid.*

69 See TeraExchange, 'TeraExchange Completes First Bitcoin Derivatives Trade on Regulated Exchange', Press Release (9 October 2014) www.prnewswire.com/news-releases/teraexchange-completes-first-bitcoin-derivatives-trade-on-regulated-exchange-278661591.html.

70 See CFTC's Global Markets Advisory Committee Meeting (9 October 2014). Agenda is available at www.cftc.gov/About/CFTCCcommittees/GlobalMarketsAdvisory/gmac_100914_agenda. Webcast is available at <https://www.youtube.com/watch?v=uwe-RQAPN9I>

71 For example, Russian-based ICBIT and China-based OKCoin. See Hومان B Shadab, *Regulating Bitcoin and Block Chain Derivatives*, (Bitcoin, 9 October 2014). Available at: http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/gmac_100914_bitcoin.pdf

A lack of jurisdiction for the Federal Reserve

Calling Bitcoin a ‘payment innovation’⁷² that exists outside the banking industry, Federal Reserve Chair Janet Yellin clearly laid out the current position of the Federal Reserve during a Senate Banking Committee hearing in February 2014: ‘[T]here’s no intersection at all, in any way, between Bitcoin and banks that the Federal Reserve has the ability to supervise and regulate. So the Fed doesn’t have authority to supervise or regulate Bitcoin in any way.’⁷³ Based on Chair Yellin’s testimony, it appears that the Federal Reserve will remain quiet on the topic of virtual currencies for the near future.

However, Chair Yellin’s statement does not indicate that she believes virtual currencies should remain untouched by government. On the contrary, she indicated that her understanding was that existing statutes and regulations were sufficient to enable the Department of Justice and FinCEN to take action against those using virtual currencies to facilitate illegal activities and money laundering.

Bitcoin and elections: the FEC gives the green light to Bitcoin PAC donations

According to one count, there are nearly 20 federal, state and local political organisations that accept donations in Bitcoin.⁷⁴ However, this number is likely to increase in light of the recent vote by the FEC in favour of permitting political committees to accept donations in Bitcoins.⁷⁵ Questions over the impact of Bitcoins on political campaigns have divided the FEC over the past year. The FEC held hearings in the spring of 2014 with the intent to clarify the issue of how political campaigns should treat donations granted in virtual currency. These hearings were held in response to an advisory request from the Make Your Laws political action committee, which sought guidance on what it could and could not do with donations made in virtual currencies. The FEC considered two main approaches.⁷⁶ The first would:

72 Janet Yellin, Testimony before the Senate Committee on Banking, Housing and Urban Affairs (27 February 2014) www.banking.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing_ID=146352e9-c437-4f39-af7c-ca0c61c54f64&Witness_ID=029b1373-42bf-4009-ab7f-77d6624c6e93.

73 *Ibid.*

74 Make Your Laws, ‘Political Organizations Accepting Bitcoin’, <https://makeyourlaws.org/fec/bitcoin/pacs>. This list includes Representative Steve Stockman, who is a strong supporter of virtual currencies, and Texas Attorney-General (and candidate for governor) Greg Abbott.

75 Federal Election Commission, ‘Advisory Opinion 2014-02 Political Committee May Accept Bitcoins as Contributions’ (*FEC Record* 8 May 2014) www.fec.gov/pages/fecrecord/2014/june/ao2014-02.shtml.

76 *Ibid.*

- limit virtual currency donations to ‘no more than the equivalent of \$100 per donor’;
- require that the virtual currency donations be converted into cash within ten days; and
- would prohibit political action committees from making their own expenditures in virtual currencies.⁷⁷

The second alternative would set no limits on the value of virtual currency that could be donated and would permit the political action committee to treat the virtual currency as donations in kind and use them directly for expenditures.⁷⁸

Ultimately, the FEC voted six to zero that a political committee may accept Bitcoin donations as proposed by Make Your Laws.⁷⁹ However, pursuant to the Advisory Opinion, PACs must sell these Bitcoins and convert them to dollars prior to their deposit into an official campaign account.⁸⁰ Also, under the FEC ruling, Bitcoins may not be used to acquire goods and services.⁸¹

The Consumer Financial Protection Bureau focuses on risks

On 11 August 2014, the Consumer Financial Protection Bureau (CFPB) issued a consumer advisory warning on the risks of virtual currencies. The consumer advisory contains a basic overview of the risks generally associated with virtual currencies: volatile exchange rates, hacking, scams, their experimental nature, etc. Highlighting the depth of CFPB’s interest in the topic, it provides specific details on some of the concerning practices associated with virtual currencies. For instance, the advisory warns of high exchange rates and transaction fees of up to seven per cent at Bitcoin ATMs, the risks of losing private keys, the importance of knowing with whom virtual currency transactions are being conducted, the lack of government insurance of virtual currency wallets if an exchange or wallet company fails and the risk that companies may not offer assistance or refunds for lost or stolen funds.⁸² In addition to publishing the consumer advisory, the CFPB announced that it will accept complaints on virtual currency products and services, including exchange services or online digital wallets. Not only will

⁷⁷ *Ibid.*

⁷⁸ *Ibid.*

⁷⁹ Matea Gold, ‘Federal Election Commission approves bitcoin donations to political committees’ (*The Washington Post* 8 May 2014) www.washingtonpost.com/blogs/post-politics/wp/2014/05/08/federal-election-commission-approves-bitcoin-donations-to-political-committees/.

⁸⁰ See n75.

⁸¹ *Ibid.*

⁸² Consumer Financial Protection Board, ‘Risks to Consumers Posed by Virtual Currencies’, (Consumer Financial Protection Bureau 11 August 2014) www.consumerfinance.gov/newsroom/cfpb-warns-consumers-about-bitcoin.

the CFPB act on complaints within its jurisdiction, but it has expressed its intent to forward complaints to federal and state regulators, as appropriate.

The landscape at the state level

Last year's FinCEN classification of Bitcoin administrators or exchangers of virtual currencies as money transmitters puts these entities under the remit of state regulators. State regulators have different viewpoints on virtual currencies, and, as with federal regulators, continue to evolve in their treatment of virtual currencies. Action at the state level is taking place both by individual states as well as through joint efforts such as those of the Conference of State Bank Supervisors ('CSBS'), the nationwide organisation of banking regulators from all 50 states, and the North American Securities Administrators Association (NASAA), which includes state, provincial and territorial securities administrators from each state and territory in the US as well as those of Canada and Mexico.

In February 2014, the CSBS stood up the Emerging Payments Task Force (the 'Task Force'), composed of nine state regulators, to study virtual currencies and engage with a broad range of stakeholders. On 23 April 2014, the Task Force and the NASAA issued the Model State Consumer and Investor Guidance on Virtual Currency.⁸³ The model consumer guidance is designed to assist state regulatory agencies in providing the consumer with information about virtual currency. Almost immediately, Nevada and Maryland adopted the model consumer guidance.⁸⁴ The guidance warns of risks including volatility, theft and lack of regulations, reinforces the IRS ruling that virtual currencies are not legal tender and calls on consumers to 'do their homework' with regards to virtual currencies.⁸⁵

The model consumer guidance is likely to be just one output of the Task Force. According to the head of the Task Force, Massachusetts Commissioner of Banks David Cotney, the group is examining the possibility of 'some types of model definitions, or model laws or regulations'.⁸⁶ A public hearing held

83 Conference of State Bank Supervisors, 'Model State Consumer and Investor Guidance on Virtual Currency' (23 April 2014) www.csbs.org/legislative/testimony/Documents/ModelConsumerGuidance-Virtual%20Currencies.pdf (hereinafter 'Model Guidance').

84 See State of Maryland Office of the Commissioner of Financial Regulation, 'Virtual Currencies: Risks for Buying, Selling, Transaction, and Investing', Advisory Notice 14-01 (24 April 2014) <https://dflr.state.md.us/finance/advisories/advisoryvirtual.shtml>; and State of Nevada Department of Business & Industry, 'Nevada Financial Institutions Division issues consumer and investor guidance on virtual currency' (25 April 2014) www.fid.state.nv.us/GuidanceVirtualCurrency.pdf.

85 Model Guidance, 2.

86 Douwe Miedema, 'U.S. states take lead in writing bitcoin rules' (*Reuters* 17 May 2014) www.reuters.com/article/2014/05/17/us-bitcoin-rules-idUSBREA4G08P20140517.

on 16 May 2014 was designed to inform the Task Force's efforts to create this 'Bitcoin rule book' over the next year. Cotney expects that the group's output will be used as recommendations to federal regulators and Congress.⁸⁷

While the majority of states have largely taken a neutral approach to virtual currencies, issuing advisory notices and warnings designed to educate their residents but not taking steps to actually regulate virtual currencies, others have been more proactive. In April 2014, Texas became one of the first states to outline a regulatory policy for the virtual currency market with the issue of a detailed memorandum that examines regulatory treatment of virtual currencies under Texas law. In addition to confirming that virtual currencies will not be considered legal tender, Banking Commissioner Charles Cooper clarified that the exchange of virtual currencies for sovereign currency will not be considered currency exchange under the Texas Finance Code.⁸⁸ As a result, no currency exchange licence is required to conduct any such transactions in Texas. However, most virtual currency exchanges that do business with Texas consumers – even those that are not based in Texas – will be subject to state licensing rules for their money wiring services.⁸⁹

On 28 June 2014, California, home to many virtual currency startup businesses, became the first state to pass legislation legalising the use of virtual currencies in transactions in the state. At issue was a provision under the California Corporations Code, which provided that no entity was permitted to 'issue or put in circulation, as money, anything but the lawful money of the United States'.⁹⁰ AB 129 repealed this provision, clarifying that the use of virtual currencies does not violate the law when such currencies are used for the purchase of goods or services or the transmission of payments.⁹¹ However, while the legislation ensures that virtual currencies are legal to use in California, they do not change the fact that they are still not categorised as legal tender pursuant to the Coinage Act of 1965.

NEW YORK PROPOSES STRICT REGULATORY FRAMEWORK

The New York Department of Financial Services (NYDFS) has adopted one of the most aggressive stances when it comes to virtual currencies, and it recently became the first state to propose a regulatory framework for virtual currencies.

87 *Ibid.*

88 Charles G Cooper, 'Regulatory Treatment of Virtual Currencies Under the Texas Money Services Act', State of Texas Department of Banking Supervisory Memorandum – 1037 (3 April 2014) www.dob.texas.gov/public/uploads/files/consumer-information/sm1037.pdf.

89 *Ibid.*

90 See s 107 of the California Corporations Code.

91 AB 129.

NYDFS Superintendent Benjamin Lawsky has said the NYDFS believes that 'putting in place appropriate regulatory safeguards... will be beneficial to the long-term strength of the virtual currency industry'.⁹² As early as August 2013, New York used subpoenas to seek information on consumer protection, investment strategies and anti-money laundering compliance from 22 entities and investors involved in the virtual currency industry.⁹³ In the spring of 2014, the NYDFS requested proposals from firms to set up 'regulated' exchanges for virtual currencies, with Lawsky stating there is an 'urgent need for stronger oversight... including robust standards for consumer protection, cyber security and anti-money laundering compliance'.⁹⁴

The resulting draft regulatory framework was released for public comment in July, initially with a 45-day comment period, which was extended to 21 October 2014. According to Lawsky, the framework seeks to 'strike an appropriate balance that helps protect consumers and root out illegal activity – without stifling beneficial innovation'.⁹⁵ As expected, the proposed NYDFS regulations include a tailored 'BitLicense' for virtual currency firms operating in New York, as well as additional regulations for other types of virtual currency firms beyond exchanges.⁹⁶ The proposed BitLicences would be required for firms engaged in:

- receiving or transmitting virtual currency on behalf of customers;
- securing, storing or maintaining custody or control of such virtual currency on behalf of customers;
- performing retail conversion services;
- buying and selling virtual currency as a customer business or;
- controlling, administering or issuing a virtual currency.⁹⁷

Requirements of potential BitLicensees are significant. Under the proposed regulations, licensees must adhere to a long list of requirements, to include:

- maintaining specific capital requirements;
- protecting customer assets;
- seeking approval prior to any action that would result in a change of control of a licensee;

92 Kashmir Hill, 'Every Important Person in Bitcoin Just Got Subpoenaed by New York's Financial Regulator' (*Forbes* 12 August 2013) www.forbes.com/sites/kashmirhill/2013/08/12/every-important-person-in-bitcoin-just-got-subpoenaed-by-new-yorks-financial-regulator/

93 *Ibid.*

94 NY State Department of Financial Services, 'NYDFS Issues Public Order on Virtual Currency Exchanges' (11 March 2014) www.dfs.ny.gov/about/po_vc_03112014.htm.

95 NY State Department of Financial Services, 'NYDFS Releases Proposed BitLicense Regulatory Framework for Virtual Currency Firms', Press Release (17 July 2014) www.dfs.ny.gov/about/press2014/pr1407171.html.

96 *Ibid.*

97 NY State Department of Financial Services, 'Proposed New York Codes, Rules and Regulations' (17 July 2014) www.dfs.ny.gov/about/press2014/pr1407171-vc.pdf/.

- submitting reports and financial statements;
- establishing an anti-money laundering programme;
- establishing a cybersecurity programme; and
- maintaining a business continuity and disaster recovery plan.⁹⁸

Additionally, the regulations provide that licensees must affirmatively disclose material risks associated with virtual currencies to customers.⁹⁹ The proposed framework is viewed by some as a positive development in regulating virtual currencies. Others view it as a highly invasive and burdensome proposal that would stifle growth throughout the entire industry.

Views on virtual currencies outside the US

Virtual currencies transcend traditional sovereign jurisdictions. Just as in the United States, foreign regulatory regimes are becoming increasingly interested in Bitcoin and other virtual currencies. In a report published in January 2014, the Law Library of Congress examined regulations or statements made by the central banks or government offices of 40 foreign jurisdictions and the European Union on the topic of Bitcoins.¹⁰⁰ While the report found that few countries have adopted laws or regulations governing virtual currencies, there is considerable discourse on the topic taking place around the globe.¹⁰¹

The treatment of Bitcoin and other virtual currencies by regulatory regimes abroad may have a significant impact on their evolution. An example of this impact is China, which is one of the few foreign jurisdictions to implement specific regulations applicable to virtual currencies. In 2013, China accounted for more than half of the international trade in Bitcoin.¹⁰² More than 100,000 Bitcoins were traded each day on local exchange BTC China in late 2013. However, recently, fewer than 2,000 Bitcoins have been traded daily on the exchange.¹⁰³ While Chinese investor interest has doubtless been affected by the significant drop in the price of Bitcoin (from over \$1,200 to around \$600 during this period), another important factor in the

98 *Ibid.*

99 *Ibid.*

100 Law Library of Congress, 'Regulation of Bitcoin in Selected Jurisdictions' (January 2014), www.loc.gov/law/help/bitcoin-survey/regulation-of-bitcoin.pdf (hereinafter, 'Law Library Report'). The Law Library maintains and updated reference for the countries surveyed at www.loc.gov/law/help/bitcoin-survey.

101 See Law Library Report.

102 'Bitcoin in China: A dream dispelled' (*The Economist* 12 April 2014) www.economist.com/news/finance-and-economics/21600736-chinese-regulators-make-life-hard-cryptocurrencies-dream-dispelled.

103 *Ibid.*

dramatic decrease in trading is the Chinese regulatory regime. In December 2013, the Chinese central bank and four other regulatory bodies jointly issued the ‘Notice on Precautions Against the Risks of Bitcoins’ (the ‘Joint Chinese Notice’).¹⁰⁴ In an echo of the recent IRS ruling, the Joint Chinese Notice defined Bitcoin as a ‘virtual commodity’ and found that it was not a currency, and therefore should not be circulated and used in the market as such.¹⁰⁵ Further, banks and payment institutions in China may not deal in Bitcoins.¹⁰⁶ The central bank clarified in March that it was not prohibiting trading in virtual currencies;¹⁰⁷ however, it appears that Chinese investor interest in Bitcoin has been tempered.

Brazil is one of the few other countries that has enacted legislation addressing virtual currencies. On 9 October 2013, Law No 12,865 ‘created the possibility for normalization of mobile payment systems and the creation of electronic currencies’.¹⁰⁸ However, in April 2014, Brazil announced that, like the IRS, it will tax Bitcoin capital gains in a similar manner as other securities.¹⁰⁹

In addition, in June 2014, Canada adopted an amendment to its Proceeds of Crime (Money Laundering) and Terrorist Financing Act that will treat virtual currencies as ‘money service businesses’ for the purposes of the Canadian anti-money laundering law.¹¹⁰ As a result, companies dealing in virtual currencies will be required to register with the Financial Transactions and Reports Analysis Centre of Canada, implement compliance programmes, maintain records, report suspicious or terrorist-related property transactions and determine if any of the customers are ‘politically exposed persons’.¹¹¹

104 The Notice was issued by the People’s Bank of China, Ministry of Industry and Information Technology, China Banking Regulatory Commission, China Securities Regulatory Commission and China Insurance Regulatory Commission.

105 *Ibid.*

106 According to the unofficial English summary of the Notice referenced in the Law Library Report, the Notice stipulates that financial and payment institutions may not use Bitcoin pricing for products or services, buy or sell Bitcoins, or provide direct or indirect Bitcoin-related services to customers, including registering, trading, settling, clearing or other services; accepting Bitcoins or using Bitcoins as a clearing tool; and trading Bitcoins with Chinese yuan or foreign currencies.

107 *Ibid.*

108 Law Library Report; Law No 12,865 of 9 October 2013.

109 Kenneth Rapoza, ‘Brazil follows IRS, Declares Bitcoin Gains Taxable’ (*Forbes* 7 April 2014) www.forbes.com/sites/kenrapoza/2014/04/07/brazil-follows-irs-declares-bitcoin-gains-taxable/.

110 Tariq Ahmad, ‘Canada: Canada Passes Law Regulating Virtual Currencies as “Money Service Businesses”’ (*Law Library of Congress* 9 July 2014) www.loc.gov/lawweb/servlet/lloc_news?disp3_1205404064_text.

111 *Ibid.*

The law also applies to virtual currency exchanges outside Canada that ‘direct services at persons or entities in Canada’.¹¹²

As with the US, most foreign jurisdictions do not consider virtual currencies to be legal tender. They continue to follow the evolution of virtual currencies closely, but have yet to take affirmative steps to regulate them.

Law enforcement and virtual currencies

The role of federal law enforcement

Bitcoin and virtual currencies present new issues for federal law enforcement, particularly ‘given the appeal that they have among those seeking to conceal illegal activity’,¹¹³ as Attorney-General Eric Holder testified before the House Judiciary Committee. Since the recent advent of virtual currencies, regulators and law enforcement authorities worldwide have struggled with how to respond to the use of such currencies for illegal transactions, particularly given the pseudonymity of these transactions. While in some ways this pseudonymity is analogous to that of cash transactions (and could potentially be regulated similarly), the virtual nature of Bitcoins makes law enforcement more difficult, especially across international borders. Attorney General Holder pledged his department’s commitment to keep up with this new technology and ensure their investigations continue unimpeded.¹¹⁴

Because Bitcoin transactions can be very difficult to trace,¹¹⁵ and often cross multiple legal jurisdictions, it is hard for law enforcement to track or seize criminal profits. The FBI has publicised its concerns about Bitcoin, particularly the lack of regulation for offshore services that may be used by criminals as a safe haven for criminal conduct.¹¹⁶ Such conduct may encompass the trafficking of drugs, weapons and other illegal goods and

112 *Ibid.*

113 Devlin Barrett, ‘U.S. Attorney General Warns of Criminal Appeal of Bitcoin, Other Virtual Currencies’ (*The Wall Street Journal* 8 April 2014) <http://online.wsj.com/articles/SB10001424052702304819004579489373683252290>.

114 *Ibid.*

115 Transactions are difficult to trace because Bitcoin users are not identified by name in transactions. Instead of creating an account at a centralised database, users generate their public addresses and private keys using a complex algorithm. Any string of 27–34 alphanumeric characters can function as a public key. Public-private keys can be generated with minimal effort and an essentially infinite supply. In fact, Bitcoin recommends that users use each public key only once in order to avoid using keys in settings that might give away personal details. A further complication is the attribution problem that makes it difficult to trace any activities in cyberspace.

116 Federal Bureau of Investigation, ‘Intelligence Assessment, (u) Bitcoin Virtual Currency: Unique Features Present Distinct Challenges for Deterring Illicit Activity’ (24 April 2012) <https://justsecurity.org/wp-content/uploads/2014/04/FBI-CyberIntelligenceCriminalIntelligence.2012.pdf>.

services. Additionally, the Department of Homeland Security, Department of Treasury and Department of Justice have all expressed concerns regarding the potentially unlawful uses of Bitcoin and other virtual currencies.¹¹⁷

A summary of recent law enforcement efforts

To date, there have been several enforcement actions taken against websites and individuals trading in virtual currencies. As discussed earlier, the biggest enforcement effort came in 2013 when the FBI shut down the online marketplace Silk Road. Nearly 30,000 Bitcoins were initially seized from Bitcoin wallets residing on Silk Road servers.¹¹⁸ Subsequently, over 144,000 Bitcoins were seized from computer hardware belonging to Ross William Ulbricht, or 'Dread Pirate Roberts', the alleged owner and operator of Silk Road.¹¹⁹ In June 2014, the US Marshals Service auctioned the nearly 30,000 Bitcoins (worth an estimated \$17m on the day of the auction) that were initially seized, with venture capitalist Tim Draper outbidding all other bidders to claim all of the Bitcoins.¹²⁰

While virtual currencies do present unique challenges for law enforcement, ultimately, existing statutes have appeared sufficient to prosecute illegal activities connected with Bitcoin transactions. This is a result of the fact that law enforcement has been focused primarily on the illegal activity (as defined by existing statutes and regulations), and less with the medium for carrying out that activity (ie, Bitcoin transactions). For instance, in conjunction with the shutdown of Silk Road, the FBI arrested its owner and creator, Ross William Ulbricht.¹²¹ He was charged with one count of narcotics conspiracy, one count of conspiracy to commit computer hacking and one count of money laundering conspiracy.¹²² In April 2013, the Drug Enforcement Administration (DEA) seized 11.02 Bitcoins (just over \$2,000 at the time) from an individual in South Carolina for purchasing a controlled

117 See n26 above and statements of Sen Carper, Member, Senate Committee on Homeland Security and Governmental Affairs, of Mythili Raman, Acting Assistant Attorney-General, and of Jennifer Shasky Calvery, Director Financial Crimes Enforcement Network.

118 See n14.

119 *Ibid.*

120 Kashmir Hill, 'Silk Road Bitcoin Auction Winner Tim Draper Won't Say How Many Millions He Paid' (*Forbes* 2 July 2014) www.forbes.com/sites/kashmirhill/2014/07/02/tim-draper-silk-road-bitcoin-auction/.

121 Andy Greenberg, 'Alleged Silk Road Creator Ross Ulbricht Hit With "Kingpin" Charge, Another 20 Years Minimum Prison Time' (*Forbes* 4 February 2014) www.forbes.com/sites/andygreenberg/2014/02/04/alleged-silk-road-creator-ross-ulbricht-hit-with-kingpin-charge-another-20-years-minimum-prison-time/.

122 See n14.

substance.¹²³ This was the first seizure by the DEA of Bitcoins from an individual. In November 2013, a Delaware doctor was arrested for making over 600 sales in 17 countries of prescription drugs such as Xanax and Adderall through Silk Road.¹²⁴ In December 2013, three alleged Silk Road employees were also indicted, as well as four individuals accused of selling methamphetamines through Silk Road.¹²⁵

In January 2014, the Manhattan US Attorney announced charges against Bitcoin exchangers, including the CEO of Bitcoin Exchange Company, who planned to sell and launder over \$1m in Bitcoins related to Silk Road drug trafficking.¹²⁶ The charges were for money laundering and operating unlicensed money transmitting business. DEA Acting Special Agent in Charge James J Hunt said: ‘The charges announced today depict law enforcement’s commitment to identifying those who promote the sale of illegal drugs throughout the world. Hiding behind their computers, both defendants are charged with knowingly contributing to and facilitating anonymous drug sales, earning substantial profits along the way.’¹²⁷

Also in January 2014, the FBI charged an individual with selling a toxin to an undercover agent for Bitcoins through Black Market Reloaded.¹²⁸ Black Market Reloaded was Silk Road’s main competitor, and a refuge for many when Silk Road was terminated. Another recent enforcement action is from

123 Devlin Barrett and Danny Yadron, ‘Bitcoin Poses a Challenge for Law Enforcement’ (*The Wall Street Journal* 22 October 2013) <http://online.wsj.com/news/articles/SB10001424052702304384104579143703058398582>.

124 Kashmir Hill, ‘How A Delaware Doctor was Linked to Silk Road Drug Sales’ (*Forbes* 26 November 2013) www.forbes.com/sites/kashmirhill/2013/11/26/how-a-delaware-doctor-was-linked-to-silk-road-drug-sales/.

125 Despite Silk Road’s purported anonymity, authorities were able to decipher some identities once physical goods were actually shipped. Andy Greenberg, ‘Feds Indict Three More Alleged Employees of Silk Road’s Dread Pirate Roberts’ (*Forbes* 20 December 2013) www.forbes.com/sites/andygreenberg/2013/12/20/feds-indict-three-more-alleged-employees-of-the-silk-roads-dread-pirate-roberts/.

126 *Ibid.*

127 US Drug Enforcement Administration, ‘Manhattan U.S. Attorney Announces Charges against Bitcoin Exchangers, Including CEO of Bitcoin Exchange Company, for Scheme to Sell and Launder over \$1 Million in Bitcoins Related to Silk Road Trafficking’ (27 January 2014) www.dea.gov/dea/divisions/nyc/2014/nyc012714.shtml.

128 US Attorney’s Office, District of New Jersey, ‘Florida Man Arrested, Charged in New Jersey With Sale of Deadly Toxin On Underground Online Marketplace’, Press Release (21 January 2014) www.fbi.gov/newark/press-releases/2014/florida-man-arrested-charged-in-new-jersey-with-sale-of-deadly-toxin-on-underground-online-marketplace. (Reporting that one of the accused sold a Secret Service agent \$25,000 worth of Bitcoins, while the other sold \$1,500 worth of Bitcoins to an agent. The undercover agents were seeking individuals engaged in high-volume activity, and found the two defendants on the exchange site LocalBitcoins. Both defendants face two counts of money laundering and one count of engaging in an unlicensed money servicing business.)

the Department of Justice's arrest of an individual for selling unlicensed firearms, arms smuggling and money laundering, also through Black Market Reloaded.¹²⁹ Because of the anonymity and complexity involved in these transactions, it is difficult to gauge the effectiveness of law enforcement at reducing illicit activities that utilise virtual currencies.

A summary of state law enforcement efforts

Federal prosecutors have been filing charges against individuals since October 2013, and states have recently begun to follow suit. In February 2014, Miami authorities brought the first ever state law virtual currency-related charges against two men for engaging in 'too-large' Bitcoin transactions, in violation of Florida's money laundering laws.¹³⁰ The accused sold thousands of dollars in Bitcoins to undercover agents who said they were using the digital currency to buy stolen credit card numbers.¹³¹ While it does not appear that other states have brought charges thus far, states are monitoring the landscape.

Department of Treasury

To date, the Department of Treasury has focused primarily on the use of virtual currencies for money laundering. The Bank Secrecy Act (BSA) requires any financial institution that can be defined as a money transmitter to register with the FinCEN and aid in detecting money laundering by tracking its clients and reporting suspicious activity. In March 2013, FinCEN issued guidance that people using Bitcoin to buy and sell goods and services for personal use would not be subject to the BSA regulations, but that virtual currency exchanges will be regulated as money transmitters.¹³² This guidance also established three categories:

- administrators;
- exchangers; and
- users.¹³³

129 Andy Greenberg, 'Sting Operation Nabs Alleged Online Arms Dealer on Silk Road Competitor Site' (*Forbes* 7 November 2013), www.forbes.com/sites/andygreenberg/2013/11/07/sting-operation-nabs-alleged-online-arms-dealer-via-silk-road-competitor-site/.

130 Susannah Nesmith, 'Miami Bitcoin Arrests May Be First State Prosecution' (*Bloomberg* 10 February 2014) www.bloomberg.com/news/2014-02-09/miami-bitcoin-arrests-may-be-first-state-prosecution.html.

131 *Ibid.*

132 FinCEN Guidance FIN-2013-G001, Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (18 March 2013) www.fincen.gov/statutes_regs/guidance/html/FIN-2013-G001.html.

133 *Ibid.*

Users are not characterised as money services businesses, and thus are exempt from BSA regulations. Administrators or exchangers who either accept and transmit Bitcoins or buy or sell Bitcoins are subject to the BSA.¹³⁴

FinCEN later clarified in January 2014 that users mining Bitcoins for their own personal benefit would not be considered money transmitters under the BSA.¹³⁵ The second ruling stated that the mere production and distribution of software, even if the purpose of the software is to facilitate the sale of virtual currency, would not make a company subject to regulation under the BSA.¹³⁶ When making a ruling on what category an individual or business falls into, FinCEN will generally focus on who benefits from the given activity.

One of the most significant drawbacks of all these enforcement mechanisms is that they generally can only be imposed within the US, and foreign countries may not levy as many regulations or disclosure requirements. Enforcement authorities have legitimate concerns that illegal activity may be conducted outside their jurisdictional reach using virtual currency. However, one example of US enforcement of a foreign exchange was the issue by the Department of Homeland Security of a seizure warrant for one of MtGox's accounts for failure to register with FinCEN as a money transmitting company.¹³⁷ As discussed above, despite being based in Tokyo, MtGox carried out money services business activities in US territory prior to its bankruptcy. Between May and July 2013 over \$5m was seized. In June 2013, MtGox officially received its money services business licence from FinCEN, only to shut down completely in February 2014.

Conclusion

The rise of virtual currencies such as Bitcoin has been explosive, but the future remains uncertain. Ultimately, the answers to the question of whether virtual currencies are currencies, commodities or mediums of exchange will

¹³⁴ *Ibid.*

¹³⁵ FinCEN Ruling FIN-2014-R001, Application of FinCEN's Regulations to Virtual Currency Mining Operations (30 January 2014) www.fincen.gov/news_room/rp/rulings/pdf/FIN-2014-R001.pdf.

¹³⁶ FinCEN Ruling FIN-2014-R002, Application of FinCEN's Regulations to Virtual Currency Software Development and Certain Investment Activity (30 January 2014) www.fincen.gov/news_room/rp/rulings/pdf/FIN-2014-R002.pdf.

¹³⁷ Kashmir Hill, 'The Feds Are Cracking Down on Mt. Gox (Not on Bitcoin)' (*Forbes* 5 May 2013) www.forbes.com/sites/kashmirhill/2013/05/15/the-feds-are-cracking-down-on-mt-gox-not-on-bitcoin/. (Reporting that the Department of Homeland Security has a warrant issued from the US District Court for the District of Maryland issued to seize the Dwolla payment service with respect to accounts used for trading with MtGox. The warrant was brought under 18 USC s 1960 for operating an unlicensed money transmitting business.)

drive policy-making and the future of Bitcoin. It appears unlikely that the US Congress will pass legislation relating to virtual currencies in the near future; the future of virtual currencies in the US is more likely to be shaped by actions taken by regulators and states. And, as the examples of recent law enforcement demonstrate, existing statutes and regulations provide significant authority for legal actions. However, while the broad mandate authorised under the existing statutory and regulatory regimes may be effective in some regards, there is little doubt that there are many open questions as to how virtual currencies should be characterised and regulated.